

23791WOPCTSEQ
SEQUENCE LISTING

<110> MERCK, SHARP & DOHME CORP.

<120> ANTI-LAG3 ANTIBODIES AND ANTIGEN-BINDING FRAGMENTS

<130> 23791

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<150> 62/171,319

<151> 2015-06-05

<150> 62/039,081

<151> 2014-08-19

<160> 470

<170> PatentIn version 3.5

<210> 1

<211> 408

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

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tgcacagcct ctggcttcaa cattgaagac tactatatgc actggatgaa acagaggcct	180
gaacagggcc tggagtggat tggatggatt gatcctgtga atggtgatac tgaatatgcc	240
ccgaagtcc agggcaaggc cactatgact gcagacacat cctccaacac agcctaccta	300
cacctcaaca gcctgacatc tgaggacact gccgtctatt actgtaattt ctatgatggt	360
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<211> 136

<212> PRT

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<223> Description of Artificial Sequence: Synthetic polypeptide

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Ile Asn Ser Glu Val Gln Leu Leu Gln Ser Gly Ala Glu Leu Val Arg	
20 25 30	
Ser Gly Ala Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile	
35 40 45	

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Glu Asp Tyr Tyr Met His Trp Met Lys Gln Arg Pro Glu Gln Gly Leu
50 55 60

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

Pro Lys Phe Gln Gly Lys Ala Thr Met Thr Ala Asp Thr Ser Ser Asn
85 90 95

Thr Ala Tyr Leu His Leu Asn Ser Leu Thr Ser Glu Asp Thr Ala Val
100 105 110

Tyr Tyr Cys Asn Phe Tyr Asp Gly Tyr Leu Phe Ala Phe Trp Gly Gln
115 120 125

Gly Thr Leu Val Thr Val Ser Ala
130 135

<210> 3
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<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 3
Gly Phe Asn Ile Glu Asp Tyr Tyr Met His
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<210> 4
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<212> PRT
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<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 4
Trp Ile Asp Pro Val Asn Gly Asp Thr Glu Tyr Ala Pro Lys Phe Gln
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Gly

<210> 5
<211> 8
<212> PRT
<213> Artificial Sequence

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

<400> 5
Tyr Asp Gly Tyr Leu Phe Ala Phe
1 5

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

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

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atctcctgca ggtctagtaa gagtctcctg catagtgatg gcaacactta tctgtattgg      180
ctcctgcaga ggccaggcca gtctcctcag ctctgatat atcggatgtc caaccttgcc      240
tcaggggtcc cagacagggt cagcggcagt gggtcaggaa ctgttttcac actgagaatc      300
agcagactgg aggctgagga tgtgggtatt tattactgta tgcaacatct agaatatcct      360
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<210> 7
 <211> 132
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Val Thr Pro Gly Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser
35     40     45
Leu Leu His Ser Asp Gly Asn Thr Tyr Leu Tyr Trp Leu Leu Gln Arg
50     55     60
Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala
65     70     75     80
Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Val Phe
85     90     95
Thr Leu Arg Ile Ser Arg Leu Glu Ala Glu Asp Val Gly Ile Tyr Tyr
100    105    110
Cys Met Gln His Leu Glu Tyr Pro Phe Thr Phe Gly Gly Gly Thr Lys
115    120    125
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Leu Glu Ile Lys
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<210> 8
<211> 16
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<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 8
Arg Ser Ser Lys Ser Leu Leu His Ser Asp Gly Asn Thr Tyr Leu Tyr
1 5 10 15

<210> 9
<211> 8
<212> PRT
<213> Artificial Sequence

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

<400> 9
Tyr Arg Met Ser Asn Leu Ala Ser
1 5

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

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

<400> 10
Met Gln His Leu Glu Tyr Pro Phe Thr
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<210> 11
<211> 414
<212> DNA
<213> Artificial Sequence

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

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tgcaaggctt ctgggtcctc cttcactgac tactatataa actgggtgaa gcagaagcct 180
ggacagggac ttgagtggat tggatggatt tatcctggaa gcggttaattc tatctacaat 240
gagaacttca aggccaaggc cacattgact gtagacacat cctccagcac agcctacatg 300
catctcagca gcctgacatc tgaggacact gctgtctatt tctgtgcaag agaggctgat 360

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<210> 12

<211> 138

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 12

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1 5 10 15

Val Arg Cys Gln Ile Arg Leu Gln Gln Ser Gly Pro Glu Leu Val Lys
20 25 30

Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Ser Ser Phe
35 40 45

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

Glu Trp Ile Gly Trp Ile Tyr Pro Gly Ser Gly Asn Ser Ile Tyr Asn
65 70 75 80

Glu Asn Phe Lys Ala Lys Ala Thr Leu Thr Val Asp Thr Ser Ser Ser
85 90 95

Thr Ala Tyr Met His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val
100 105 110

Tyr Phe Cys Ala Arg Glu Ala Asp Tyr Asp Asp Ala Leu Asp Tyr Trp
115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
130 135

<210> 13

<211> 10

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

<400> 13

Gly Ser Ser Phe Thr Asp Tyr Tyr Ile Asn
1 5 10

<210> 14

<211> 17

<212> PRT

<213> Artificial Sequence

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<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 14

Trp Ile Tyr Pro Gly Ser Gly Asn Ser Ile Tyr Asn Glu Asn Phe Lys
1 5 10 15

Ala

<210> 15

<211> 10

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

<400> 15

Glu Ala Asp Tyr Asp Asp Ala Leu Asp Tyr
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<210> 16

<211> 384

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

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ttctcctgca gggccagtc gagcattggc acaagcatac actggtatca gcaaagaaca	180
aatggttctc caaggcttct cataaagtat gcttctgagt ctatctctgg gatcccttcc	240
aggtttagtg gcagtggatc agggacagat tttactctta gcatcaacag tgtggagtca	300
gaagatattg cagattatta ctgtcaacaa agtaatagct ggccaacgta cacgttcgga	360
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<210> 17

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 17

Met Val Ser Thr Pro Gln Phe Leu Val Phe Leu Leu Phe Trp Ile Pro
1 5 10 15

Ala Ser Arg Gly His Ile Leu Leu Thr Gln Ser Pro Ala Ile Leu Ser

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20

25

30

Val Ser Pro Gly Glu Arg Val Ser Phe Ser Cys Arg Ala Ser Gln Ser
35 40 45

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

Arg Leu Leu Ile Lys Tyr Ala Ser Glu Ser Ile Ser Gly Ile Pro Ser
65 70 75 80

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

Ser Val Glu Ser Glu Asp Ile Ala Asp Tyr Tyr Cys Gln Gln Ser Asn
100 105 110

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

<210> 18

<211> 11

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

<400> 18

Arg Ala Ser Gln Ser Ile Gly Thr Ser Ile His
1 5 10

<210> 19

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 19

Tyr Ala Ser Glu Ser Ile Ser
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<210> 20

<211> 10

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

<400> 20

Gln Gln Ser Asn Ser Trp Pro Thr Tyr Thr
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<210> 21
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 <212> DNA
 <213> Artificial Sequence

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 tgcaaggctt ctggctacac actcactgac tactggatgc actgggtgaa gcagaggcct 180
 ggacaaggcc ttgagtggat cggagcgatt gatatttctg atagttattc tagctacaat 240
 caaaagttca agggcaaggc cacattgact gtagacgaat cctccagcac agcctacatg 300
 cagctcacca gcctgacatc tgaggactct gcggtctatt actgtgcaag atcccccttc 360
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<210> 22
 <211> 142
 <212> PRT
 <213> Artificial Sequence

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

<400> 22
 Met Arg Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
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 20 25 30
 Pro Gly Ala Ser Ala Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Leu
 35 40 45
 Thr Asp Tyr Trp Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
 50 55 60
 Glu Trp Ile Gly Ala Ile Asp Ile Ser Asp Ser Tyr Ser Ser Tyr Asn
 65 70 75 80
 Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Glu Ser Ser Ser
 85 90 95
 Thr Ala Tyr Met Gln Leu Thr Ser Leu Thr Ser Glu Asp Ser Ala Val
 100 105 110
 Tyr Tyr Cys Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr
 115 120 125

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

<210> 23
<211> 10
<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

<400> 23
Gly Tyr Thr Leu Thr Asp Tyr Trp Met His
1 5 10

<210> 24
<211> 17
<212> PRT
<213> Artificial Sequence

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

<400> 24
Ala Ile Asp Ile Ser Asp Ser Tyr Ser Ser Tyr Asn Gln Lys Phe Lys
1 5 10 15

Gly

<210> 25
<211> 14
<212> PRT
<213> Artificial Sequence

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

<400> 25
Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
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<210> 26
<211> 384
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<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

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atcagttgca gggcaagtca ggacattagc aattatttaa actggtatca gcagaaacca 180

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gatggaactg ttaaactcct gatctactac acatcaagat tacactcagg agtcccatca 240
 aggttcagtg gcagtgggtc tggaacagat tattctctca ccattagcaa cctggagcaa 300
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<210> 27
 <211> 128
 <212> PRT
 <213> Artificial Sequence

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

<400> 27
 Met Met Ser Ser Ala Gln Phe Leu Gly Leu Leu Leu Cys Phe Gln
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Gly Thr Arg Cys Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser
 20 25 30

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

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

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

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

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

Thr Leu Pro Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
 115 120 125

<210> 28
 <211> 11
 <212> PRT
 <213> Artificial Sequence

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 <223> Description of Artificial Sequence: Synthetic peptide

<400> 28
 Arg Ala Ser Gln Asp Ile Ser Asn Tyr Leu Asn
 1 5 10

<210> 29
 <211> 7
 <212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

<400> 29

Tyr Thr Ser Arg Leu His Ser
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<210> 30

<211> 10

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

<400> 30

Gln Gln Gly Asp Thr Leu Pro Pro Trp Thr
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<210> 31

<211> 447

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic polynucleotide

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tgcaaggctt ctggatacac attcactgac tacaacgtgg actgggtgaa gcagcgccat	180
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gagctccgca gcctgacatc tgaggacact gcagtctatt tctgtgcaag gaactatagg	360
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<210> 32

<211> 138

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 32

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

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Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
50 55 60

Glu Trp Ile Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser
65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
100 105 110

Tyr Phe Cys Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp
115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
130 135

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

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<223> Description of Artificial Sequence: Synthetic peptide

<400> 33
Asp Tyr Asn Val Asp
1 5

<210> 34
<211> 17
<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

<400> 34
Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe Lys
1 5 10 15

Gly

<210> 35
<211> 10
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<223> Description of Artificial Sequence: Synthetic peptide

<400> 35

Asn Tyr Arg Trp Phe Gly Ala Met Asp His
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<210> 36

<211> 547

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic polynucleotide

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atttcctgca aggccagtca aagtcttgat tatgaagggtg atagtgatat gaattggtac      180
caacagaaac caggacagcc acccagactc ctcatctctg gtgcatccaa tctagagtct      240
gggatcccag ccagggttcag tggcagtggg tctgggacag acttcactgt taacatccat      300
cctgtggagg aggaggatgc tgcaacctat tactgtcagc aaagtactga ggatcctcgg      360
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atcttccac catccagtga gcagttaaca tctggagggtg cctcagtcgt gtgcttcttg      480
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<210> 37

<211> 131

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 37

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Gly Ser Thr Gly Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala
20 25 30

Val Ser Pro Gly Gln Arg Ala Thr Ile Ser Cys Lys Ala Ser Gln Ser
35 40 45

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

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

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Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
85 90 95

Val Asn Ile His Pro Val Glu Glu Glu Asp Ala Ala Thr Tyr Tyr Cys
100 105 110

Gln Gln Ser Thr Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu
115 120 125

Glu Ile Lys
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<210> 38
<211> 15
<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

<400> 38
Lys Ala Ser Gln Ser Leu Asp Tyr Glu Gly Asp Ser Asp Met Asn
1 5 10 15

<210> 39
<211> 7
<212> PRT
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<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 39
Gly Ala Ser Asn Leu Glu Ser
1 5

<210> 40
<211> 9
<212> PRT
<213> Artificial Sequence

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

<400> 40
Gln Gln Ser Thr Glu Asp Pro Arg Thr
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<210> 41
<211> 447
<212> PRT
<213> Artificial Sequence

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

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<400> 41

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1 5 10 15

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

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

Gly Gly Ile Asn Pro Ser Asn Gly Gly Thr Asn Phe Asn Glu Lys Phe
50 55 60

Lys Asn Arg Val Thr Leu Thr Thr Asp Ser Ser Thr Thr Thr Ala Tyr
65 70 75 80

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

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

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

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

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

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

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

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

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

Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val
225 230 235 240

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

Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu
260 265 270

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

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

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

Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile
325 330 335

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

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

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

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

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

Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
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His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
435 440 445

<210> 42

<211> 218

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 42

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

Gly Tyr Ser Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
35 40 45

Arg Leu Leu Ile Tyr Leu Ala Ser Tyr Leu Glu Ser Gly Val Pro Ala
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50

55

60

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

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

Asp Leu Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
100 105 110

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

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

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

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

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

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

Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 43

<211> 440

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 43

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Lys Arg Tyr Tyr Ala Asp Ser Val
50 55 60

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Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Phe
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Thr Asn Asp Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
 100 105 110
 Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser
 115 120 125
 Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
 130 135 140
 Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
 145 150 155 160
 Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
 165 170 175
 Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys
 180 185 190
 Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp
 195 200 205
 Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala
 210 215 220
 Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
 225 230 235 240
 Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
 245 250 255
 Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val
 260 265 270
 Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
 275 280 285
 Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
 290 295 300
 Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly
 305 310 315 320
 Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
 325 330 335

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Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr
340 345 350

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
355 360 365

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
370 375 380

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
385 390 395 400

Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe
405 410 415

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
420 425 430

Ser Leu Ser Leu Ser Leu Gly Lys
435 440

<210> 44

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 44

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

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

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Ser Asn Trp Pro Arg
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

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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> 45

<211> 138

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 45

Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
 1 5 10 15

Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
 20 25 30

Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
 35 40 45

Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
 50 55 60

Glu Trp Ile Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser
 65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
 85 90 95

Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
 100 105 110

Tyr Phe Cys Ala Arg Asn Tyr Arg Ser Phe Gly Ala Met Asp His Trp
 115 120 125

23791WOPCTSEQ

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
130 135

<210> 46
<211> 420
<212> DNA
<213> Artificial Sequence

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

<400> 46
atggagtgga gctggagcgt gttcctgttc ttcttggtga ccaccggcgt gcacagcgag 60
gtgctgctgc tgcagtccgg ccctgagctg gtgaagcccg gaaccagcgt gaagatccct 120
tgcaaggcca gcggctacac cttcaccgac tacaacgtgg actgggtgaa gcagaggcac 180
ggcaaaggcc tggagtggat cggcgacatc aacccaaca acggcggcac catctacagc 240
cagaagttca agggcaaggc caccctgaca gtggacaaga gcagcagcac cgccttcatg 300
gagctgagga gcctgaccag cgaggacacc gccgtgtact tctgcgccag gaactacagg 360
agctttggcg ccatggacca ctggggccag ggaaccagcg tgaccgtgag ctccgctagc 420

<210> 47
<211> 138
<212> PRT
<213> Artificial Sequence

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

<400> 47
Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
1 5 10 15
Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
20 25 30
Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45
Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
50 55 60
Glu Trp Ile Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser
65 70 75 80
Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95
Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
100 105 110

23791WOPCTSEQ

Tyr Phe Cys Ala Arg Asn Tyr Arg Tyr Phe Gly Ala Met Asp His Trp
115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
130 135

<210> 48
<211> 420
<212> DNA
<213> Artificial Sequence

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

<400> 48
atggagtgga gctggagcgt gttcctgttc ttcctggtga ccaccggcgt gcacagcgag 60
gtgctgctgc tgcagtccgg ccctgagctg gtgaagcccg gaaccagcgt gaagatccct 120
tgcaaggcca gcggctacac cttcaccgac tacaacgtgg actgggtgaa gcagaggcac 180
ggcaaaggcc tggagtggat cggcgacatc aacccaaca acggcggcac catctacagc 240
cagaagttca agggcaaggc caccctgaca gtggacaaga gcagcagcac cgccttcatg 300
gagctgagga gcctgaccag cgaggacacc gccgtgtact tctgcgccag gaactacagg 360
tattttggcg ccatggacca ctggggccag ggaaccagcg tgaccgtgag ctccgctagc 420

<210> 49
<211> 138
<212> PRT
<213> Artificial Sequence

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

<400> 49
Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
1 5 10 15

Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
20 25 30

Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
50 55 60

Glu Trp Ile Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser
65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
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110

115

130

<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic polynucleotide

60

120

180

240

300

360

420

<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic polypeptide

1

20

35

50

65

85

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23791WOPCTSEQ

Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
100 105 110

Tyr Phe Cys Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp
115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
130 135

<210> 52
<211> 420
<212> DNA
<213> Artificial Sequence

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

<400> 52
atggagtgga gctggagcgt gttcctgttc ttcctggtga ccaccggcgt gcacagcgag 60
gtgctgctgc tgcagtccgg ccctgagctg gtgaagcccg gaaccagcgt gaagatccct 120
tgcaaggcca gcggctacac cttcaccgac tacaacgtgg actgggtgaa gcagaggcac 180
ggcaaaggcc tggagtggat cggcgacatc aacccaaca gcggcggcac catctacagc 240
cagaagttca agggcaaggc caccctgaca gtggacaaga gcagcagcac cgccttcatg 300
gagctgagga gcctgaccag cgaggacacc gccgtgtact tctgcgccag gaactacagg 360
tggtttggcg ccatggacca ctggggccag ggaaccagcg tgaccgtgag ctccgctagc 420

<210> 53
<211> 138
<212> PRT
<213> Artificial Sequence

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

<400> 53
Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
1 5 10 15

Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
20 25 30

Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
50 55 60

Glu Trp Ile Gly Asp Ile Asn Pro Asn Asp Gly Gly Thr Ile Tyr Ser
65 70 75 80

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Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
100 105 110

Tyr Phe Cys Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp
115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
130 135

<210> 54

<211> 420

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 54

atggagtgga gctggagcgt gttcctgttc ttcctggtga ccaccggcgt gcacagcgag	60
gtgctgctgc tgcagtccgg ccctgagctg gtgaagcccg gaaccagcgt gaagatccct	120
tgcaaggcca gcggctacac cttcaccgac tacaacgtgg actgggtgaa gcagaggcac	180
ggcaaaggcc tggagtggat cggcgacatc aacccaacg atggcggcac catctacagc	240
cagaagttca agggcaaggc caccctgaca gtggacaaga gcagcagcac cgccttcacg	300
gagctgagga gcctgaccag cgaggacacc gccgtgtact tctgcgccag gaactacagg	360
tggtttggcg ccatggacca ctggggccag ggaaccagcg tgaccgtgag ctccgctagc	420

<210> 55

<211> 138

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 55

Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
1 5 10 15

Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
20 25 30

Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
50 55 60

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Glu Trp Ile Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser
65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
100 105 110

Tyr Phe Cys Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp
115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
130 135

<210> 56

<211> 420

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 56

atggagtgga gctggagcgt gttcctgttc ttcctggtga ccaccggcgt gcacagcgag	60
gtgctgctgc tgcagtccgg ccctgagctg gtgaagcccga gaaccagcgt gaagatccct	120
tgcaaggcca gcggctacac cttcaccgac tacaacgtgg actgggtgaa gcagaggcac	180
ggcaaaggcc tggagtggat cggcgacatc aacccaaca acggcggcac catctacagc	240
cagaagttca agggcaaggc caccctgaca gtggacaaga gcagcagcac cgccttcag	300
gagctgagga gcctgaccag cgaggacacc gccgtgtact tctgcgccag gaactacagg	360
tggtttggcg ccatggacca ctggggccag ggaaccagcg tgaccgtgag ctccgctagc	420

<210> 57

<211> 131

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 57

Met Ser Val Pro Thr Gln Val Leu Gly Leu Leu Leu Leu Trp Leu Thr
1 5 10 15

Asp Ala Arg Cys Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala
20 25 30

Val Ser Pro Gly Gln Arg Ala Thr Ile Ser Cys Lys Ala Ser Gln Ser
35 40 45

Leu Asp Tyr Glu Gly Asp Ser Asp Met Asn Trp Tyr Gln Gln Lys Pro
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50

55

60

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

Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
85 90 95

Val Asn Ile His Pro Val Glu Glu Glu Asp Ala Ala Thr Tyr Tyr Cys
100 105 110

Gln Gln Ser Thr Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu
115 120 125

Glu Ile Lys
130

<210> 58

<211> 399

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 58

atgagcgtgc ccacacaggt gctgggcctg ctgctgctgt ggctgaccga cgccaggtgc 60
gacatcgtgc tgaccagag ccctgctagc ctggctgtga gccctggcca gagagccacc 120
atcagctgca aggccagcca gtccctggac tacgagggcg acagcgacat gaactggtac 180
cagcagaagc ccggccagcc tcccagactg ctgatcagcg gcgccctcaa cctggagagc 240
ggcatccctg ccagggttag cggcagcggg agcggcaccg acttcaccgt gaacatccac 300
cccgtggaag aggaggacgc cgccacctac tactgccagc agagcacaga ggaccccagg 360
accttcggcg gaggcaccaa gctggagatc aagcgtacg 399

<210> 59

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 59

Met Ser Val Pro Thr Gln Val Leu Gly Leu Leu Leu Trp Leu Thr
1 5 10 15

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

Val Ser Pro Gly Glu Arg Val Ser Phe Ser Cys Arg Ala Ser Gln Ser
35 40 45

23791WOPCTSEQ

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

Arg Leu Leu Ile Lys Tyr Ala Ser Glu Ser Ile Ser Gly Ile Pro Ser
65 70 75 80

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

Ser Val Glu Ser Glu Asp Ile Ala Asp Tyr Tyr Cys Gln Gln Ser Ser
100 105 110

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

<210> 60
<211> 390
<212> DNA
<213> Artificial Sequence

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

<400> 60
atgagcgtgc ccaccaggt gctgggactg ctgctgctgt ggctgaccga cgccaggtgc 60
atcatcctgc tgaccagag ccccgccatt ctgagcgtga gccctggcga gagggtagac 120
ttcagctgca gggccagcca gagcatcggc accagcatcc actggtacca gcagaggacc 180
aacggcagcc ccaggctgct gatcaagtac gccagcgaga gcatcagcgg catcccttcc 240
aggtttagcg gcagcggcag cggcaccgat ttcaccctga gcatcaacag cgtggagagc 300
gaggacatcg ccgactacta ctgccagcag agcagcagct accccaccta caccttcggc 360
ggcggcacca agctggagat caagcgtacg 390

<210> 61
<211> 128
<212> PRT
<213> Artificial Sequence

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

<400> 61
Met Ser Val Pro Thr Gln Val Leu Gly Leu Leu Leu Leu Trp Leu Thr
1 5 10 15

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

Val Ser Pro Gly Glu Arg Val Ser Phe Ser Cys Arg Ala Ser Gln Ser
35 40 45

23791WOPCTSEQ

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

Arg Leu Leu Ile Lys Tyr Ala Ser Glu Ser Ile Ser Gly Ile Pro Ser
65 70 75 80

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

Ser Val Glu Ser Glu Asp Ile Ala Asp Tyr Tyr Cys Gln Gln Ser Arg
100 105 110

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

<210> 62
<211> 390
<212> DNA
<213> Artificial Sequence

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

<400> 62
atgagcgtgc ccaccaggt gctgggactg ctgctgctgt ggctgaccga cgccaggtgc 60
atcatcctgc tgaccagag ccccgccatt ctgagcgtga gccctggcga gaggggtgagc 120
ttcagctgca gggccagcca gagcatcggc accagcatcc actggtacca gcagaggacc 180
aacggcagcc ccaggctgct gatcaagtac gccagcgaga gcatcagcgg catcccttcc 240
aggtttagcg gcagcggcag cggcaccgat ttcaccctga gcatcaacag cgtggagagc 300
gaggacatcg ccgactacta ctgccagcag agcagaagct accccaccta caccttcggc 360
ggcggcacca agctggagat caagcgtacg 390

<210> 63
<211> 132
<212> PRT
<213> Artificial Sequence

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

<400> 63
Met Ser Val Pro Thr Gln Val Leu Gly Leu Leu Leu Leu Trp Leu Thr
1 5 10 15

Asp Ala Arg Cys Asp Ile Val Leu Thr Gln Ala Ala Pro Ser Val Pro
20 25 30

Val Thr Pro Gly Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser
35 40 45

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Leu Leu His Ser Asp Gly Asn Thr Tyr Leu Tyr Trp Leu Leu Gln Arg
50 55 60

Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Leu Ser Asn Leu Ala
65 70 75 80

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Val Phe
85 90 95

Thr Leu Arg Ile Ser Arg Leu Glu Ala Glu Asp Val Gly Ile Tyr Tyr
100 105 110

Cys Met Gln His Leu Glu Tyr Pro Phe Thr Phe Gly Gly Gly Thr Lys
115 120 125

Leu Glu Ile Lys
130

<210> 64
<211> 402
<212> DNA
<213> Artificial Sequence

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

<400> 64
atgagcgtgc ccacacaggt gctgggcctg ctgctgctgt ggctgacaga cgccaggtgc 60
gacattgtgc tgacacaggc cgctcccagc gtgcctgtga caccggaga gagcgtgagc 120
atcagctgca ggtccagcaa gtccctgctg cacagcgacg gcaacaccta cctgtactgg 180
ctgctgcaga gacccggaca gagccccag ctgctgatct acaggctgtc caacctggcc 240
agcggagtgc ccgacagatt tagcggcagc ggcagcggca ccgtgtttac cctgaggatc 300
agcaggctgg aggccgagga cgtgggcacg tactactgca tgcagcacct ggagtacccc 360
ttcaccttcg gcggcggcac caagctggaa atcaagcgta cg 402

<210> 65
<211> 132
<212> PRT
<213> Artificial Sequence

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

<400> 65
Met Ser Val Pro Thr Gln Val Leu Gly Leu Leu Leu Trp Leu Thr
1 5 10 15

Asp Ala Arg Cys Asp Ile Val Leu Thr Gln Ala Ala Pro Ser Val Pro
20 25 30

Val Thr Pro Gly Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser
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35 40 23791WOPCTSEQ 45

Leu Leu His Ser Asp Gly Asn Thr Tyr Leu Tyr Trp Leu Leu Gln Arg
50 55 60

Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Tyr Ser Asn Leu Ala
65 70 75 80

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Val Phe
85 90 95

Thr Leu Arg Ile Ser Arg Leu Glu Ala Glu Asp Val Gly Ile Tyr Tyr
100 105 110

Cys Met Gln His Leu Glu Tyr Pro Phe Thr Phe Gly Gly Gly Thr Lys
115 120 125

Leu Glu Ile Lys
130

<210> 66
<211> 402
<212> DNA
<213> Artificial Sequence

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

<400> 66
atgagcgtgc ccacacaggt gctgggcctg ctgctgctgt ggctgacaga cgccaggtgc 60
gacattgtgc tgacacaggc cgctcccagc gtgcctgtga caccgggaga gagcgtgagc 120
atcagctgca ggtccagcaa gtccctgctg cacagcgacg gcaacaccta cctgtactgg 180
ctgctgcaga gacccggaca gagccccag ctgctgatct acaggtactc caacctggcc 240
agcggagtgc ccgacagatt tagcggcagc ggcagcggca ccgtgtttac cctgaggatc 300
agcaggctgg aggccgagga cgtgggcacg tactactgca tgcagcacct ggagtacccc 360
ttcaccttcg gcggcggcac caagctggaa atcaagcgta cg 402

<210> 67
<211> 142
<212> PRT
<213> Artificial Sequence

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

<400> 67
Met Glu Trp Ser Trp Val Phe Leu Phe Phe Leu Ser Val Thr Thr Gly
1 5 10 15

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

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Pro Gly Ala Ser Ala Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Leu
35 40 45

Thr Asp Tyr Tyr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
50 55 60

Glu Trp Ile Gly Ala Ile Asp Ile Ser Asp Ser Tyr Ser Ser Tyr Asn
65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Glu Ser Ser Ser
85 90 95

Thr Ala Tyr Met Gln Leu Thr Ser Leu Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Ser Pro Phe Tyr Asn Asn Arg Gly Gly Asn Tyr
115 120 125

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

<210> 68
<211> 432
<212> DNA
<213> Artificial Sequence

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

<400> 68
atggagtgga gctgggtggt cctcttcttc ctgagcgtga ccaccggcgt gcacagccag 60
gtgcagctgc agcagcccgg agccgaactg gtgatgcctg gcgccagcgc caagatgagc 120
tgcaaggcca gcggctacac cctgaccgac tactacatgc actgggtgaa gcagagacct 180
ggccagggcc tggagtggat tggcgccatc gacatctccg acagctacag cagctacaac 240
cagaagtca agggcaaggc caccctcacc gtggacgaga gcagcagcac cgcctacatg 300
cagctgacca gcctcaccag cgaggacagc gccgtgtact actgcgccag gtcccccttc 360
tacaacaaca ggggcggcaa ctacttcgac tactggggcc agggcacaac cctgaccgtg 420
agctccgcta gc 432

<210> 69
<211> 142
<212> PRT
<213> Artificial Sequence

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

<400> 69
Met Glu Trp Ser Trp Val Phe Leu Phe Phe Leu Ser Val Thr Thr Gly

1 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200 205 210 215 220 225 230 235 240 245 250 255 260 265 270 275 280 285 290 295 300 305 310 315 320 325 330 335 340 345 350 355 360 365 370 375 380 385 390 395 400 405 410 415 420 425 430 435 440 445 450 455 460 465 470 475 480 485 490 495 500 505 510 515 520 525 530 535 540 545 550 555 560 565 570 575 580 585 590 595 600 605 610 615 620 625 630 635 640 645 650 655 660 665 670 675 680 685 690 695 700 705 710 715 720 725 730 735 740 745 750 755 760 765 770 775 780 785 790 795 800 805 810 815 820 825 830 835 840 845 850 855 860 865 870 875 880 885 890 895 900 905 910 915 920 925 930 935 940 945 950 955 960 965 970 975 980 985 990 995 1000

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

Pro Gly Ala Ser Ala Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Leu
35 40 45

Thr Asp Tyr Tyr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
50 55 60

Glu Trp Ile Gly Ala Ile Asp Ile Ser Asp Ser Tyr Ser Ser Tyr Asn
65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Glu Ser Ser Ser
85 90 95

Thr Ala Tyr Met Gln Leu Thr Ser Leu Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Ser Pro Phe Tyr Asn Tyr Arg Gly Gly Asn Tyr
115 120 125

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

<210> 70
<211> 432
<212> DNA
<213> Artificial Sequence

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

<400> 70							
atggagtgga	gctgggtggt	cctcttcttc	ctgagcgtga	ccaccggcgt	gcacagccag		60
gtgcagctgc	agcagcccgg	agccgaactg	gtgatgcctg	gcgccagcgc	caagatgagc		120
tgcaaggcca	gcggctacac	cctgaccgac	tactacatgc	actgggtgaa	gcagagacct		180
ggccagggcc	tggagtggat	tggcgccatc	gacatctccg	acagctacag	cagctacaac		240
cagaagttca	agggcaaggc	caccctcacc	gtggacgaga	gcagcagcac	cgcctacatg		300
cagctgacca	gcctcaccag	cgaggacagc	gccgtgtact	actgcgccag	gtcccccttc		360
tacaactaca	ggggcggcaa	ctacttcgac	tactggggcc	agggcacaaac	cctgaccgtg		420
agctccgcta	gc						432

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<210> 71
<211> 138
<212> PRT
<213> Artificial Sequence
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$\langle 220 \rangle$

23791WOPCTSEQ

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 71

Met Glu Trp Ser Trp Val Phe Leu Phe Phe Leu Ser Val Thr Thr Gly
1 5 10 15

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

Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Ser Ser Phe
35 40 45

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

Glu Trp Ile Gly Trp Ile Tyr Pro Gly Ser Gly Asn Leu Ile Tyr Asn
65 70 75 80

Glu Asn Phe Lys Ala Lys Ala Thr Leu Thr Val Asp Thr Ser Ser Ser
85 90 95

Thr Ala Tyr Met His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val
100 105 110

Tyr Phe Cys Ala Arg Glu Ala Asp Tyr Asp Asp Ala Leu Asp Tyr Trp
115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
130 135

<210> 72

<211> 420

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 72

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atcaggctgc agcagagcgg ccccgaactg gtgaaacctg gcgccagcgt gaagatcagc	120
tgcaaggcct ccggcagcag cttcaccgac tactacatca actgggtgaa gcagaagccc	180
ggccagggcc tggagtggat tggctggatc taccgccgga gcggcaacct gatctacaac	240
gagaacttca aggccaaggc caccctgacc gtggacacca gcagcagcac cgcctacatg	300
cacctgagca gcctgaccag cgaggacacc gccgtgtact tctgcgccag agaggccgac	360
tatgacgacg ccctggacta ctggggccag ggaaccagcg tgaccgtgag cagcgctagc	420

<210> 73

<211> 136

<212> PRT

23791WOPCTSEQ

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 73

Met Glu Trp Ser Trp Val Phe Leu Phe Phe Leu Ser Val Thr Thr Gly
1 5 10 15Val His Ser Glu Val Gln Leu Leu Gln Ser Gly Ala Glu Leu Val Arg
20 25 30Ser Gly Ala Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile
35 40 45Glu Asp Tyr Tyr Met His Trp Met Lys Gln Arg Pro Glu Gln Gly Leu
50 55 60Glu Trp Ile Gly Trp Ile Asp Pro Val Asn Leu Asp Thr Glu Tyr Ala
65 70 75 80Pro Lys Phe Gln Gly Lys Ala Thr Met Thr Ala Asp Thr Ser Ser Asn
85 90 95Thr Ala Tyr Leu His Leu Asn Ser Leu Thr Ser Glu Asp Thr Ala Val
100 105 110Tyr Tyr Cys Asn Phe Tyr Asp Gly Tyr Leu Phe Ala Phe Trp Gly Gln
115 120 125Gly Thr Leu Val Thr Val Ser Ala
130 135

<210> 74

<211> 483

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 74

atggagtgga gctgggtgtt cctcttcttc ctgagcgtga ccaccggcgt gcacagcgag 60

gtgcagctgc tgcagagcgg cgctgaactg gtgagaagcg gcgccagcgt gaagctgagc 120

tgcaccgcca gcggcttcaa catcgaggac tactacatgc actggatgaa gcagagaccc 180

gagcagggcc tggagtggat cggctggatc gaccccgatga acctggacac cgagtacgcc 240

cccaagttcc agggcaaggc caccatgacc gccgacacca gcagcaacac cgcctacctg 300

cacctgaaca gcctgaccag cgaggacacc gccgtgtact actgcaactt ctacgacggc 360

tacctgttcg cttctgtggg ccagggcaca ctggtgaccg tgagcgccgc tagcaacttc 420

tacgacggct acctgttcgc cttctgtgggc cagggcacac tgggtgaccgt gagcgccgct 480

agc

483

<210> 75
 <211> 136
 <212> PRT
 <213> Artificial Sequence

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

<400> 75
 Met Glu Trp Ser Trp Val Phe Leu Phe Phe Leu Ser Val Thr Thr Gly
 1 5 10 15
 Val His Ser Glu Val Gln Leu Leu Gln Ser Gly Ala Glu Leu Val Arg
 20 25 30
 Ser Gly Ala Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile
 35 40 45
 Glu Asp Tyr Tyr Met His Trp Met Lys Gln Arg Pro Glu Gln Gly Leu
 50 55 60
 Glu Trp Ile Gly Trp Ile Asp Pro Val Asn Val Asp Thr Glu Tyr Ala
 65 70 75 80
 Pro Lys Phe Gln Gly Lys Ala Thr Met Thr Ala Asp Thr Ser Ser Asn
 85 90 95
 Thr Ala Tyr Leu His Leu Asn Ser Leu Thr Ser Glu Asp Thr Ala Val
 100 105 110
 Tyr Tyr Cys Asn Phe Tyr Asp Gly Tyr Leu Phe Ala Phe Trp Gly Gln
 115 120 125
 Gly Thr Leu Val Thr Val Ser Ala
 130 135

<210> 76
 <211> 414
 <212> DNA
 <213> Artificial Sequence

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

<400> 76
 atggagtga gctgggtgtt cctcttcttc ctgagcgtga ccaccggcgt gcacagcgag 60
 gtgcagctgc tgcagagcgg cgctgaactg gtgagaagcg gcgccagcgt gaagctgagc 120
 tgcaccgcca gcggcttcaa catcgaggac tactacatgc actggatgaa gcagagaccc 180
 gagcagggcc tggagtggat cggctggatc gaccccgatga acgtcgacac cgagtacgcc 240

23791WOPCTSEQ

cccaagttcc agggcaaggc caccatgacc gccgacacca gcagcaacac cgcctacctg 300
 cacctgaaca gcctgaccag cgaggacacc gccgtgtact actgcaactt ctacgacggc 360
 tacctgttcg ctttctgggg ccagggcaca ctggtgaccg tgagcgccgc tagc 414

<210> 77
 <211> 138
 <212> PRT
 <213> Artificial Sequence

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

<400> 77
 Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
 1 5 10 15

Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
 20 25 30

Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
 35 40 45

Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
 50 55 60

Glu Trp Ile Gly Asp Ile Asn Pro Asn Ser Gly Gly Thr Ile Tyr Ser
 65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
 85 90 95

Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
 100 105 110

Tyr Phe Cys Ala Arg Asn Tyr Arg Ser Phe Gly Ala Met Asp His Trp
 115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
 130 135

<210> 78
 <211> 420
 <212> DNA
 <213> Artificial Sequence

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

<400> 78
 atggagtgga gctggagcgt gttcctgttc ttcctggtga ccaccggcgt gcacagcgag 60

gtgctgctgc tgcagagcgg ccctgaactg gtgaagcccg gcaccagcgt gaagatcccc 120

tgcaaggcca gcggtacac cttcaccgac tacaatgtgg actgggtgaa gcagaggcac 180

23791WOPCTSEQ

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ggcaagggcc tggagtggat cggcgacatc aacccaaca gcggcggcac catctactcc      240
cagaagttca agggcaaggc caccctgacc gtggacaaga gctccagcac cgccttcatg      300
gagctgagga gcctgaccag cgaggacacc gccgtgtact tctgcgccag gaactacagg      360
agcttcggcg ccatggatca ctggggacag ggcaccagcg tgaccgtgag cagcgctagc      420

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<210> 79
 <211> 138
 <212> PRT
 <213> Artificial Sequence

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

<400> 79
 Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
 1 5 10 15

Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
 20 25 30

Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
 35 40 45

Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
 50 55 60

Glu Trp Ile Gly Asp Ile Asn Pro Asn Ser Gly Gly Thr Ile Tyr Ser
 65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
 85 90 95

Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
 100 105 110

Tyr Phe Cys Ala Arg Asn Tyr Arg Tyr Phe Gly Ala Met Asp His Trp
 115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
 130 135

<210> 80
 <211> 420
 <212> DNA
 <213> Artificial Sequence

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

<400> 80
 atggagtgga gctggagcgt gttcctgttc ttctggtga ccaccggcgt gcacagcgag 60

23791WOPCTSEQ

gtgctgctgc tgcagagcgg ccctgaactg gtgaagcccg gcaccagcgt gaagatcccc 120
 tgcaaggcca gcggctacac cttcaccgac tacaatgtgg actgggtgaa gcagaggcac 180
 ggcaagggcc tggagtggat cggcgacatc aacccaaca gcggcggcac catctactcc 240
 cagaagttca agggcaaggc caccctgacc gtggacaaga gctccagcac cgccttcatg 300
 gagctgagga gcctgaccag cgaggacacc gccgtgtact tctgcgccag gaactacagg 360
 tatttcggcg ccatggatca ctggggacag ggcaccagcg tgaccgtgag cagcgctagc 420

<210> 81
 <211> 138
 <212> PRT
 <213> Artificial Sequence

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

<400> 81
 Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
 1 5 10 15
 Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
 20 25 30
 Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
 35 40 45
 Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
 50 55 60
 Glu Trp Ile Gly Asp Ile Asn Pro Asn Ser Gly Gly Thr Ile Tyr Ser
 65 70 75 80
 Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
 85 90 95
 Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
 100 105 110
 Tyr Phe Cys Ala Arg Asn Tyr Arg Gln Phe Gly Ala Met Asp His Trp
 115 120 125
 Gly Gln Gly Thr Ser Val Thr Val Ser Ser
 130 135

<210> 82
 <211> 420
 <212> DNA
 <213> Artificial Sequence

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

23791WOPCTSEQ

<400> 82
atggagtgga gctggagcgt gttcctgttc ttcctggtga ccaccggcgt gcacagcgag 60
gtgctgctgc tgcagagcgg ccctgaactg gtgaagcccg gcaccagcgt gaagatcccc 120
tgcaaggcca gcggctacac cttcaccgac tacaatgtgg actgggtgaa gcagaggcac 180
ggcaagggcc tggagtggat cggcgacatc aacccaaca gcggcggcac catctactcc 240
cagaagttca agggcaaggc caccctgacc gtggacaaga gctccagcac cgccttcatg 300
gagctgagga gcctgaccag cgaggacacc gccgtgtact tctgcgccag gaactacagg 360
caattcggcg ccatggatca ctggggacag ggcaccagcg tgaccgtgag cagcgctagc 420

<210> 83
<211> 138
<212> PRT
<213> Artificial Sequence

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

<400> 83
Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
1 5 10 15

Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
20 25 30

Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
50 55 60

Glu Trp Ile Gly Asp Ile Asn Pro Asn Asp Gly Gly Thr Ile Tyr Ser
65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
100 105 110

Tyr Phe Cys Ala Arg Asn Tyr Arg Ser Phe Gly Ala Met Asp His Trp
115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
130 135

<210> 84
<211> 420
<212> DNA
<213> Artificial Sequence

<220>

23791WOPCTSEQ

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 84
 atggagtgga gctggagcgt gttcctgttc ttcctggtga ccaccggcgt gcacagcgag 60
 gtgctgctgc tgcagagcgg ccctgaactg gtgaagcccg gcaccagcgt gaagatcccc 120
 tgcaaggcca gcggctacac cttcaccgac tacaatgtgg actgggtgaa gcagaggcac 180
 ggcaagggcc tggagtggat cggcgacatc aacccaacg atggcggcac catctactcc 240
 cagaagttca agggcaaggc caccctgacc gtggacaaga gctccagcac cgccttcattg 300
 gagctgagga gcctgaccag cgaggacacc gccgtgtact tctgcgccag gaactacagg 360
 agcttcggcg ccatggatca ctggggacag ggcaccagcg tgaccgtgag cagcgctagc 420

<210> 85

<211> 138

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 85

Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
 1 5 10 15

Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
 20 25 30

Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
 35 40 45

Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
 50 55 60

Glu Trp Ile Gly Asp Ile Asn Pro Asn Asp Gly Gly Thr Ile Tyr Ser
 65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
 85 90 95

Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
 100 105 110

Tyr Phe Cys Ala Arg Asn Tyr Arg Tyr Phe Gly Ala Met Asp His Trp
 115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
 130 135

<210> 86

<211> 420

<212> DNA

23791WOPCTSEQ

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 86

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atggagtgga gctggagcgt gttcctgttc ttcctggtga ccaccggcgt gcacagcgag      60
gtgctgctgc tgcagagcgg ccctgaactg gtgaagcccg gcaccagcgt gaagatcccc      120
tgcaaggcca gcggctacac cttcaccgac tacaatgtgg actgggtgaa gcagaggcac      180
ggcaagggcc tggagtggat cggcgacatc aacccaacg atggcggcac catctactcc      240
cagaagttca agggcaaggc caccctgacc gtggacaaga gctccagcac cgccttcatg      300
gagctgagga gcctgaccag cgaggacacc gccgtgtact tctgcgccag gaactacagg      360
tatttcggcg ccatggatca ctggggacag ggcaccagcg tgaccgtgag cagcgctagc      420

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<210> 87

<211> 138

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 87

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Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
1           5           10          15

```

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Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
          20          25          30

```

```

Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
          35          40          45

```

```

Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
          50          55          60

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```

Glu Trp Ile Gly Asp Ile Asn Pro Asn Asp Gly Gly Thr Ile Tyr Ser
          65          70          75          80

```

```

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
          85          90          95

```

```

Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
          100          105          110

```

```

Tyr Phe Cys Ala Arg Asn Tyr Arg Gln Phe Gly Ala Met Asp His Trp
          115          120          125

```

```

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
          130          135

```

23791WOPCTSEQ

<210> 88
 <211> 420
 <212> DNA
 <213> Artificial Sequence

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

<400> 88
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 gtgctgctgc tgcagagcgg ccctgaactg gtgaagcccg gcaccagcgt gaagatcccc 120
 tgcaaggcca gcggtacac cttcaccgac tacaatgtgg actgggtgaa gcagaggcac 180
 ggcaagggcc tggagtggat cggcgacatc aacccaacg atggcggcac catctactcc 240
 cagaagttca agggcaaggc caccctgacc gtggacaaga gctccagcac cgccttcattg 300
 gagctgagga gcctgaccag cgaggacacc gccgtgtact tctgcgccag gaactacagg 360
 caattcggcg ccatggatca ctggggacag ggcaccagcg tgaccgtgag cagcgctagc 420

<210> 89
 <211> 138
 <212> PRT
 <213> Artificial Sequence

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

<400> 89
 Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
 1 5 10 15

Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
 20 25 30

Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
 35 40 45

Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
 50 55 60

Glu Trp Ile Gly Asp Ile Asn Pro Asn Thr Gly Gly Thr Ile Tyr Ser
 65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
 85 90 95

Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
 100 105 110

Tyr Phe Cys Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp
 115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser

130

135

<210> 90
 <211> 420
 <212> DNA
 <213> Artificial Sequence

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

<400> 90
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 gtgctgctgc tgcaatccgg acctgagctc gtgaagcctg gaaccagcgt gaagatcccc 120
 tgcaaggcct ccggctacac cttcaccgac tacaacgtcg actgggtgaa acagaggcac 180
 ggaaagggac tggagtggat tggagacatt aaccctaaca ccggcggcac catctactcc 240
 cagaagttca agggcaaggc caccctgacc gtcgacaaga gcagcagcac cgcctttatg 300
 gagctgagat ccctgacatc cgaggacacc gccgtctact tttgcgccag gaactacagg 360
 tggtttggcg ccatggacca ctggggacag ggcacctccg tcaccgtgtc ctccgctagc 420

<210> 91
 <211> 138
 <212> PRT
 <213> Artificial Sequence

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

<400> 91
 Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
 1 5 10 15
 Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
 20 25 30
 Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
 35 40 45
 Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
 50 55 60
 Glu Trp Ile Gly Asp Ile Asn Pro Asn Val Gly Gly Thr Ile Tyr Ser
 65 70 75 80
 Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
 85 90 95
 Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
 100 105 110
 Tyr Phe Cys Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp
 115 120 125

23791WOPCTSEQ

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
130 135

<210> 92
<211> 420
<212> DNA
<213> Artificial Sequence

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

<400> 92
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gtgctgctgc tgcaatccgg acctgagctc gtgaagcctg gaaccagcgt gaagatcccc 120
tgcaaggcct ccggctacac cttcaccgac tacaacgtcg actgggtgaa acagaggcac 180
ggaaagggac tggagtggat tggagacatt aaccctaacg tgggcggcac catctactcc 240
cagaagttca agggcaaggc caccctgacc gtcgacaaga gcagcagcac cgcctttatg 300
gagctgagat ccctgacatc cgaggacacc gccgtctact ttgcgccag gaactacagg 360
tggtttggcg ccatggacca ctggggacag ggcacctccg tcaccgtgtc ctccgctagc 420

<210> 93
<211> 138
<212> PRT
<213> Artificial Sequence

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

<400> 93
Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
1 5 10 15
Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
20 25 30
Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45
Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
50 55 60
Glu Trp Ile Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser
65 70 75 80
Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95
Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
100 105 110

23791WOPCTSEQ

Tyr Phe Cys Ala Arg Asn Tyr Arg Phe Phe Gly Ala Met Asp His Trp
115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
130 135

<210> 94
<211> 420
<212> DNA
<213> Artificial Sequence

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

<400> 94
atggagtggc cctggagcgt gttcctcttc ttcctggtca ccacaggcgt gcactccgag 60
gtgctgctgc tgcaatccgg acctgagctc gtgaagcctg gaaccagcgt gaagatcccc 120
tgcaaggcct ccggctacac cttcaccgac tacaacgtcg actgggtgaa acagaggcac 180
ggaaagggac tggagtggat tggagacatt aaccctaaca atggcggcac catctactcc 240
cagaagttca agggcaaggc caccctgacc gtcgacaaga gcagcagcac cgcctttatg 300
gagctgagat ccctgacatc cgaggacacc gccgtctact tttgcgccag gaactacagg 360
ttttttggcg ccatggacca ctggggacag ggcacctccg tcaccgtgtc ctccgctagc 420

<210> 95
<211> 138
<212> PRT
<213> Artificial Sequence

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

<400> 95
Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
1 5 10 15

Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
20 25 30

Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
50 55 60

Glu Trp Ile Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser
65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

23791WOPCTSEQ

Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
100 105 110

Tyr Phe Cys Ala Arg Asn Tyr Arg Ile Phe Gly Ala Met Asp His Trp
115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
130 135

<210> 96

<211> 420

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 96

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tgcaaggcct	ccggctacac	cttcaccgac	tacaacgtcg	actgggtgaa	acagaggcac	180
ggaaagggac	tggagtggat	tggagacatt	aaccctaaca	atggcggcac	catctactcc	240
cagaagttca	agggaaggc	caccctgacc	gtcgacaaga	gcagcagcac	cgcctttatg	300
gagctgagat	ccctgacatc	cgaggacacc	gccgtctact	tttgcgccag	gaactacagg	360
atctttggcg	ccatggacca	ctggggacag	ggcacctccg	tcaccgtgtc	ctccgctagc	420

<210> 97

<211> 138

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 97

Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
1 5 10 15

Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
20 25 30

Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
50 55 60

Glu Trp Ile Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser
65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser

Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
 100 105 110

Tyr Phe Cys Ala Arg Asn Tyr Arg Leu Phe Gly Ala Met Asp His Trp
 115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
 130 135

<210> 98

<211> 420

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 98

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 gtgctgctgc tgcaatccgg acctgagctc gtgaagcctg gaaccagcgt gaagatcccc 120
 tgcaaggcct ccggctacac cttcaccgac tacaacgtcg actgggtgaa acagaggcac 180
 ggaaagggac tggagtggat tggagacatt aaccctaaca atggcggcac catctactcc 240
 cagaagttca agggcaaggc caccctgacc gtcgacaaga gcagcagcac cgcctttatg 300
 gagctgagat ccctgacatc cgaggacacc gccgtctact ttgcgccag gaactacagg 360
 ctgtttggcg ccatggacca ctggggacag ggcacctccg tcaccgtgtc ctccgctagc 420

<210> 99

<211> 138

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 99

Met Glu Trp Ser Trp Ser Val Phe Leu Phe Phe Leu Val Thr Thr Gly
 1 5 10 15

Val His Ser Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys
 20 25 30

Pro Gly Thr Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe
 35 40 45

Thr Asp Tyr Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu
 50 55 60

Glu Trp Ile Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser
 65 70 75 80

23791WOPCTSEQ

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

Thr Ala Phe Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val
100 105 110

Tyr Phe Cys Ala Arg Asn Tyr Arg Val Phe Gly Ala Met Asp His Trp
115 120 125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
130 135

<210> 100

<211> 417

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 100

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gtgctgctgc tgcaatccgg acctgagctc gtgaagcctg gaaccagcgt gaagatcccc	120
tgcaaggcct ccggctacac cttcaccgac tacaacgtcg actgggtgaa acagaggcac	180
ggaaagggac tggagtggat tggagacatt aaccctaaca atggcgccac catctactcc	240
cagaagtcca agggcaaggc caccctgacc gtcgacaaga gcagcagcac cgcctttatg	300
gagctgagat ccctgacatc cgaggacacc gccgtctact ttgcgccag gaactacagg	360
gtgtttggcg ccatggacca ctggggacag ggcacctccg tcaccgtgtc ctccgct	417

<210> 101

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 101

Met Ser Val Pro Thr Gln Val Leu Gly Leu Leu Leu Trp Leu Thr
1 5 10 15

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

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

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

23791WOPCTSEQ

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

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

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

Thr Leu Pro Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
115 120 125

<210> 102

<211> 390

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 102

atgagcgtgc ccaccaggt gctgggactg ctgctgctgt ggctgaccga cgccaggtgc	60
gacatccaga tgaccagac cacaagcagc ctgagcgcct ccctgggcca cagagtgacc	120
atcagctgta gggccagcca ggacatcagc aactacctga actggtacca gcagaagccc	180
gacggcaccg tgaagctgct gatctactac accagcaggc tgcacagcgg cgtgcctagc	240
aggttcagcg gaagcggcag cggcaccgac tacagcctca ccatcagcaa cctggagcag	300
gaggacattg ccacctactt ctgccagcag ggcgacacac tgcctccttg gaccttcggc	360
ggcggcacca agctggagat caagcgtacg	390

<210> 103

<211> 142

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 103

Met Glu Trp Ser Trp Val Phe Leu Phe Phe Leu Ser Val Thr Thr Gly
1 5 10 15

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

Pro Gly Ala Ser Ala Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Leu
35 40 45

Thr Asp Tyr Trp Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
50 55 60

23791WOPCTSEQ

Glu Trp Ile Gly Ala Ile Asp Ile Ser Asp Ser Tyr Ser Ser Tyr Asn
65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Glu Ser Ser Ser
85 90 95

Thr Ala Tyr Met Gln Leu Thr Ser Leu Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr
115 120 125

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

<210> 104

<211> 432

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 104

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gtgcagctgc agcagcccg agctgagctg gtgatgcctg gagccagcgc caagatgtcc	120
tgcaaggcca gcggctacac cctgaccgac tactggatgc actgggtgaa gcagaggcct	180
ggacagggcc tggagtggat cggcgccatc gatatctccg acagctacag cagctacaac	240
cagaagttca agggcaaggc caccctgacc gtggacgagt ccagcagcac cgcctacatg	300
cagctgacca gcctgacctc cgaggactcc gccgtgtact actgcgccag gagccccctc	360
tacaactcca ggggcggcaa ctacttcgac tactggggcc agggcacaac cctgaccgtg	420
agcagcgcta gc	432

<210> 105

<211> 1407

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 105

atggaatggg cctgggtgtt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag	60
atgcagctgg tgcagtctgg ccccgaagtg aagaaacctg gcacctccgt gaaggtgtcc	120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggctaga	180
ggacagcggc tggaatggat cggcgacatc aacccaaca acggcggcac catctacgcc	240
cagaaattcc aagagagagt gaccatcacc gtcgataagt ccacctccac cgcctacatg	300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccga gaactaccgg	360

23791WOPCTSEQ

tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc cagcgccagc	420
acaaagggcc ccagcgtggt ccctctggcc cccagcagca agagcacatc tggcggaaca	480
gccgccctgg gctgcctcgt gaaggactac ttccccgagc ccgtgaccgt gtcttggaac	540
tctggcgccc tgaccagcgg cgtgcacacc tttccagccg tgctgcagag cagcggcctg	600
tacagcctgt cctctgtggt caccgtgcct agcagcagcc tgggcaccca gacctacatc	660
tgcaacgtga accacaagcc cagcaacacc aaggtggaca agaaggtgga acccaagagc	720
tgcgacaaga cccacacctg tccccctgc cctgccccctg aactgctggg cggaccctcc	780
gtgttcctgt tcccccaaa gcccaaggac accctgatga tcagccggac ccccgaagtg	840
acctgcgtgg tgggtggacgt gtcccacgag gacctgaag tgaagttcaa ttggtacgtg	900
gacggcgtgg aagtgcacaa cgccaagacc aagcccagag aggaacagta caacagcacc	960
taccgggtgg tgtccgtgct gaccgtgctg caccaggact ggctgaacgg caaagagtac	1020
aagtgcaagg tgtccaacaa ggccctgcct gccccatcg agaaaaccat cagcaaggcc	1080
aagggccagc cccgcgagcc ccaggtgtac aactgcccc ctagccggga cgagctgacc	1140
aagaaccagg tgtccctgac ctgtctggtc aagggcttct accccagcga tatcgccgtg	1200
gaatgggaga gcaacggcca gcccgagaac aactacaaga ccaccccccc tgtgctggac	1260
agcgacggct cattcttcct gtacagcaag ctgaccgtgg acaagagccg gtggcagcag	1320
ggcaacgtgt tcagctgcag cgtgatgcac gaggcctgc acaaccacta caccagaag	1380
tccctgagcc tgagccccgg caaatga	1407

<210> 106

<211> 449

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 106

Gln	Met	Gln	Leu	Val	Gln	Ser	Gly	Pro	Glu	Val	Lys	Lys	Pro	Gly	Thr
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Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Asp	Tyr
			20					25					30		

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

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

Gln	Glu	Arg	Val	Thr	Ile	Thr	Val	Asp	Lys	Ser	Thr	Ser	Thr	Ala	Tyr
65					70					75					80

23791WOPCTSEQ

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

Ala Arg Asn Tyr₁₀₀ Arg Trp Phe Gly Ala₁₀₅ Met Asp His Trp Gly₁₁₀ Gln Gly

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

Pro Leu₁₃₀ 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 Asn₂₁₀ Thr Lys Val Asp Lys₂₁₅ Lys 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 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

23791WOPCTSEQ

Leu Pro Pro Ser Arg Asp Glu Leu 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> 107

<211> 1407

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 107

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tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggctaga	180
ggacagcggc tggaatggat cggcgacatc aaccccaact ccggcggcac catctacgcc	240
cagaaattcc aagagagagt gaccatcacc gtcgataagt ccacctccac cgcctacatg	300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccga aactaccgg	360
tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc cagcgccagc	420
acaaagggcc ccagcgtggt ccctctggcc cccagcagca agagcacatc tggcggaaca	480
gccgccctgg gctgcctcgt gaaggactac ttccccgagc ccgtgaccgt gtcttgaac	540
tctggcgccc tgaccagcgg cgtgcacacc tttccagccg tgctgcagag cagcggcctg	600
tacagcctgt cctctgtggt caccgtgcct agcagcagcc tgggcacca gacctacatc	660
tgcaacgtga accacaagcc cagcaacacc aaggtggaca agaaggtgga acccaagagc	720
tgcgacaaga cccacacctg tccccctgc cctgcccctg aactgctggg cggaccctcc	780
gtgttcctgt tcccccaaa gcccaaggac accctgatga tcagccggac cccgaagtg	840
acctgcgtgg tggtggacgt gtcccacgag gaccctgaag tgaagttcaa ttggtacgtg	900

23791WOPCTSEQ

gacggcgtgg aagtgcacaa cgccaagacc aagcccagag aggaacagta caacagcacc 960
 taccgggtgg tgtccgtgct gaccgtgctg caccaggact ggctgaacgg caaagagtac 1020
 aagtgaagg tgtccaacaa ggccctgcct gccccatcg agaaaaccat cagcaaggcc 1080
 aagggccagc cccgcgagcc ccaggtgtac aactgcccc ctagccggga cgagctgacc 1140
 aagaaccagg tgtccctgac ctgtctggtc aagggttctt accccagcga tatcgccgtg 1200
 gaatgggaga gcaacggcca gcccgagaac aactacaaga ccaccccccc tgtgctggac 1260
 agcgacggct cattcttcct gtacagcaag ctgaccgtgg acaagagccg gtggcagcag 1320
 ggcaacgtgt tcagctgcag cgtgatgcac gaggccctgc acaaccacta caccagaag 1380
 tccctgagcc tgagccccgg caaatga 1407

<210> 108

<211> 449

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 108

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

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

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

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

Gln Glu Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

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

Thr Thr 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

23791WOPCTSEQ

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 Lys 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 Asp Glu Leu 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

23791WOPCTSEQ

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

Lys

<210> 109

<211> 1407

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 109

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tgcaaggcct ccggctacac cttcacgcac tacaacgtgg actgggtccg acaggctaga      180
ggacagcggc tggaatggat cggcgacatc aacccaacg acggcggcac catctacgcc      240
cagaaattcc aagagagagt gaccatcacc gtcgataagt ccacctccac cgcctacatg      300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg      360
tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc cagcgccagc      420
acaaagggcc ccagcgtggt ccctctggcc cccagcagca agagcacatc tggcggaaca      480
gccgccctgg gctgcctcgt gaaggactac ttccccgagc ccgtgaccgt gtcttggaac      540
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tgcaacgtga accacaagcc cagcaacacc aaggtggaca agaaggtgga acccaagagc      720
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gtgttcctgt tcccccaaa gcccaaggac accctgatga tcagccggac ccccgaagtg      840
acctgcgtgg tgggtggacgt gtcccacgag gaccctgaag tgaagttcaa ttggtacgtg      900
gacggcgtgg aagtgcacaa cgccaagacc aagcccagag aggaacagta caacagcacc      960
taccgggtgg tgtccgtgct gaccgtgctg caccaggact ggctgaacgg caaagagtac     1020
aagtgcaagg tgtccaacaa ggccctgcct gccccatcg agaaaaccat cagcaaggcc     1080
aagggccagc cccgcgagcc ccaggtgtac acactgcccc ctagccggga cgagctgacc     1140
aagaaccagg tgtccctgac ctgtctggtc aagggcttct accccagcga tatcgccgtg     1200
gaatgggaga gcaacggcca gcccgagaac aactacaaga ccaccccccc tgtgctggac     1260
agcgacggct cattcttcct gtacagcaag ctgaccgtgg acaagagccg gtggcagcag     1320
ggcaacgtgt tcagctgcag cgtgatgcac gaggccctgc acaaccacta caccagaag     1380
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23791WOPCTSEQ

<210> 110

<211> 449

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 110

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

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

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

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

Gln Glu Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

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

Thr Thr 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 Lys 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 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 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 Asp Glu Leu₃₆₀ Thr Lys Asn Gln Val₃₆₅ Ser Leu Thr

Cys Leu₃₇₀ Val 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 Val Asp₄₁₅ Lys

Ser Arg Trp Gln₄₂₀ Gln Gly Asn Val Phe₄₂₅ Ser Cys Ser Val Met₄₃₀ His Glu

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

Lys

<210> 111

<211> 1407

<212> DNA

<213> Artificial sequence

<220>

<223> Description of Artificial sequence: Synthetic polynucleotide

<400> 111

23791WOPCTSEQ

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atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag      60
atgcagctgg tgcagtctgg ccccgaagtg aagaaacctg gcacctccgt gaagggtgcc      120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggctaga      180
ggacagcggc tggaatggat cggcgacatc aacccaacc agggcggcac catctacgcc      240
cagaaattcc aagagagagt gaccatcacc gtcgataagt ccacctccac cgcctacatg      300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg      360
tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc cagcgccagc      420
acaaagggcc ccagcgtggt ccctctggcc cccagcagca agagcacatc tggcggaaca      480
gccgccctgg gctgcctcgt gaaggactac ttccccgagc ccgtgaccgt gtcttggaac      540
tctggcgccc tgaccagcgg cgtgcacacc tttccagccg tgctgcagag cagcggcctg      600
tacagcctgt cctctgtggt caccgtgcct agcagcagcc tgggcaccca gacctacatc      660
tgcaacgtga accacaagcc cagcaacacc aagggtggaca agaaggtgga acccaagagc      720
tgcgacaaga cccacacctg tccccctgc cctgcccctg aactgctggg cggaccctcc      780
gtgttcctgt tcccccaaa gcccaaggac accctgatga tcagccggac ccccgaagtg      840
acctgcgtgg tggtggacgt gtcccacgag gaccctgaag tgaagttcaa ttggtacgtg      900
gacggcgtgg aagtgcacaa cgccaagacc aagcccagag aggaacagta caacagcacc      960
taccgggtgg tgtccgtgct gaccgtgctg caccaggact ggctgaacgg caaagagtac     1020
aagtgcaagg tgtccaacaa ggccctgcct gccccatcg agaaaaccat cagcaaggcc     1080
aagggccagc cccgcgagcc ccaggtgtac aactgcccc ctagccggga cgagctgacc     1140
aagaaccagg tgtccctgac ctgtctggtc aagggtcttct accccagcga tatcgccgtg     1200
gaatgggaga gcaacggcca gcccgagaac aactacaaga ccaccccccc tgtgctggac     1260
agcgacggct cattcttcct gtacagcaag ctgaccgtgg acaagagccg gtggcagcag     1320
ggcaacgtgt tcagctgcag cgtgatgcac gaggccctgc acaaccacta caccagaag     1380
tccctgagcc tgagccccgg caaatga                                     1407

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<210> 112

<211> 449

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 112

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

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

Asn Val Asp Trp Val Arg Gln Ala Arg Gly Gln Arg Leu Glu Trp Ile

23791WOPCTSEQ

35

40

45

Gly Asp Ile Asn Pro Asn Gln Gly Gly Thr Ile Tyr Ala Gln Lys Phe
 50 55 60
 Gln Glu Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
 100 105 110
 Thr Thr 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 Lys 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 23791WOPCTSEQ 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 Asp Glu Leu 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> 113
<211> 1398
<212> DNA
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 113						
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atgcagctgg	tgcagtctgg	ccccgaagtg	aagaaacctg	gcacctccgt	gaagggtgtcc	120
tgcaaggcct	ccggctacac	cttcaccgac	tacaacgtgg	actgggtccg	acaggctaga	180
ggacagcggc	tggaatggat	cggcgacatc	aaccccaaca	acggcggcac	catctacgcc	240
cagaaaattcc	aagagagagt	gaccatcacc	gtcgataagt	ccacctccac	cgcctacatg	300
gaactgtcct	ccctgcggag	cgaggacacc	gccgtgtact	actgcgcccg	gaactaccgg	360
tggttcggcg	ccatggatca	ctggggccag	ggcaccaccg	tgaccgtgtc	ctctgcctcc	420
accaagggcc	cctccgtggt	ccctctggcc	ccttgctccc	ggtccacctc	cgagtctacc	480
gccgctctgg	gctgcctggt	gaaagactac	ttccccgagc	ctgtgaccgt	gtcctggaac	540
tctggcgccc	tgacctctgg	cgtgcacacc	ttccctgccg	tgtgtcagtc	ctccggcctg	600

23791WOPCTSEQ

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tactccctgt cctccgtggt gacagtgtccc tcctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac      720
ggccctccct gccccccctg ccctgccccca gaatttcttg gaggccttc cgtgtttctg      780
ttcccccaa agccaagga caccctgatg atctcccga ccccgaagt gacctgctg      840
gtggtggacg tgtccaaga agatcccgag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccaggtgta caccctgtccc ctagccaag aagagatgac caagaaccag     1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200
tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc     1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc     1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc     1380
ctgagcctgg gcaagtga                                     1398

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<210> 114

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 114

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

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

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

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

Gln Glu Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

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

23791WOPCTSEQ

Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 355 360 365
 Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 370 375 380

23791WOPCTSEQ

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 115

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 115

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt ccactcccag	60
atgcagctgg tgcagtccgg ccctgaagtg aagaaacccg gcacctccgt gaaggtgtcc	120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtgcg acaggccaga	180
ggccagagac tggaatggat cggcgacatc aacccaacg acggcggcac catctacgcc	240
cagaaattcc aggaacgcgt caccatcacc gtggacaagt ccacctccac cgcctacatg	300
gaactgtcct ccctgagatc cgaggacacc gccgtgtact actgcgcccg gaattaccgg	360
tggttcggcg ccatggatca ttggggccag ggcaccacag tgaccgtgtc ctctgcttcc	420
accaagggcc cctcagtgtt ccctctggcc ccttgctcca gatccacctc cgagtctacc	480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ccgtgacagt gtcctggaac	540
tctggcgctc tgaccagtgg cgtgcacacc ttccctgccg tgctgcagtc tagcggcctg	600
tactccctgt cctccgtggt gacagtgcct tcctccagcc tgggcaccaa gacctacacc	660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac	720
ggccctccct gccaccttg ccctgcccct gaatttctgg gaggcccctc cgtgtttctg	780
ttccccccaa agcccaagga caccctgatg atctcccga cccctgaagt gacctgcgtg	840
gtggtggacg tgtcccagga agatcccag gtccagttca attggtacgt ggacggcgtg	900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg	960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagagta caagtgcaaa	1020
gtcagcaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caaggggcag	1080
ccccgcgagc ctcaggtgta cacactgcca cctagccagg aagagatgac caagaaccag	1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag	1200
tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc	1260

23791WOPCTSEQ

tccttcttcc tgtactctcg gctgaccgtg gataagagcc ggtggcagga aggcaatgtc 1320
 tttagctgca gcgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
 ctgagcctgg gcaaata 1398

<210> 116
 <211> 446
 <212> PRT
 <213> Artificial Sequence

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

<400> 116
 Gln Met Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys Pro Gly Thr
 1 5 10 15

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

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

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

Gln Glu Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205

23791WOPCTSEQ

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 117
<211> 1398
<212> DNA
<213> Artificial Sequence

<220>

23791WOPCTSEQ

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 117

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atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag      60
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tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggctaga      180
ggacagcggc tggaatggat cggcgacatc aaccccaact ccggcggcac catctacgcc      240
cagaaattcc aagagagagt gaccatcacc gtcgataagt ccacctccac cgcctacatg      300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg      360
tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc      420
accaagggcc cctccgtggt ccctctggcc ctttgctccc ggtccacctc cgagtctacc      480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac      540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg      600
tactccctgt cctccgtggt gacagtgcc tctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aagggtggaca agcgggtgga atctaagtac      720
ggccctccct gccccccctg ccctgcccc gaatttcttg gaggcccttc cgtgtttctg      780
ttcccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg      840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag     1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200
tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc     1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc     1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc     1380
ctgagcctgg gcaagtga                                     1398

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<210> 118

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 118

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

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

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23791WOPCTSEQ
25

20

30

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

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

Gln Glu Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

23791WOPCTSEQ

290

295

300

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430

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

<210> 119

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 119

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atgcagctgg tgcagtctgg ccccgaaagt aagaaacctg gcacctccgt gaaggtgtcc 120

tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggctaga 180

ggacagcggc tggaatggat cggcgacatc aacccaacc agggcggcac catctacgcc 240

cagaaattcc aagagagagt gaccatcacc gtcgataagt ccacctccac cgcctacatg 300

gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccgaactaccgg 360

tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc 420

accaagggcc cctccgtgtt ccctctggcc ccttgctccc ggtccacctc cgagtctacc 480

gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540

tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600

23791WOPCTSEQ

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tactccctgt cctccgtggt gacagtgtccc tcctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac      720
ggccctccct gccccccctg ccctgccccca gaatttcttg gaggccttc cgtgtttctg      780
ttcccccaa agccaagga caccctgatg atctcccga ccccgaagt gacctgctg      840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccaggtgta caccctgtccc ctagccaag aagagatgac caagaaccag     1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200
tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc     1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc     1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc     1380
ctgagcctgg gcaagtga                                     1398

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<210> 120

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 120

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

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

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

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

Gln Glu Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

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

23791WOPCTSEQ

Thr Thr Val₁₁₅ Thr Val Ser Ser Ala₁₂₀ Ser Thr Lys Gly₁₂₅ Pro Ser Val Phe
Pro Leu₁₃₀ Ala Pro Cys Ser Arg₁₃₅ Ser Thr Ser Glu Ser₁₄₀ 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 Lys Thr Tyr₂₀₀ Thr Cys Asn Val Asp₂₀₅ His Lys Pro
Ser Asn₂₁₀ Thr Lys Val Asp Lys₂₁₅ Arg Val Glu Ser Lys₂₂₀ Tyr Gly Pro Pro
Cys₂₂₅ Pro Pro Cys Pro Ala₂₃₀ Pro Glu Phe Leu Gly₂₃₅ Gly Pro Ser Val Phe₂₄₀
Leu Phe Pro Pro Lys₂₄₅ Pro Lys Asp Thr Leu₂₅₀ Met Ile Ser Arg Thr₂₅₅ Pro
Glu Val Thr Cys₂₆₀ Val Val Val Asp Val₂₆₅ Ser Gln Glu Asp Pro₂₇₀ Glu Val
Gln Phe Asn₂₇₅ Trp Tyr Val Asp Gly₂₈₀ Val Glu Val His Asn₂₈₅ Ala Lys Thr
Lys Pro₂₉₀ Arg Glu Glu Gln Phe₂₉₅ Asn Ser Thr Tyr Arg₃₀₀ Val Val Ser Val
Leu Thr Val Leu His Gln₃₁₀ Asp Trp Leu Asn Gly₃₁₅ Lys Glu Tyr Lys Cys₃₂₀
Lys Val Ser Asn Lys₃₂₅ Gly Leu Pro Ser Ser₃₃₀ Ile Glu Lys Thr Ile₃₃₅ Ser
Lys Ala Lys Gly₃₄₀ Gln Pro Arg Glu Pro₃₄₅ Gln Val Tyr Thr Leu₃₅₀ Pro Pro
Ser Gln Glu₃₅₅ Glu Met Thr Lys Asn₃₆₀ Gln Val Ser Leu Thr₃₆₅ Cys Leu Val
Lys Gly₃₇₀ Phe Tyr Pro Ser Asp₃₇₅ Ile Ala Val Glu Trp₃₈₀ Glu Ser Asn Gly

23791WOPCTSEQ

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 121

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 121

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag	60
atgcagctgg tgcagtctgg ccccgaagtg aagaaacctg gcacctccgt gaaggtgtcc	120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggctaga	180
ggacagcggc tggaatggat cggcgacatc aacccaacg gcggcggcac catctacgcc	240
cagaaattcc aagagagagt gaccatcacc gtcgataagt ccacctccac cgcctacatg	300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg	360
tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc	420
accaagggcc cctccgtggt ccctctggcc ccttgctccc ggtccacctc cgagtctacc	480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac	540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg	600
tactccctgt cctccgtggt gacagtgtcc tcctccagcc tgggcaccaa gacctacacc	660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac	720
ggccctccct gccccccctg ccctgcccc gaatttctgg gaggcccttc cgtgtttctg	780
ttccccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg	840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg	900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg	960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa	1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag	1080
cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag	1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag	1200
tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc	1260

23791WOPCTSEQ

tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 122
 <211> 446
 <212> PRT
 <213> Artificial Sequence

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

<400> 122
 Gln Met Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys Pro Gly Thr
 1 5 10 15

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

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

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

Gln Glu Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205

23791WOPCTSEQ

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 123

<211> 1398

<212> DNA

<213> Artificial sequence

<220>

<223> Description of Artificial sequence: Synthetic

23791WOPCTSEQ

polynucleotide

<400> 123

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atggaatggt cctgggtgtt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag      60
gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg gcgcctccgt gaaggtgtcc      120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca      180
ggacagggcc tggaatggat gggcgacatc aacccaaca acggcggcac catctacgcc      240
cagaaattcc agggcagagt gacctccacc gtggacacct ccatctccac cgcctacatg      300
gaactgtccc ggctgcggag cgacgacacc gtggtgtact actgcgcccg gaactaccgg      360
tccttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc      420
accaagggcc cctccgtgtt ccctctggcc ctttgtctcc ggtccacctc cgagtctacc      480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac      540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg      600
tactccctgt cctccgtggt gacagtgtcc tcctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac      720
ggccctccct gccccccctg ccctgcccc gaatttcttg gaggcccttc cgtgtttctg      780
ttccccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg      840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag     1140
gtgtcccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200
tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc     1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc     1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgttcc     1380
ctgagcctgg gcaagtga                                     1398

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<210> 124

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 124

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

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

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23791WOPCTSEQ

Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45
 Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ala Gln Lys Phe
 50 55 60
 Gln Gly Arg Val Thr Ser Thr Val Asp Thr Ser Ile Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Val Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asn Tyr Arg Ser Phe Gly Ala Met Asp His Trp Gly Gln Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 290 295 300

23791WOPCTSEQ

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 125

<211> 717

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 125

atgtccgtgc ctaccaggt gctgggactg ctgctgctgt ggctgaccga cgccagatgc	60
gacatcgtca tgaccagac ccctctgtcc ctgtccgtga caccggcca gcctgcttcc	120
atttcctgca aggcctccca gtccctggac tacgaaggcg actccgacat gaattggtat	180
ctgcagaagc ctggccagcc tcctcagctg ctgatctacg ggcctccaa tctggagtct	240
ggcgtgcccc acagattctc cggatctggc agtggcaccg acttcaccct gaagatcagc	300
cgggtggaag ccgaggacgt gggcgtgtac tactgtcagc agtctaccga ggaccctcgg	360
acctttggcg gaggcaccaa ggtggaaatc aagcggacag tggctgcccc ttccgtgttt	420
atcttccctc catccgacga acagctgaag tccggcaccg cctctgtggt ctgcctgctg	480
aacaacttct acccacgcga ggccaaggtc cagtgggaagg tggacaacgc cctgcagtcc	540
ggcaactccc aggaatccgt caccgagcag gactccaaag actccaccta cagcctgtcc	600

23791WOPCTSEQ

agcaccctga ccctgagcaa ggccgactac gagaagcaca aggtgtacgc ctgcgaagtg 660
 acccaccagg gcctgagcag ccccgtagacc aagtccttca accggggcga gtgctga 717

<210> 126
 <211> 238
 <212> PRT
 <213> Artificial Sequence

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

<400> 126
 Met Ser Val Pro Thr Gln Val Leu Gly Leu Leu Leu Leu Trp Leu Thr
 1 5 10 15

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

Val Thr Pro Gly Gln Pro Ala Ser Ile Ser Cys Lys Ala Ser Gln Ser
 35 40 45

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

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

Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
 85 90 95

Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
 100 105 110

Gln Gln Ser Thr Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val
 115 120 125

Glu Ile Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro
 130 135 140

Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu
 145 150 155 160

Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn
 165 170 175

Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser
 180 185 190

Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala
 195 200 205

Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly
 Page 79

210

215

220

Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 225 230 235

<210> 127
 <211> 1398
 <212> DNA
 <213> Artificial Sequence

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

<400> 127
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 gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc 120
 tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca 180
 ggacagggcc tggaatggat gggcgacatc aacccaaca acggcggcac catctacgcc 240
 cagaaattcc agggcagagt gaccatgacc gtggacacct ccacctccac cgtgtacatg 300
 gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccga gaactaccgg 360
 tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc 420
 accaagggcc cctccgtggt ccctctggcc ccttgctccc ggtccacctc cgagtctacc 480
 gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540
 tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
 tactccctgt cctccgtggt gacagtgtcc tcctccagcc tgggcaccaa gacctacacc 660
 tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac 720
 ggccctccct gccccccctg ccctgccccga gaatttctgg gagggccttc cgtgtttctg 780
 ttccccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg 840
 gtggtggacg tgtcccaaga agatcccgag gtccagttca attggtacgt ggacggcgtg 900
 gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg 960
 gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa 1020
 gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag 1080
 cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag 1140
 gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 128
 <211> 446

23791WOPCTSEQ

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 128

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 Asp Tyr
20 25 30Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ala Gln Lys Phe
50 55 60Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
115 120 125Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu
130 135 140Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
145 150 155 160Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
165 170 175Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
180 185 190Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
210 215 220Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

23791WOPCTSEQ

Leu Phe Pro Pro Lys₂₄₅ Pro Lys Asp Thr Leu₂₅₀ Met Ile Ser Arg Thr₂₅₅ Pro

Glu Val Thr Cys₂₆₀ Val Val Val Asp Val₂₆₅ Ser Gln Glu Asp Pro₂₇₀ Glu Val

Gln Phe Asn₂₇₅ Trp Tyr Val Asp Gly₂₈₀ Val Glu Val His Asn₂₈₅ Ala Lys Thr

Lys Pro₂₉₀ Arg Glu Glu Gln Phe₂₉₅ Asn Ser Thr Tyr Arg₃₀₀ Val Val Ser Val

Leu Thr Val Leu His Gln₃₁₀ Asp Trp Leu Asn Gly₃₁₅ Lys Glu Tyr Lys Cys₃₂₀

Lys Val Ser Asn Lys₃₂₅ Gly Leu Pro Ser Ser₃₃₀ Ile Glu Lys Thr Ile₃₃₅ Ser

Lys Ala Lys Gly₃₄₀ Gln Pro Arg Glu Pro₃₄₅ Gln Val Tyr Thr Leu₃₅₀ Pro Pro

Ser Gln Glu₃₅₅ Glu Met Thr Lys Asn₃₆₀ Gln Val Ser Leu Thr₃₆₅ Cys Leu Val

Lys Gly₃₇₀ Phe Tyr Pro Ser Asp₃₇₅ Ile Ala Val Glu Trp₃₈₀ Glu Ser Asn Gly

Gln Pro Glu Asn Asn Tyr₃₉₀ Lys Thr Thr Pro Pro₃₉₅ Val Leu Asp Ser Asp₄₀₀

Gly Ser Phe Phe Leu₄₀₅ Tyr Ser Arg Leu Thr₄₁₀ Val Asp Lys Ser Arg₄₁₅ Trp

Gln Glu Gly Asn₄₂₀ Val Phe Ser Cys Ser₄₂₅ Val Met His Glu Ala₄₃₀ Leu His

Asn His Tyr₄₃₅ Thr Gln Lys Ser Leu₄₄₀ Ser Leu Ser Leu Gly₄₄₅ Lys

<210> 129

<211> 720

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 129

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gacgtggtga tgaccagag ccctctgtcc ctgcccgtga cactgggaca gcccgctagc 120

atcagctgca gaagcagcaa gagcctgctg cacagcgacg gcaacaccta cctgtactgg 180

23791WOPCTSEQ

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ttccagcaga ggcccggaca gagccccagg agactgatct acaggatgag caacctggcc      240
tccggcgtgc ccgatagatt ctccggcagc ggctccggca ccgacttcac cctgaagatc      300
tccagagtgg aggccgagga cgtgggcgtg tactactgca tgcagcacct ggagtacccc      360
ttcaccttcg gcggcggcac aaaggtggag atcaagcgta cgggtggctgc cccctccgtg      420
ttcatcttcc cccccagcga tgagcagctg aagagcggca cagccagcgt ggtgtgcctg      480
ctgaacaact tctaccccag ggaggccaag gtgcagtgga aggtggacaa cgccctgcag      540
agcggcaaca gccaggagtc cgtgaccgag caggacagca aggacagcac ctacagcctg      600
agcagcacac tgaccctgag caaggccgac tacgagaagc acaaggtgta cgcctgcgag      660
gtgacccatc agggcctgag cagccccgtg accaagagct tcaacagggg cgagtgtgta      720

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<210> 130

<211> 219

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 130

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

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
20 25 30

Asp Gly Asn Thr Tyr Leu Tyr Trp Phe Gln Gln Arg Pro Gly Gln Ser
35 40 45

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

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Leu Glu Tyr Pro Phe Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
115 120 125

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

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145 150 155 160

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

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

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

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 210 215

<210> 131

<211> 708

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 131

atgagcgtgc ccacacaggt gctgggcctg ctgctgctgt ggctgaccga cgccaggtgc	60
gagatcgtga tgaccagag ccctgccaca ctgagcgtga gccctggcga gagagctacc	120
ctgagctgca gggcctccca gagcatcggc accagcatcc actggtacca gcagaagcct	180
ggacaggccc ccaggctgct gatctactac gccagcgaga gcatcagcgg catccctgcc	240
agatttagcg gcagcggcag cggcaccgag ttcacactga ccatcagcag cctgcagagc	300
gaggacttcg ccgtgtacta ctgccagcag agcaacagct ggcctaccta caccttcggc	360
ggcggcacca aggtggagat caagcgtacg gtggctgccc cctccgtggt catcttcccc	420
cccagcgatg agcagctgaa gagcggcaca gccagcgtgg tgtgcctgct gaacaacttc	480
taccccaggg aggccaaggt gcagtggaag gtggacaacg ccctgcagag cggcaacagc	540
caggagtccg tgaccgagca ggacagcaag gacagcacct acagcctgag cagcacactg	600
accctgagca aggccgacta cgagaagcac aaggtgtacg cctgcgaggt gacccatcag	660
ggcctgagca gcccgtgac caagagcttc aacaggggcg agtgctga	708

<210> 132

<211> 215

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 132

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

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

23791WOPCTSEQ

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

<210> 133

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 133

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gactcccag	60
gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc	120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca	180
ggacagcggc tggaatggat gggcgacatc aaccccaact ccggcggcac catctactcc	240

23791WOPCTSEQ

cagaaattcc agggcagagt gaccatcacc gtggacacct ccgcctccac cgcctacatg	300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg	360
tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc	420
accaagggcc cctccgtggt ccctctggcc ctttgctccc ggtccacctc cgagtctacc	480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac	540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg	600
tactccctgt cctccgtggt gacagtgtcc tcctccagcc tgggcaccaa gacctacacc	660
tgtaacgtgg accacaagcc ctccaacacc aagggtggaca agcgggtgga atctaagtac	720
ggccctccct gccccccctg ccctgccccca gaatttctgg gagggccctc cgtgtttctg	780
ttccccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg	840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg	900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg	960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa	1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag	1080
cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag	1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag	1200
tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc	1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc	1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgtcc	1380
ctgagcctgg gcaagtga	1398

<210> 134

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 134

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	Asp	Tyr
			20					25					30		

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

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

Gln	Gly	Arg	Val	Thr	Ile	Thr	Val	Asp	Thr	Ser	Ala	Ser	Thr	Ala	Tyr
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

23791WOPCTSEQ

65 70 75 80
 Met Glu Leu Ser Ser₈₅ Leu Arg Ser Glu Asp₉₀ Thr Ala Val Tyr Tyr₉₅ Cys
 Ala Arg Asn Tyr₁₀₀ Arg Trp Phe Gly Ala₁₀₅ Met Asp His Trp Gly₁₁₀ Gln Gly
 Thr Thr Val₁₁₅ Thr Val Ser Ser Ala₁₂₀ Ser Thr Lys Gly Pro₁₂₅ Ser Val Phe
 Pro Leu₁₃₀ Ala Pro Cys Ser Arg₁₃₅ Ser Thr Ser Glu Ser₁₄₀ 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 Lys Thr Tyr₂₀₀ Thr Cys Asn Val Asp₂₀₅ His Lys Pro
 Ser Asn₂₁₀ Thr Lys Val Asp Lys₂₁₅ Arg Val Glu Ser Lys₂₂₀ Tyr Gly Pro Pro
 Cys₂₂₅ Pro Pro Cys Pro Ala₂₃₀ Pro Glu Phe Leu Gly₂₃₅ Gly Pro Ser Val Phe₂₄₀
 Leu Phe Pro Pro Lys₂₄₅ Pro Lys Asp Thr Leu₂₅₀ Met Ile Ser Arg Thr₂₅₅ Pro
 Glu Val Thr Cys₂₆₀ Val Val Val Asp Val₂₆₅ Ser Gln Glu Asp Pro₂₇₀ Glu Val
 Gln Phe Asn₂₇₅ Trp Tyr Val Asp Gly₂₈₀ Val Glu Val His Asn₂₈₅ Ala Lys Thr
 Lys Pro₂₉₀ Arg Glu Glu Gln Phe₂₉₅ Asn Ser Thr Tyr Arg₃₀₀ Val Val Ser Val
 Leu Thr Val Leu His Gln₃₁₀ Asp Trp Leu Asn Gly₃₁₅ Lys Glu Tyr Lys Cys₃₂₀
 Lys Val Ser Asn Lys₃₂₅ Gly Leu Pro Ser Ser₃₃₀ Ile Glu Lys Thr Ile₃₃₅ Ser
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
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Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
355 360 365

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 135
<211> 717
<212> DNA
<213> Artificial Sequence

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

<400> 135
atgtccgtgc ccaccaggt gctgggactg ctgctgctgt ggctgaccga cgccagatgc 60
gacgtggtga tgaccagtc cccctgtcc ctgcctgtga cactgggcca gcctgcctcc 120
atctcctgca aggctccca gtccctggac tacgaggcg actccgacat gaactggttc 180
cagcagcggc ctggccagtc ccctcggaga ctgatctacg gcgcctccaa cctggaatcc 240
ggcgtgcccc acagattctc cggtccggc tctggcaccg acttcaccct gaagatcagc 300
cgggtggaag ccgaggacgt gggcgtgtac tactgccagc agtccaccga ggacccccgg 360
acctttggcg gaggcaccaa ggtggaaatc aagcggaccg tggccgctcc ctccgtgttc 420
atcttccac cctccgacga gcagctgaag tccggcaccg cctccgtggt ctgcctgctg 480
aacaacttct accctcgcga ggccaagggt cagtgggaagg tggacaacgc cctgcagtcc 540
ggcaactccc aagaatccgt gaccgagcag gactccaagg acagcaccta ctccctgtcc 600
tccaccctga ccctgtccaa ggccgactac gagaagcaca aggtgtacgc ctgcgaagtg 660
accaccagg gcctgtccag ccccgtagacc aagtccttca accggggcga gtgctga 717

<210> 136
<211> 218
<212> PRT
<213> Artificial Sequence

<220>

23791WOPCTSEQ

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 136

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

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

Gly Asp Ser Asp Met Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser Pro
35 40 45

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

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
65 70 75 80

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Ser Thr
85 90 95

Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
100 105 110

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

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

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

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

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

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

Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 137

<211> 717

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

23791WOPCTSEQ

<400> 137
 atgtccgtgc ccaccaggt gctgggactg ctgctgctgt ggctgaccga cgccagatgc 60
 gacatcgtga tgaccagac cccctgttcc ctgtccgtga cacctggcca gcctgcctcc 120
 atctcctgca aggcctccca gtccctggac tacgagggcg actccgacat gaactggtat 180
 ctgcagaagc ccggccagcc ccctcagctg ctgatctacg gcgcctccaa cctggaatcc 240
 ggcgtgcccc acagattctc cggtccggc tctggcaccg acttcaccct gaagatcagc 300
 cgggtggaag ccgaggacgt gggcgtgtac tactgccagc agtccaccga ggacccccgg 360
 acctttggcg gaggcaccaa ggtggaaatc aagcggaccg tggccgctcc ctccgtgttc 420
 atcttccac cctccgacga gcagctgaag tccggcaccg cctccgtggt ctgcctgctg 480
 aacaacttct accctcgcga ggccaaggtg cagtgggaagg tggacaacgc cctgcagtcc 540
 ggcaactccc aagaatccgt gaccgagcag gactccaagg acagcaccta ctccctgtcc 600
 tccaccctga ccctgtccaa ggccgactac gagaagcaca aggtgtacgc ctgcgaagtg 660
 acccaccagg gcctgtccag ccccgtagcc aagtccttca accggggcga gtgctga 717

<210> 138
 <211> 218
 <212> PRT
 <213> Artificial Sequence

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

<400> 138
 Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Ser Val Thr Pro Gly
 1 5 10 15
 Gln Pro Ala Ser Ile Ser Cys Lys Ala Ser Gln Ser Leu Asp Tyr Glu
 20 25 30
 Gly Asp Ser Asp Met Asn Trp Tyr Leu Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Gln Leu Leu Ile Tyr Gly Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
 65 70 75 80
 Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Ser Thr
 85 90 95
 Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
 100 105 110
 Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
 115 120 125

23791WOPCTSEQ

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

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

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

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

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

Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 210 215

<210> 139
 <211> 1398
 <212> DNA
 <213> Artificial Sequence

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

<400> 139
 atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag 60
 gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc 120
 tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca 180
 ggacagggcc tggaatggat gggcgacatc aacccaacg acggcggcac catctacgcc 240
 cagaaattcc agggcagagt gacctccacc gtggacacct ccatctccac cgcctacatg 300
 gaactgtccc ggctgcggag cgacgacacc gtggtgtact actgcgcccg gaactaccgg 360
 tccttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc 420
 accaagggcc cctccgtggt ccctctggcc ccttgctccc ggtccacctc cgagtctacc 480
 gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540
 tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
 tactccctgt cctccgtggt gacagtgcc tcctccagcc tgggcaccaa gacctacacc 660
 tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac 720
 ggccctccct gccccccctg ccctgcccc gaatttctgg gaggcccttc cgtgtttctg 780
 ttcccccaa agccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg 840
 gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg 900
 gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg 960
 gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa 1020

23791WOPCTSEQ

gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag 1080
 cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag 1140
 gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 140

<211> 446

<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 Asp Tyr
 20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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

23791WOPCTSEQ

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 355 360 365
 Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 370 375 380
 Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 385 390 395 400
 Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
 405 410 415
 Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445

23791WOPCTSEQ

<210> 141
 <211> 1398
 <212> DNA
 <213> Artificial Sequence

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

<400> 141
 atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gactctccag 60
 gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg gcgcctccgt gaaggtgtcc 120
 tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca 180
 ggacagggcc tggaatggat gggcgacatc aacccaacg acggcggcac catctacgcc 240
 cagaaattcc agggcagagt gacctccacc gtggacacct ccatctccac cgcctacatg 300
 gaactgtccc ggctgcggag cgacgacacc gtggtgtact actgcgcccg gaactaccgg 360
 tacttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc 420
 accaagggcc cctccgtggt ccctctggcc ccttgctccc ggtccacctc cgagtctacc 480
 gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540
 tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
 tactccctgt cctccgtggt gacagtgtccc tcctccagcc tgggcaccaa gacctacacc 660
 tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac 720
 ggccctccct gccccccctg ccctgcccc gaatttctgg gagggccctc cgtgtttctg 780
 ttcccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg 840
 gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg 900
 gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg 960
 gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgc aaa 1020
 gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag 1080
 cctcgcgagc ccaggtgta caccctgccc cctagccaag aagagatgac caagaaccag 1140
 gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 142
 <211> 446
 <212> PRT
 <213> Artificial Sequence

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

23791WOPCTSEQ

polypeptide

<400> 142

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 Asp Tyr
 20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 143

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 143

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gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc 120

tgcaaggcct ccggctacac cttaccgac tacaacgtgg actgggtccg acaggcccca 180

ggacagggcc tggaatggat gggcgacatc aacccaacg acggcggcac catctacgcc 240

cagaaattcc agggcagagt gacctcacc gtggacacct ccatctccac cgcttacatg 300

gaactgtccc ggctgcggag cgacgacacc gtggtgtact actgcgccg gaactaccgg 360

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accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc 480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
tactccctgt cctccgtggt gacagtgtcc tcctccagcc tgggcaccaa gacctacacc 660
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gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa 1020
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ctgagcctgg gcaagtga 1398

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<210> 144

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 144

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 Asp Tyr
20 25 30

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

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

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

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Met Glu Leu Ser Arg₈₅ Leu Arg Ser Asp₉₀ Asp Thr Val Val Tyr Tyr₉₅ Cys

Ala Arg Asn Tyr₁₀₀ Arg Trp Phe Gly Ala₁₀₅ Met Asp His Trp Gly₁₁₀ Gln Gly

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

Pro Leu₁₃₀ Ala Pro Cys Ser Arg₁₃₅ Ser Thr Ser Glu Ser₁₄₀ 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 Lys Thr Tyr₂₀₀ Thr Cys Asn Val Asp₂₀₅ His Lys Pro

Ser Asn₂₁₀ Thr Lys Val Asp Lys₂₁₅ Arg Val Glu Ser Lys₂₂₀ Tyr Gly Pro Pro

Cys₂₂₅ Pro Pro Cys Pro Ala₂₃₀ Pro Glu Phe Leu Gly₂₃₅ Gly Pro Ser Val Phe₂₄₀

Leu Phe Pro Pro Lys₂₄₅ Pro Lys Asp Thr Leu₂₅₀ Met Ile Ser Arg Thr₂₅₅ Pro

Glu Val Thr Cys₂₆₀ Val Val Val Asp Val₂₆₅ Ser Gln Glu Asp Pro₂₇₀ Glu Val

Gln Phe Asn₂₇₅ Trp Tyr Val Asp Gly₂₈₀ Val Glu Val His Asn₂₈₅ Ala Lys Thr

Lys Pro₂₉₀ Arg Glu Glu Gln Phe₂₉₅ Asn Ser Thr Tyr Arg₃₀₀ Val Val Ser Val

Leu Thr Val Leu His Gln₃₁₀ Asp Trp Leu Asn Gly₃₁₅ Lys Glu Tyr Lys Cys₃₂₀

Lys Val Ser Asn Lys₃₂₅ Gly Leu Pro Ser Ser₃₃₀ Ile Glu Lys Thr Ile₃₃₅ Ser

Lys Ala Lys Gly₃₄₀ Gln Pro Arg Glu Pro₃₄₅ Gln Val Tyr Thr Leu₃₅₀ Pro Pro

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 145
<211> 1398
<212> DNA
<213> Artificial Sequence

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

<400> 145
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gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc 120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca 180
ggacagggcc tggaatggat gggcgacatc aacccaact ccggcggcac catctacgcc 240
cagaaattcc agggcagagt gacctcacc gtggacacct ccatctccac cgcctacatg 300
gaactgtccc ggctgcggag cgacgacacc gtggtgtact actgcgcccg gaactaccgg 360
cagttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc 420
accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc 480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
tactccctgt cctccgtggt gacagtgcc tcctccagcc tgggcaccaa gacctacacc 660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac 720
ggccctccct gccccccctg ccctgcccc gaatttctgg gaggcccttc cgtgtttctg 780
ttcccccaa agccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg 840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg 900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg 960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa 1020

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 gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 146

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 146

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

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

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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

23791WOPCTSEQ

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

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

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

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<210> 147
 <211> 1398
 <212> DNA
 <213> Artificial Sequence

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

<400> 147
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 gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc 120
 tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca 180
 ggacagggcc tggaatggat gggcgacatc aacccaact ccggcggcac catctacgcc 240
 cagaaattcc agggcagagt gacctcacc gtggacacct ccatctccac cgcctacatg 300
 gaactgtccc ggctgcggag cgacgacacc gtggtgtact actgcgcccg gaactaccgg 360
 tccttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc 420
 accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc 480
 gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540
 tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
 tactccctgt cctccgtggt gacagtgtcc tcctccagcc tgggcaccaa gacctacacc 660
 tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac 720
 ggccctccct gccccccctg ccctgcccc aattttctgg gaggcccttc cgtgtttctg 780
 ttcccccaa agccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg 840
 gtggtggacg tgtccaaga agatcccgag gtccagttca attggtacgt ggacggcgtg 900
 gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg 960
 gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa 1020
 gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag 1080
 cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag 1140
 gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 148
 <211> 446
 <212> PRT
 <213> Artificial Sequence

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

23791WOPCTSEQ

<400> 148

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 Asp Tyr
 20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270

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Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 149

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 149

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gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc	120
tgcaaggcct ccggctacac cttaccgac tacaacgtgg actgggtccg acaggcccca	180
ggacagggcc tggaatggat gggcgacatc aacccaact ccggcggcac catctacgc	240
cagaaattcc agggcagagt gacctcacc gtggacacct ccatctccac cgcctacatg	300
gaactgtccc ggctgcggag cgacgacacc gtggtgtact actgcgcccg gaactaccgg	360

23791WOPCTSEQ

tacttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc	420
accaagggcc cctccgtgtt ccctctggcc ccttgctccc ggtccacctc cgagtctacc	480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac	540
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tactccctgt cctccgtggt gacagtgtccc tcctccagcc tgggcaccaa gacctacacc	660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac	720
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ttcccccaa agccaagga caccctgatg atctcccga cccccgaagt gacctgcgtg	840
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gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg	960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa	1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag	1080
cctcgcgagc cccaggtgta caccctgccc cctagccaag aagagatgac caagaaccag	1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag	1200
tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc	1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc	1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc	1380
ctgagcctgg gcaagtga	1398

<210> 150
 <211> 446
 <212> PRT
 <213> Artificial Sequence

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

<400> 150
 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 Asp Tyr
 20 25 30

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

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

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

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Val Val Tyr Tyr Cys

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85

90

95

Ala Arg Asn Tyr Arg Tyr Phe Gly Ala Met Asp His Trp Gly Gln Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val

23791WOPCTSEQ

355

360

365

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430

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

<210> 151

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 151

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tgcaaggcct ccggctacac cttaccgac tacaacgtgg actgggtccg acaggcccca      180
ggacagggcc tggaatggat gggcgacatc aacccaact ccggcggcac catctacgcc      240
cagaaattcc agggcagagt gacctccacc gtggacacct ccatctccac cgcctacatg      300
gaactgtccc ggctgcggag cgacgacacc gtggtgtact actgcgcccg gaactaccgg      360
tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc      420
accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc      480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac      540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg      600
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ttcccccaa agccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg      840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080

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23791WOPCTSEQ

cctcgcgagc cccaggtgta caccctgccc cctagccaag aagagatgac caagaaccag 1140
 gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 152

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 152

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 Asp Tyr
 20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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

23791WOPCTSEQ

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

Ser Ser Leu₁₉₅ Gly Thr Lys Thr Tyr₂₀₀ Thr Cys Asn Val Asp₂₀₅ His Lys Pro

Ser Asn₂₁₀ Thr Lys Val Asp Lys₂₁₅ Arg Val Glu Ser Lys₂₂₀ Tyr Gly Pro Pro

Cys₂₂₅ Pro Pro Cys Pro Ala₂₃₀ Pro Glu Phe Leu Gly₂₃₅ Gly Pro Ser Val Phe₂₄₀

Leu Phe Pro Pro Lys₂₄₅ Pro Lys Asp Thr Leu₂₅₀ Met Ile Ser Arg Thr₂₅₅ Pro

Glu Val Thr Cys₂₆₀ Val Val Val Asp Val₂₆₅ Ser Gln Glu Asp Pro₂₇₀ Glu Val

Gln Phe Asn₂₇₅ Trp Tyr Val Asp Gly₂₈₀ Val Glu Val His Asn₂₈₅ Ala Lys Thr

Lys Pro₂₉₀ Arg Glu Glu Gln Phe₂₉₅ Asn Ser Thr Tyr Arg₃₀₀ Val Val Ser Val

Leu Thr Val Leu His Gln₃₁₀ Asp Trp Leu Asn Gly₃₁₅ Lys Glu Tyr Lys Cys₃₂₀

Lys Val Ser Asn Lys₃₂₅ Gly Leu Pro Ser Ser₃₃₀ Ile Glu Lys Thr Ile₃₃₅ Ser

Lys Ala Lys Gly₃₄₀ Gln Pro Arg Glu Pro₃₄₅ Gln Val Tyr Thr Leu₃₅₀ Pro Pro

Ser Gln Glu₃₅₅ Glu Met Thr Lys Asn₃₆₀ Gln Val Ser Leu Thr₃₆₅ Cys Leu Val

Lys Gly₃₇₀ Phe Tyr Pro Ser Asp₃₇₅ Ile Ala Val Glu Trp₃₈₀ Glu Ser Asn Gly

Gln Pro Glu Asn Asn Tyr₃₉₀ Lys Thr Thr Pro Pro₃₉₅ Val Leu Asp Ser Asp₄₀₀

Gly Ser Phe Phe Leu₄₀₅ Tyr Ser Arg Leu Thr₄₁₀ Val Asp Lys Ser Arg₄₁₅ Trp

Gln Glu Gly Asn₄₂₀ Val Phe Ser Cys Ser₄₂₅ Val Met His Glu Ala₄₃₀ Leu His

Asn His Tyr₄₃₅ Thr Gln Lys Ser Leu₄₄₀ Ser Leu Ser Leu Gly₄₄₅ Lys

23791WOPCTSEQ

<210> 153
 <211> 1398
 <212> DNA
 <213> Artificial Sequence

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

<400> 153
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 gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc 120
 tgcaaggcct ccggctacac cttaccgac tacaacgtgg actgggtccg acaggcccca 180
 ggacagggcc tggaatggat gggcgacatc aacccaaca acggcggcac catctacgcc 240
 cagaaattcc agggcagagt gacctcacc gtggacacct ccatctccac cgcctacatg 300
 gaactgtccc ggctgcggag cgacgacacc gtggtgtact actgcgccg gaactaccgg 360
 tccttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc 420
 accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc 480
 gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540
 tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
 tactccctgt cctccgtggt gacagtgtcc tcctccagcc tgggcaccaa gacctacacc 660
 tgtaacgtgg accacaagcc ctccaacacc aagggtggaca agcgggtgga atctaagtac 720
 ggccctccct gccccccctg ccctgcccc gaatttctgg gaggccttc cgtgtttctg 780
 ttcccccaa agccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg 840
 gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg 900
 gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg 960
 gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa 1020
 gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag 1080
 cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag 1140
 gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 154
 <211> 446
 <212> PRT
 <213> Artificial Sequence

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

23791WOPCTSEQ

<400> 154

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 Asp Tyr
20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

23791WOPCTSEQ

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 155

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 155

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag 60

gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc 120

tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca 180

ggacagggcc tggaatggat gggcgacatc aacccaaca acggcggcac catctacgcc 240

cagaaattcc agggcagagt gacctcacc gtggacacct ccatctccac cgcctacatg 300

gaactgtccc ggctgcggag cgacgacacc gtggtgtact actgcgcccgaactaccgg 360

tacttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc 420

23791WOPCTSEQ

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accaagggcc cctccgtgtt ccctctggcc ccttgctccc ggtccacctc cgagtctacc      480
gccgctctgg gctgcctggg gaaagactac ttccccgagc ctgtgaccgt gtcctggaac      540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg      600
tactccctgt cctccgtggg gacagtgtcc tcctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aagggtggaca agcgggtgga atctaagtac      720
ggccctccct gccccccctg ccctgccccca gaatttctgg gagggccttc cgtgtttctg      780
ttcccccaa agccaagga caccctgatg atctcccga ccccggaagt gacctgcgtg      840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag     1140
gtgtccctga cctgtctggg gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200
tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc     1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc     1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc     1380
ctgagcctgg gcaagtga                                     1398

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<210> 156

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 156

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 Asp Tyr
 20 25 30

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

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

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

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

23791WOPCTSEQ

Ala Arg Asn Tyr Arg Tyr Phe Gly Ala Met Asp His Trp Gly Gln Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 355 360 365

23791WOPCTSEQ

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430

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

<210> 157

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 157

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tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca	180
ggacagggcc tggaatggat gggcgacatc aacccaaca acggcggcac catctacgcc	240
cagaaattcc agggcagagt gacctccacc gtggacacct ccatctccac cgcctacatg	300
gaactgtccc ggctgcggag cgacgacacc gtggtgtact actgcgccc gaactaccgg	360
tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc	420
accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc	480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac	540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg	600
tactccctgt cctccgtggt gacagtgtcc tcctccagcc tgggcaccaa gacctacacc	660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac	720
ggccctccct gccccccctg ccctgcccc gaatttctgg gaggccttc cgtgtttctg	780
ttcccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg	840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg	900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg	960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa	1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag	1080

23791WOPCTSEQ

cctcgcgagc cccaggtgta caccctgccc cctagccaag aagagatgac caagaaccag 1140
 gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 158

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 158

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 Asp Tyr
 20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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
 Page 116

23791WOPCTSEQ

180

185

190

Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 355 360 365
 Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 370 375 380
 Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 385 390 395 400
 Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
 405 410 415
 Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445

<210> 159

23791WOPCTSEQ

<211> 1398
 <212> DNA
 <213> Artificial Sequence

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

<400> 159
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 gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc 120
 tgcaaggcct ccggctacac cttaccgac tacaacgtgg actgggtccg acaggcccca 180
 ggacagggcc tggaatggat gggcgacatc aacccaacg acggcggcac catctacgcc 240
 cagaaattcc agggcagagt gacctccacc gtggacacct ccatctccac cgcctacatg 300
 gaactgtccc ggctgcggag cgacgacacc gtggtgtact actgcgcccga gaactaccgg 360
 cagttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc 420
 accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc 480
 gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540
 tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
 tactccctgt cctccgtggt gacagtgtcc tcctccagcc tgggcaccaa gacctacacc 660
 tgtaacgtgg accacaagcc ctccaacacc aagggtggaca agcgggtgga atctaagtac 720
 ggccctccct gccccccctg ccctgcccc gaatttctgg gagggccctc cgtgtttctg 780
 ttcccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg 840
 gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg 900
 gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg 960
 gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa 1020
 gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag 1080
 cctcgcgagc ccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag 1140
 gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 160
 <211> 446
 <212> PRT
 <213> Artificial Sequence

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

<400> 160

23791WOPCTSEQ

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 Asp Tyr
20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

23791WOPCTSEQ

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 161

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 161

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gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc	120
tgcaaggcct ccggctacac cttaccgac tacaacgtgg actgggtccg acaggcccca	180
ggacagggcc tggaatggat gggcgacatc aacccaacg acggcggcac catctacgcc	240
cagaaattcc agggcagagt gaccatgacc gtggacacct ccacctccac cgtgtacatg	300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgccg gaactaccgg	360
cagttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc	420

23791WOPCTSEQ

accaagggcc cctccgtgtt ccctctggcc ccttgctccc ggtccacctc cgagtctacc 480
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 tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
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 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 162

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 162

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

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

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

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

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

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

23791WOPCTSEQ

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

23791WOPCTSEQ

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430

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

<210> 163

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 163

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gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc	120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca	180
ggacagggcc tggaatggat gggcgacatc aacccaacg acggcggcac catctacgcc	240
cagaaattcc agggcagagt gaccatgacc gtggacacct ccacctccac cgtgtacatg	300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccga gaactaccgg	360
tccttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc	420
accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc	480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac	540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg	600
tactccctgt cctccgtggt gacagtgcct tcctccagcc tgggcaccaa gacctacacc	660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac	720
ggccctccct gccccccctg ccctgccccga gaatttctgg gaggcccttc cgtgtttctg	780
ttccccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg	840
gtggtggacg tgtcccaaga agatcccag gtccagttca attggtacgt ggacggcgtg	900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg	960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa	1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag	1080
cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag	1140

23791WOPCTSEQ

gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 164
 <211> 446
 <212> PRT
 <213> Artificial Sequence

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

<400> 164
 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 Asp Tyr
 20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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

23791WOPCTSEQ

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

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 165
<211> 1398

23791WOPCTSEQ

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 165

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atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gactcccag      60
gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc      120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca      180
ggacagggcc tggaatggat gggcgacatc aacccaacg acggcggcac catctacgcc      240
cagaaattcc agggcagagt gaccatgacc gtggacacct ccacctccac cgtgtacatg      300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg      360
tacttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc      420
accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc      480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac      540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg      600
tactccctgt cctccgtggt gacagtggcc tcctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac      720
ggccctccct gccccccctg ccctgcccc aattttctgg gagggccttc cgtgtttctg      780
ttcccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg      840
gtggtggacg tgtcccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccaggtgta caccctggcc ctagccaag aagagatgac caagaaccag     1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200
tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc     1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc     1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc     1380
ctgagcctgg gcaagtga                                     1398

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<210> 166

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 166

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

1				5					10					15		
Ser	Val	Lys	Val 20	Ser	Cys	Lys	Ala	Ser 25	Gly	Tyr	Thr	Phe	Thr 30	Asp	Tyr	
Asn	Val	Asp 35	Trp	Val	Arg	Gln	Ala 40	Pro	Gly	Gln	Gly	Leu 45	Glu	Trp	Met	
Gly	Asp 50	Ile	Asn	Pro	Asn	Asp 55	Gly	Gly	Thr	Ile	Tyr 60	Ala	Gln	Lys	Phe	
Gln 65	Gly	Arg	Val	Thr	Met 70	Thr	Val	Asp	Thr	Ser 75	Thr	Ser	Thr	Val	Tyr 80	
Met	Glu	Leu	Ser	Ser 85	Leu	Arg	Ser	Glu	Asp 90	Thr	Ala	Val	Tyr	Tyr 95	Cys	
Ala	Arg	Asn	Tyr 100	Arg	Tyr	Phe	Gly	Ala 105	Met	Asp	His	Trp	Gly 110	Gln	Gly	
Thr	Thr	Val 115	Thr	Val	Ser	Ser	Ala 120	Ser	Thr	Lys	Gly	Pro 125	Ser	Val	Phe	
Pro	Leu 130	Ala	Pro	Cys	Ser	Arg 135	Ser	Thr	Ser	Glu	Ser 140	Thr	Ala	Ala	Leu	
Gly 145	Cys	Leu	Val	Lys	Asp 150	Tyr	Phe	Pro	Glu	Pro 155	Val	Thr	Val	Ser	Trp 160	
Asn	Ser	Gly	Ala	Leu 165	Thr	Ser	Gly	Val	His 170	Thr	Phe	Pro	Ala	Val 175	Leu	
Gln	Ser	Ser	Gly 180	Leu	Tyr	Ser	Leu	Ser 185	Ser	Val	Val	Thr	Val 190	Pro	Ser	
Ser	Ser	Leu 195	Gly	Thr	Lys	Thr	Tyr 200	Thr	Cys	Asn	Val	Asp 205	His	Lys	Pro	
Ser	Asn 210	Thr	Lys	Val	Asp	Lys 215	Arg	Val	Glu	Ser	Lys 220	Tyr	Gly	Pro	Pro	
Cys 225	Pro	Pro	Cys	Pro	Ala 230	Pro	Glu	Phe	Leu	Gly 235	Gly	Pro	Ser	Val	Phe 240	
Leu	Phe	Pro	Pro	Lys 245	Pro	Lys	Asp	Thr	Leu 250	Met	Ile	Ser	Arg	Thr 255	Pro	
Glu	Val	Thr	Cys 260	Val	Val	Val	Asp	Val 265	Ser	Gln	Glu	Asp	Pro 270	Glu	Val	
Gln	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	

23791WOPCTSEQ

275

280

285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430

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

<210> 167

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 167

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcaactcccag 60

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tgcaaggcct ccggctacac cttaccgac tacaacgtgg actgggtccg acaggcccca 180

ggacagggcc tggaatggat gggcgacatc aacccaacg acggcggcac catctacgcc 240

cagaaattcc agggcagagt gaccatgacc gtggacacct ccacctccac cgtgtacatg 300

gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccga gaactaccgg 360

tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc 420

accaagggcc cctccgtggt ccctctggcc ccttgctccc ggtccacctc cgagtctacc 480

23791WOPCTSEQ

gccgctctgg gctgcctggg gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540
 tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
 tactccctgt cctccgtggg gacagtgtcc tcctccagcc tgggcaccaa gacctacacc 660
 tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac 720
 ggccctccct gccccccctg ccctgcccc gaatttctgg gagggccttc cgtgtttctg 780
 ttccccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg 840
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 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 168

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 168

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 Asp Tyr
 20 25 30

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

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

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

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

23791WOPCTSEQ

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

23791WOPCTSEQ

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430

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

<210> 169

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 169

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag	60
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tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca	180
ggacagggcc tggaatggat gggcgacatc aacccaact ccggcggcac catctacgcc	240
cagaaattcc agggcagagt gaccatgacc gtggacacct ccacctccac cgtgtacatg	300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccga gaactaccgg	360
cagttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc	420
accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc	480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac	540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg	600
tactccctgt cctccgtggt gacagtgtcc tctccagcc tgggcaccaa gacctacacc	660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac	720
ggccctccct gccccccctg ccctgccccga gaatttctgg gaggcccttc cgtgtttctg	780
ttccccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg	840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg	900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg	960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa	1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag	1080
cctcgcgagc cccaggtgta caccctgccc cctagccaag aagagatgac caagaaccag	1140

23791WOPCTSEQ

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 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 170

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 170

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 Asp Tyr
 20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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

23791WOPCTSEQ

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

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 171
<211> 1398
<212> DNA

23791WOPCTSEQ

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 171

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atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag      60
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tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca      180
ggacagggcc tggaatggat gggcgacatc aacccaact ccggcggcac catctacgcc      240
cagaaattcc agggcagagt gaccatgacc gtggacacct ccacctccac cgtgtacatg      300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg      360
tccttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc      420
accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc      480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac      540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg      600
tactccctgt cctccgtggt gacagtgtcc tcctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aagggtggaca agcgggtgga atctaagtac      720
ggccctccct gccccccctg ccctgcccc aattttctgg gagggccttc cgtgtttctg      780
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gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccaggtgta caccctgccc cctagccaag aagagatgac caagaaccag     1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200
tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc     1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc     1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc     1380
ctgagcctgg gcaagtga

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<210> 172

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 172

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

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23791WOPCTSEQ

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

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

23791WOPCTSEQ

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 173

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 173

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc	120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca	180
ggacagggcc tggaatggat gggcgacatc aacccaact ccggcggcac catctacgcc	240
cagaaattcc agggcagagt gaccatgacc gtggacacct ccacctccac cgtgtacatg	300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgccg gaactaccgg	360
tacttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc	420
accaagggcc cctccgtggt ccctctggcc ccttgctccc ggtccacctc cgagtctacc	480

23791WOPCTSEQ

gccgctctgg gctgcctggg gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
tactccctgt cctccgtggg gacagtcccc tcctccagcc tgggcaccaa gacctacacc 660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac 720
ggccctccct gccccccctg ccctgccccca gaatttctgg gaggccttc cgtgtttctg 780
ttccccccaa agcccaagga caccctgatg atctcccga ccccggaagt gacctgcgtg 840
gtggtggacg tgtcccaaga agatcccag gtccagttca attggtacgt ggacggcgtg 900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg 960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa 1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag 1080
cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag 1140
gtgtccctga cctgtctggg gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
ctgagcctgg gcaagtga 1398

<210> 174

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 174

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 Asp Tyr
20 25 30

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

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

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

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

Ala Arg Asn Tyr Arg Tyr Phe Gly Ala Met Asp His Trp Gly Gln Gly

23791WOPCTSEQ

100

105

110

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly

23791WOPCTSEQ

370

375

380

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430

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

<210> 175

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 175

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atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag      60
gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaagggtgcc      120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca      180
ggacagggcc tggaatggat gggcgacatc aacccaact ccggcggcac catctacgcc      240
cagaaattcc agggcagagt gaccatgacc gtggacacct ccacctccac cgtgtacatg      300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg      360
tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc      420
accaagggcc cctccgtggt ccctctggcc ccttgctccc ggtccacctc cgagtctacc      480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac      540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg      600
tactccctgt cctccgtggt gacagtgcc tctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac      720
ggccctccct gccccccctg ccctgcccc gaatttctgg gaggcccttc cgtgtttctg      780
ttccccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg      840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccaggtgta caccctgccc cctagccaag aagagatgac caagaaccag     1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200

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23791WOPCTSEQ

tccaacggcc agcccgagaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgtgcc 1380
 ctgagcctgg gcaagtga 1398

<210> 176

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 176

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 Asp Tyr
 20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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

23791WOPCTSEQ

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

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 177

<211> 1398

<212> DNA

<213> Artificial sequence

23791WOPCTSEQ

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 177

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atggaatggg cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag      60
gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaagggtgcc      120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca      180
ggacagggcc tggaatggat gggcgacatc aacccaaca acggcggcac catctacgcc      240
cagaaattcc agggcagagt gaccatgacc gtggacacct ccacctccac cgtgtacatg      300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg      360
cagttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc      420
accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc      480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac      540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg      600
tactccctgt cctccgtggt gacagtgcc tctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aagggtggaca agcgggtgga atctaagtac      720
ggccctccct gccccccctg ccctgcccc gaatttctgg gaggcccttc cgtgtttctg      780
ttcccccaa agccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg      840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccaggtgta caccctgccc cctagccaag aagagatgac caagaaccag     1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200
tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc     1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc     1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgtcc     1380
ctgagcctgg gcaagtga

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<210> 178

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 178

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

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23791WOPCTSEQ

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

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

23791WOPCTSEQ

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430

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

<210> 179

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 179

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gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc 120

tgcaaggcct ccggctacac cttaccgac tacaactgg actgggtccg acaggcccca 180

ggacagggcc tggaatggat gggcgacatc aacccaaca acggcggcac catctacgcc 240

cagaaattcc agggcagagt gaccatgacc gtggacacct ccacctccac cgtgtacatg 300

gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccga gaactaccgg 360

tccttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc 420

accaagggcc cctccgtggt ccctctggcc ccttgctccc ggtccacctc cgagtctacc 480

gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540

23791WOPCTSEQ

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tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg      600
tactccctgt cctccgtggt gacagtgtccc tcctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac      720
ggccctccct gccccccctg ccctgcccc aattttctgg gaggcccttc cgtgtttctg      780
ttccccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg      840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag     1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200
tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc     1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc     1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgtcc      1380
ctgagcctgg gcaagtga                                1398

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<210> 180

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 180

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 Asp Tyr
 20 25 30

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

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

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

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

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

23791WOPCTSEQ

Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 355 360 365
 Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 370 375 380

23791WOPCTSEQ

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 181

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 181

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc	120
tgcaaggcct ccggctacac cttaccgac tacaacgtgg actgggtccg acaggcccca	180
ggacagggcc tggaatggat gggcgacatc aacccaaca acggcggcac catctacgcc	240
cagaaattcc agggcagagt gaccatgacc gtggacacct ccacctccac cgtgtacatg	300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccga gaactaccgg	360
tacttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc	420
accaagggcc cctccgtggt ccctctggcc ccttgctccc ggtccacctc cgagtctacc	480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac	540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg	600
tactccctgt cctccgtggt gacagtgcc tcctccagcc tgggcaccaa gacctacacc	660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac	720
ggccctccct gccccccctg ccctgcccc gaatttctgg gaggcccttc cgtgtttctg	780
ttcccccaa agccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg	840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg	900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg	960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa	1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag	1080
cctcgcgagc cccaggtgta caccctgccc cctagccaag aagagatgac caagaaccag	1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag	1200

23791WOPCTSEQ

tccaacggcc agcccgagaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 182

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 182

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 Asp Tyr
 20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
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23791WOPCTSEQ

195

200

205

Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 355 360 365
 Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 370 375 380
 Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 385 390 395 400
 Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
 405 410 415
 Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445

<210> 183
 <211> 1398
 <212> DNA
 <213> Artificial Sequence

23791WOPCTSEQ

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 183

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atggaatggg cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag      60
gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc      120
tgcaaggcct ccggctacac cttaccgac tacaacgtgg actgggtccg acaggcccca      180
ggacagggcc tggaatggat gggcgacatc aacccaaca acggcggcac catctacgcc      240
cagaaattcc agggcagagt gaccatgacc gtggacacct ccacctccac cgtgtacatg      300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccga gaactaccgg      360
tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc      420
accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc      480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac      540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg      600
tactccctgt cctccgtggt gacagtgtcc tcctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac      720
ggccctccct gccccccctg ccctgcccc gaatttctgg gaggccttc cgtgtttctg      780
ttcccccaa agccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg      840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag     1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200
tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc     1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc     1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc     1380
ctgagcctgg gcaagtga

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<210> 184

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 184

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

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23791WOPCTSEQ

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

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

23791WOPCTSEQ

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 185

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 185

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc	120
tgcaaggcct ccggctacac cttaccgac tacaacgtgg actgggtccg acaggcccca	180
ggacagcggc tggaatggat gggcgacatc aacccaacg acggcggcac catctactcc	240
cagaaattcc agggcagagt gaccatcacc gtggacacct ccgcctccac cgcctacatg	300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccga gaactaccgg	360
cagttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc	420
accaagggcc cctccgtggt ccctctggcc ccttgctccc ggtccacctc cgagtctacc	480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac	540

23791WOPCTSEQ

tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
tactccctgt cctccgtggt gacagtgtccc tcctccagcc tgggcaccaa gacctacacc 660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac 720
ggccctccct gccccccctg ccctgccccca gaatttctgg gagggccttc cgtgtttctg 780
ttccccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg 840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg 900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg 960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa 1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag 1080
cctcgcgagc cccaggtgta caccctgtccc ctagccaag aagagatgac caagaaccag 1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
ctgagcctgg gcaagtga 1398

<210> 186

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 186

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 Asp Tyr
20 25 30

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

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

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

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

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

23791WOPCTSEQ

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

23791WOPCTSEQ

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 187

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 187

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gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc	120
tgcaaggcct ccggctacac cttaccgac tacaacgtgg actgggtccg acaggcccca	180
ggacagcggc tggaatggat gggcgacatc aacccaacg acggcggcac catctactcc	240
cagaaattcc agggcagagt gaccatcacc gtggacacct ccgcctccac cgcctacatg	300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccga gaactaccgg	360
tccttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc	420
accaagggcc cctccgtggt ccctctggcc ccttgctccc ggtccacctc cgagtctacc	480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac	540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg	600
tactccctgt cctccgtggt gacagtgtcc tcctccagcc tgggcaccaa gacctacacc	660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac	720
ggccctccct gccccccctg ccctgccccga gaatttctgg gaggcccttc cgtgtttctg	780
ttccccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg	840
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gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg	960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa	1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag	1080
cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag	1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag	1200
tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc	1260

23791WOPCTSEQ

tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgttcc 1380
 ctgagcctgg gcaagtga 1398

<210> 188
 <211> 446
 <212> PRT
 <213> Artificial Sequence

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

<400> 188
 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 Asp Tyr
 20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205

23791WOPCTSEQ

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 189
<211> 1398
<212> DNA
<213> Artificial Sequence

<220>

23791WOPCTSEQ

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 189

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tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca      180
ggacagcggc tggaatggat gggcgacatc aacccaacg acggcggcac catctactcc      240
cagaaattcc agggcagagt gaccatcacc gtggacacct ccgcctccac cgcctacatg      300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg      360
tacttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc      420
accaagggcc cctccgtggt ccctctggcc ctttgctccc ggtccacctc cgagtctacc      480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac      540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg      600
tactccctgt cctccgtggt gacagtgcc tctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac      720
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ttcccccaa agccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg      840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag     1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200
tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc     1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc     1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc     1380
ctgagcctgg gcaagtga                                     1398

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<210> 190

<211> 465

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 190

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Met Glu Trp Ser Trp Val Phe Leu Phe Phe Leu Ser Val Thr Thr Gly
1           5           10          15

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Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys

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23791WOPCTSEQ
25

20

30

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Asp Tyr Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Arg Leu
50 55 60

Glu Trp Met Gly Asp Ile Asn Pro Asn Asp Gly Gly Thr Ile Tyr Ser
65 70 75 80

Gln Lys Phe Gln Gly Arg Val Thr Ile Thr Val Asp Thr Ser Ala Ser
85 90 95

Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Asn Tyr Arg Tyr Phe Gly Ala Met Asp His Trp
115 120 125

Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
130 135 140

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

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

Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro
180 185 190

Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
195 200 205

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

His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr
225 230 235 240

Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro
245 250 255

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
260 265 270

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp
275 280 285

Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
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23791WOPCTSEQ
300

290

295

Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val
305 310 315 320

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
325 330 335

Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys
340 345 350

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
355 360 365

Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
370 375 380

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
385 390 395 400

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
405 410 415

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys
420 425 430

Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu
435 440 445

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly
450 455 460

Lys
465

<210> 191

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 191

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tgcaaggcct ccggctacac cttaccgac tacaacgtgg actgggtccg acaggcccca 180

ggacagcggc tggaatggat gggcgacatc aacccaacg acggcggcac catctactcc 240

cagaaattcc agggcagagt gaccatcacc gtggacacct ccgcctccac cgcttacatg 300

gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg 360

23791WOPCTSEQ

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tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc      420
accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc      480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac      540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg      600
tactccctgt cctccgtggt gacagtgtcc tcctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac      720
ggccctccct gccccccctg ccctgccccca gaatttctgg gaggcccttc cgtgtttctg      780
ttccccccaa agcccaagga caccctgatg atctcccga ccccggaagt gacctgcgtg      840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccagggtga caccctgccc cctagccaag aagagatgac caagaaccag     1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200
tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc     1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc     1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc     1380
ctgagcctgg gcaagtga                                     1398

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<210> 192

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 192

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 Asp Tyr
20 25 30

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

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

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

23791WOPCTSEQ

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

Ala Arg Asn Tyr₁₀₀ Arg Trp Phe Gly Ala₁₀₅ Met Asp His Trp Gly₁₁₀ Gln Gly

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

Pro Leu₁₃₀ Ala Pro Cys Ser Arg₁₃₅ Ser Thr Ser Glu Ser₁₄₀ 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 Lys Thr Tyr₂₀₀ Thr Cys Asn Val Asp₂₀₅ His Lys Pro

Ser Asn₂₁₀ Thr Lys Val Asp Lys₂₁₅ Arg Val Glu Ser Lys₂₂₀ Tyr Gly Pro Pro

Cys₂₂₅ Pro Pro Cys Pro Ala₂₃₀ Pro Glu Phe Leu Gly₂₃₅ Gly Pro Ser Val Phe₂₄₀

Leu Phe Pro Pro Lys₂₄₅ Pro Lys Asp Thr Leu₂₅₀ Met Ile Ser Arg Thr₂₅₅ Pro

Glu Val Thr Cys₂₆₀ Val Val Val Asp Val₂₆₅ Ser Gln Glu Asp Pro₂₇₀ Glu Val

Gln Phe Asn₂₇₅ Trp Tyr Val Asp Gly₂₈₀ Val Glu Val His Asn₂₈₅ Ala Lys Thr

Lys Pro₂₉₀ Arg Glu Glu Gln Phe₂₉₅ Asn Ser Thr Tyr Arg₃₀₀ Val Val Ser Val

Leu Thr Val Leu His Gln₃₁₀ Asp Trp Leu Asn Gly₃₁₅ Lys Glu Tyr Lys Cys₃₂₀

Lys Val Ser Asn Lys₃₂₅ Gly Leu Pro Ser Ser₃₃₀ Ile Glu Lys Thr Ile₃₃₅ Ser

Lys Ala Lys Gly₃₄₀ Gln Pro Arg Glu Pro₃₄₅ Gln Val Tyr Thr Leu₃₅₀ Pro Pro

23791WOPCTSEQ

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430

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

<210> 193

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 193

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc	120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca	180
ggacagcggc tggaatggat gggcgacatc aacccaact ccggcggcac catctactcc	240
cagaaattcc agggcagagt gaccatcacc gtggacacct ccgcctccac cgcctacatg	300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccga gaactaccgg	360
cagttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc	420
accaagggcc cctccgtggt ccctctggcc ccttgctccc ggtccacctc cgagtctacc	480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac	540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg	600
tactccctgt cctccgtggt gacagtgcc tcctccagcc tgggcaccaa gacctacacc	660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac	720
ggccctccct gccccccctg ccctgcccc gaatttctgg gaggcccttc cgtgtttctg	780
ttcccccaa agccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg	840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg	900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg	960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa	1020

23791WOPCTSEQ

gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag 1080
 cctcgcgagc cccaggtgta caccctgccc cctagccaag aagagatgac caagaaccag 1140
 gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 194

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 194

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 Asp Tyr
 20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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

23791WOPCTSEQ

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

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

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

23791WOPCTSEQ

<210> 195
 <211> 1398
 <212> DNA
 <213> Artificial Sequence

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

<400> 195
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 tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca 180
 ggacagcggc tggaatggat gggcgacatc aaccccaact ccggcggcac catctactcc 240
 cagaaattcc agggcagagt gaccatcacc gtggacacct ccgcctccac cgcctacatg 300
 gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg 360
 tccttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc 420
 accaagggcc cctccgtggt ccctctggcc ctttgctccc ggtccacctc cgagtctacc 480
 gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540
 tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
 tactccctgt cctccgtggt gacagtgcc tctccagcc tgggcaccaa gacctacacc 660
 tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac 720
 ggccctccct gccccccctg ccctgcccc gaatttctgg gaggcccttc cgtgtttctg 780
 ttcccccaa agccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg 840
 gtggtggacg tgtccaaga agatcccgag gtccagttca attggtacgt ggacggcgtg 900
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 gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa 1020
 gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag 1080
 cctcgcgagc cccaggtgta caccctgccc cctagccaag aagagatgac caagaaccag 1140
 gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 196
 <211> 446
 <212> PRT
 <213> Artificial Sequence

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

23791WOPCTSEQ

<400> 196

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 Asp Tyr
20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

23791WOPCTSEQ

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 197

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 197

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc	120
tgcaaggcct ccggctacac cttaccgac tacaacgtgg actgggtccg acaggcccca	180
ggacagcggc tggaatggat gggcgacatc aacccaact ccggcggcac catctactcc	240
cagaaattcc agggcagagt gaccatcacc gtggacacct ccgcctccac cgcctacatg	300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg	360

23791WOPCTSEQ

tacttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc 420
 accaagggcc cctccgtgtt ccctctggcc ccttgctccc ggtccacctc cgagtctacc 480
 gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540
 tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
 tactccctgt cctccgtggt gacagtgtccc tcctccagcc tgggcaccaa gacctacacc 660
 tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac 720
 ggccctccct gccccccctg ccctgcccc gaatttctgg gagggccctt cgtgtttctg 780
 ttcccccaa agccaagga caccctgatg atctcccga cccccgaagt gacctgcgtg 840
 gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg 900
 gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg 960
 gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa 1020
 gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag 1080
 cctcgcgagc cccaggtgta caccctgccc cctagccaag aagagatgac caagaaccag 1140
 gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 198

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 198

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 Asp Tyr
 20 25 30

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

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

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

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys

Ala Arg Asn Tyr Arg Tyr Phe Gly Ala Met Asp His Trp Gly Gln Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 199
<211> 1398
<212> DNA
<213> Artificial Sequence

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

<400> 199
atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag 60
gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc 120
tgcaaggcct ccggctacac cttaccgac tacaacgtgg actgggtccg acaggcccca 180
ggacagcggc tggaatggat gggcgacatc aacccaaca acggcggcac catctactcc 240
cagaaattcc agggcagagt gaccatcacc gtggacacct ccgcctccac cgcctacatg 300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccga gaactaccgg 360
cagttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc 420
accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc 480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
tactccctgt cctccgtggt gacagtgtcc tcctccagcc tgggcaccaa gacctacacc 660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac 720
ggccctccct gccccccctg ccctgcccc gaatttctgg gaggcccttc cgtgtttctg 780
ttcccccaa agccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg 840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg 900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg 960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa 1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag 1080

23791WOPCTSEQ

cctcgcgagc cccaggtgta caccctgccc cctagccaag aagagatgac caagaaccag 1140
 gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 200

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 200

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 Asp Tyr
 20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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

23791WOPCTSEQ

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

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

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

23791WOPCTSEQ

<210> 201
<211> 1398
<212> DNA
<213> Artificial Sequence

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

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<400> 201
atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag      60
gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc      120
tgcaaggcct ccggctacac cttaccgac tacaacgtgg actgggtccg acaggcccca      180
ggacagcggc tggaatggat gggcgacatc aacccaaca acggcggcac catctactcc      240
cagaaattcc agggcagagt gaccatcacc gtggacacct ccgcctccac cgcctacatg      300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg      360
tccttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc      420
accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc      480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac      540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg      600
tactccctgt cctccgtggt gacagtgcc tctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aagggtggaca agcgggtgga atctaagtac      720
ggccctccct gccccccctg ccctgcccc gaatttctgg gagggccttc cgtgtttctg      780
ttcccccaa agccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg      840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag     1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200
tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc     1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc     1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc     1380
ctgagcctgg gcaagtga                                     1398
```

<210> 202
<211> 446
<212> PRT
<213> Artificial Sequence

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

23791WOPCTSEQ

<400> 202

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

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

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

23791WOPCTSEQ

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 203

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 203

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag 60

gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc 120

tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca 180

ggacagcggc tggaatggat gggcgacatc aacccaaca acggcggcac catctactcc 240

cagaaattcc agggcagagt gaccatcacc gtggacacct ccgcctccac cgcctacatg 300

gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccga gaactaccgg 360

tacttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc 420

23791WOPCTSEQ

```

accaagggcc cctccgtgtt ccctctggcc ccttgctccc ggtccacctc cgagtctacc      480
gccgctctgg gctgcctggg gaaagactac ttccccgagc ctgtgaccgt gtcctggaac      540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg      600
tactccctgt cctccgtggg gacagtgtcc tcctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac      720
ggccctccct gccccccctg ccctgccccca gaatttctgg gagggccttc cgtgtttctg      780
ttcccccaa agccaagga caccctgatg atctcccga ccccggaagt gacctgcgtg      840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag     1140
gtgtccctga cctgtctggg gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200
tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc     1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc     1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc     1380
ctgagcctgg gcaagtga                                     1398

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<210> 204

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 204

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 Asp Tyr
20 25 30

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

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

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

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

23791WOPCTSEQ

Ala Arg Asn Tyr Arg Tyr Phe Gly Ala Met Asp His Trp Gly Gln Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 355 360 365

23791WOPCTSEQ

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430

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

<210> 205

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 205

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc	120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca	180
ggacagcggc tggaatggat gggcgacatc aacccaaca acggcggcac catctactcc	240
cagaaattcc agggcagagt gaccatcacc gtggacacct ccgcctccac cgcctacatg	300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg	360
tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc	420
accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc	480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac	540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg	600
tactccctgt cctccgtggt gacagtgtcc tcctccagcc tgggcaccaa gacctacacc	660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac	720
ggccctccct gccccccctg ccctgcccc gaatttctgg gaggcccttc cgtgtttctg	780
ttcccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg	840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg	900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg	960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa	1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag	1080

23791WOPCTSEQ

cctcgcgagc cccaggtgta caccctgccc cctagccaag aagagatgac caagaaccag 1140
 gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 206

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 206

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 Asp Tyr
 20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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

23791WOPCTSEQ

180

185

190

Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 355 360 365
 Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 370 375 380
 Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 385 390 395 400
 Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
 405 410 415
 Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445

<210> 207

23791WOPCTSEQ

<211> 717

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 207

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atgtccgtgc ccaccaggt gctgggactg ctgctgctgt ggctgaccga cgccagatgc      60
gacgtggtga tgaccagtc ccccctgtcc ctgcctgtga cactgggcca gcctgcctcc      120
atctcctgca aggctccca gtccctggac tacgagggcg actccgacat gaactggttc      180
cagcagcggc ctggccagtc ccctcgaga ctgatctacg gcgcctccaa cctggaatcc      240
ggcgtgcccc acagattctc cggctccggc tctggcaccg acttcaccct gaagatcagc      300
cgggtggaag ccgaggacgt gggcgtgtac tactgccagc agtccaccga ggacccccgg      360
acctttggcg gaggcacaa ggtggaaatc aagcggaccg tggccgctcc ctccgtgttc      420
atcttcccac cctccgacga gcagctgaag tccggcaccg cctccgtggt ctgcctgctg      480
aacaacttct accctcgcga ggccaagggt cagtggaagg tggacaacgc cctgcagtcc      540
ggcaactccc aagaatccgt gaccgagcag gactccaagg acagcaccta ctccctgtcc      600
tccaccctga ccctgtccaa ggccgactac gagaagcaca aggtgtacgc ctgcgaagtg      660
accaccagg gcctgtccag ccccgtagcc aagtccttca accggggcga gtgctga      717

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<210> 208

<211> 218

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 208

```

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

```

```

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

```

```

Gly Asp Ser Asp Met Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser Pro
          35          40          45

```

```

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

```

```

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
65          70          75          80

```

```

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Ser Thr
          85          90          95

```

23791WOPCTSEQ

Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
100 105 110

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

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

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

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

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

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

Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 209

<211> 717

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 209

atgtccgtgc ccaccaggt gctgggactg ctgctgctgt ggctgaccga cgccagatgc	60
gacatcgtga tgaccagac cccctgtcc ctgtccgtga cacctggcca gcctgcctcc	120
atctcctgca aggcctccca gtccctggac tacgagggcg actccgacat gaactggtat	180
ctgcagaagc ccggccagcc ccctcagctg ctgatctacg gcgcctccaa cctggaatcc	240
ggcgtgcccc acagattctc cggctccggc tctggcaccg acttcaccct gaagatcagc	300
cgggtggaag ccgaggacgt gggcgtgtac tactgccagc agtccaccga ggacccccgg	360
acctttggcg gaggcaccaa ggtggaatc aagcggaccg tggccgctcc ctccgtgttc	420
atcttccac cctccgacga gcagctgaag tccggcaccg cctccgtggt ctgcctgctg	480
aacaacttct accctcgcga ggccaagggt cagtggaagg tggacaacgc cctgcagtcc	540
ggcaactccc aagaatccgt gaccgagcag gactccaagg acagcaccta ctccctgtcc	600
tccaccctga ccctgtccaa ggccgactac gagaagcaca aggtgtacgc ctgcgaagtg	660
accaccagg gcctgtccag ccccgtagacc aagtccttca accggggcga gtgctga	717

<210> 210

23791WOPCTSEQ

<211> 218

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 210

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

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

Gly Asp Ser Asp Met Asn Trp Tyr Leu Gln Lys Pro Gly Gln Pro Pro
35 40 45

Gln Leu Leu Ile Tyr Gly Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
65 70 75 80

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Ser Thr
85 90 95

Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
100 105 110

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

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

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

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

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

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

Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 211

<211> 1398

<212> DNA

23791WOPCTSEQ

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 211

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atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactccgag      60
gtgctgctgc tgcagtctgg ccccgaactg gtgaaacctg gaacctccgt gaagatcccc      120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtcaa gcagcggcac      180
ggaaagggcc tggaatggat cggcgacatc aacccaaca acggcggcac catctactcc      240
cagaaattca agggcaaggc caccctgacc gtggacaaga gttcctccac cgccttcatt      300
gaactgcggt ccctgaccag cgaggatacc gccgtgtact tctgcgcccg gaactaccgg      360
tggttcggcg ccatggatca ctggggccag ggcacctccg tgacagtgtc ctctgcctcc      420
accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc      480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac      540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg      600
tactccctgt cctccgtggt gacagtcccc tcctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aagggtggaca agcgggtgga atctaagtac      720
ggccctccct gccccccctg ccctgcccc aattttctgg gagggccttc cgtgtttctg      780
ttcccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg      840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccaggtgta caccctgccc cctagccaag aagagatgac caagaaccag     1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200
tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc     1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc     1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc     1380
ctgagcctgg gcaagtga

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<210> 212

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 212

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

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23791WOPCTSEQ

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

Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu Glu Trp Ile
35 40 45

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

23791WOPCTSEQ

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 213

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 213

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaaggtgtcc	120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca	180
ggacagggcc tggaatggat gggcgacatc aacccaaca acggcggcac catctacgcc	240
cagaaattcc agggcagagt gacctcacc gtggacacct ccatctccac cgcctacatg	300
gaactgtccc ggctgcggag cgacgacacc gtggtgtact actgcgccg gaactaccgg	360
tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc	420
accaagggcc cctccgtggt ccctctggcc ccttgctccc ggtccacctc cgagtctacc	480

23791WOPCTSEQ

gccgctctgg gctgcctggg gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540
 tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
 tactccctgt cctccgtggg gacagtcccc tcctccagcc tgggcaccaa gacctacacc 660
 tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac 720
 ggccctccct gccccccctg ccctgccccca gaatttctgg gaggcccttc cgtgtttctg 780
 ttccccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg 840
 gtggtggacg tgtcccaaga agatcccag gtccagttca attggtacgt ggacggcgtg 900
 gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg 960
 gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa 1020
 gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag 1080
 cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag 1140
 gtgtccctga cctgtctggg gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 214

<211> 465

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 214

Met Glu Trp Ser Trp Val Phe Leu Phe Phe Leu Ser Val Thr Thr Gly
 1 5 10 15

Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
 20 25 30

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 35 40 45

Thr Asp Tyr Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
 50 55 60

Glu Trp Met Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ala
 65 70 75 80

Gln Lys Phe Gln Gly Arg Val Thr Ser Thr Val Asp Thr Ser Ile Ser
 85 90 95

Thr Ala Tyr Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Val Val
 Page 188

23791WOPCTSEQ

100

105

110

Tyr Tyr Cys₁₁₅ Ala Arg Asn Tyr Arg₁₂₀ Trp Phe Gly Ala Met₁₂₅ Asp His Trp
 Gly Gln₁₃₀ Gly Thr Thr Val Thr₁₃₅ Val Ser Ser Ala Ser₁₄₀ Thr Lys Gly Pro
 Ser₁₄₅ Val Phe Pro Leu Ala₁₅₀ Pro Cys Ser Arg Ser₁₅₅ Thr Ser Glu Ser Thr₁₆₀
 Ala Ala Leu Gly Cys₁₆₅ Leu Val Lys Asp Tyr₁₇₀ Phe Pro Glu Pro Val₁₇₅ Thr
 Val Ser Trp Asn₁₈₀ Ser Gly Ala Leu Thr₁₈₅ Ser Gly Val His Thr₁₉₀ Phe Pro
 Ala Val Leu₁₉₅ Gln Ser Ser Gly Leu₂₀₀ Tyr Ser Leu Ser Ser₂₀₅ Val Val Thr
 Val Pro₂₁₀ Ser Ser Ser Leu Gly₂₁₅ Thr Lys Thr Tyr Thr₂₂₀ Cys Asn Val Asp
 His₂₂₅ Lys Pro Ser Asn Thr₂₃₀ Lys Val Asp Lys Arg₂₃₅ Val Glu Ser Lys Tyr₂₄₀
 Gly Pro Pro Cys₂₄₅ Pro Pro Cys Pro Ala₂₅₀ Glu Phe Leu Gly Gly₂₅₅ Pro
 Ser Val Phe Leu₂₆₀ Phe Pro Pro Lys Pro₂₆₅ Lys Asp Thr Leu Met₂₇₀ Ile Ser
 Arg Thr Pro₂₇₅ Glu Val Thr Cys Val₂₈₀ Val Val Asp Val Ser₂₈₅ Gln Glu Asp
 Pro Glu₂₉₀ Val Gln Phe Asn Trp₂₉₅ Tyr Val Asp Gly Val₃₀₀ Glu Val His Asn
 Ala₃₀₅ Lys Thr Lys Pro Arg₃₁₀ Glu Glu Gln Phe Asn₃₁₅ Ser Thr Tyr Arg Val₃₂₀
 Val Ser Val Leu Thr₃₂₅ Val Leu His Gln Asp₃₃₀ Trp Leu Asn Gly Lys₃₃₅ Glu
 Tyr Lys Cys₃₄₀ Lys Val Ser Asn Lys Gly₃₄₅ Leu Pro Ser Ser Ile₃₅₀ Glu Lys
 Thr Ile Ser₃₅₅ Lys Ala Lys Gly Gln₃₆₀ Pro Arg Glu Pro Gln₃₆₅ Val Tyr Thr
 Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr

23791WOPCTSEQ

370

375

380

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 385 390 395 400

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 405 410 415

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys
 420 425 430

Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 435 440 445

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly
 450 455 460

Lys
 465

<210> 215

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 215

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg ggcctccgt gaagggtgcc	120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca	180
ggacagcggc tggaatggat gggcgacatc aacccaaca acggcggcac catctactcc	240
cagaaattcc agggcagagt gaccatcacc gtggacacct ccgcctccac cgcctacatg	300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccga gaactaccgg	360
tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc	420
accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc	480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac	540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg	600
tactccctgt cctccgtggt gacagtggcc tcctccagcc tgggcaccaa gacctacacc	660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac	720
ggccctccct gccccccctg ccctgccccga gaatttctgg gaggcccttc cgtgtttctg	780
ttccccccaa agcccaagga caccctgatg atctcccgga ccccgaagt gacctgcgtg	840
gtggtggacg tgtcccaaga agatcccag gtccagttca attggtacgt ggacggcgtg	900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg	960

23791WOPCTSEQ

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gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa 1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag 1080
cctcgcgagc cccaggtgta caccctgccc cctagccaag aagagatgac caagaaccag 1140
gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
ctgagcctgg gcaagtga 1398

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<210> 216

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 216

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 Asp Tyr
20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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

23791WOPCTSEQ

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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

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

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

23791WOPCTSEQ

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

<210> 217
 <211> 1398
 <212> DNA
 <213> Artificial Sequence

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

<400> 217
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 gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg gcgcctccgt gaaggtgtcc 120
 tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca 180
 gggaagggcc tggaatggat gggcgacatc aacccaaca acggcggcac catctacgcc 240
 cagaaattcc agggcagagt gaccatgacc gtggacacct ccaccgacac cgcctacatg 300
 gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg 360
 tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc 420
 accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc 480
 gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac 540
 tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg 600
 tactccctgt cctccgtggt gacagtgtcc tcctccagcc tgggcaccaa gacctacacc 660
 tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac 720
 ggccctccct gccccccctg ccctgcccc aattttctgg gaggcccttc cgtgtttctg 780
 ttcccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg 840
 gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg 900
 gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg 960
 gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa 1020
 gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag 1080
 cctcgcgagc cccaggtgta caccctgtcc ctagccaag aagagatgac caagaaccag 1140
 gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 218
 <211> 446
 <212> PRT
 <213> Artificial Sequence

23791WOPCTSEQ

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 218

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 Asp Tyr
 20 25 30

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

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

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

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205

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

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240

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

23791WOPCTSEQ

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

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

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

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

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

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

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

<210> 219

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 219

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gactcccag 60

gtgcagctgg tgcagtctgg cgccgaagtg aagaaacctg gctcctccgt gaaggtgtcc 120

tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggcccca 180

ggacagggcc tggaatggat gggcgacatc aacccaaca acggcggcac catctacgcc 240

cagaaattcc agggcagagt gaccatcacc gtggacaagt ccacctccac cgcctacatg 300

23791WOPCTSEQ

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gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg      360
tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc      420
accaagggcc cctccgtgtt ccctctggcc ccttgctccc ggtccacctc cgagtctacc      480
gccgctctgg gctgcctggg gaaagactac ttccccgagc ctgtgaccgt gtcctggaac      540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg      600
tactccctgt cctccgtggg gacagtgtccc tcctccagcc tgggcaccaa gacctacacc      660
tgtaacgtgg accacaagcc ctccaacacc aaggtggaca agcgggtgga atctaagtac      720
ggccctccct gccccccctg ccctgcccc aattttctgg gaggcccttc cgtgtttctg      780
ttccccccaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg      840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg      900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg      960
gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa     1020
gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag     1080
cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag     1140
gtgtccctga cctgtctggg gaaaggcttc taccctccg atatcgccgt ggaatgggag     1200
tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc     1260
tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc     1320
ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgtcc      1380
ctgagcctgg gcaagtga                                1398

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<210> 220

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 220

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

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

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

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

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

23791WOPCTSEQ

Met Glu Leu Ser Ser₈₅ Leu Arg Ser Glu Asp₉₀ Thr Ala Val Tyr Tyr₉₅ Cys
 Ala Arg Asn Tyr₁₀₀ Arg Trp Phe Gly Ala₁₀₅ Met Asp His Trp Gly₁₁₀ Gln Gly
 Thr Thr Val₁₁₅ Thr Val Ser Ser Ala₁₂₀ Ser Thr Lys Gly Pro₁₂₅ Ser Val Phe
 Pro Leu₁₃₀ Ala Pro Cys Ser Arg₁₃₅ Ser Thr Ser Glu Ser₁₄₀ 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 Lys Thr Tyr₂₀₀ Thr Cys Asn Val Asp₂₀₅ His Lys Pro
 Ser Asn₂₁₀ Thr Lys Val Asp Lys₂₁₅ Arg Val Glu Ser Lys₂₂₀ Tyr Gly Pro Pro
 Cys₂₂₅ Pro Pro Cys Pro Ala₂₃₀ Pro Glu Phe Leu Gly₂₃₅ Gly Pro Ser Val Phe₂₄₀
 Leu Phe Pro Pro Lys₂₄₅ Pro Lys Asp Thr Leu₂₅₀ Met Ile Ser Arg Thr₂₅₅ Pro
 Glu Val Thr Cys₂₆₀ Val Val Val Asp Val₂₆₅ Ser Gln Glu Asp Pro₂₇₀ Glu Val
 Gln Phe Asn₂₇₅ Trp Tyr Val Asp Gly₂₈₀ Val Glu Val His Asn₂₈₅ Ala Lys Thr
 Lys Pro₂₉₀ Arg Glu Glu Gln Phe₂₉₅ Asn Ser Thr Tyr Arg₃₀₀ Val Val Ser Val
 Leu₃₀₅ Thr Val Leu His Gln₃₁₀ Asp Trp Leu Asn Gly₃₁₅ Lys Glu Tyr Lys Cys₃₂₀
 Lys Val Ser Asn Lys₃₂₅ Gly Leu Pro Ser Ser₃₃₀ Ile Glu Lys Thr Ile₃₃₅ Ser
 Lys Ala Lys Gly₃₄₀ Gln Pro Arg Glu Pro₃₄₅ Gln Val Tyr Thr Leu₃₅₀ Pro Pro

23791WOPCTSEQ

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

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

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

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

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430

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

<210> 221

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 221

atggaatggt cctgggtggt cctgttcttc ctgtccgtga ccaccggcgt gcactcccag	60
atgcagctgg tgcagtctgg ccccgaagtg aagaaacctg gcacctccgt gaagggtgtcc	120
tgcaaggcct ccggctacac cttcaccgac tacaacgtgg actgggtccg acaggctaga	180
ggacagcggc tggaatggat cggcgacatc aacccaaca acggcggcac catctacgcc	240
cagaaattcc aagagagagt gaccatcacc gtcgataagt ccacctccac cgcctacatg	300
gaactgtcct ccctgcggag cgaggacacc gccgtgtact actgcgcccg gaactaccgg	360
tggttcggcg ccatggatca ctggggccag ggcaccaccg tgaccgtgtc gtctgcctcc	420
accaagggcc cctccgtggt ccctctggcc cttgtctccc ggtccacctc cgagtctacc	480
gccgctctgg gctgcctggt gaaagactac ttccccgagc ctgtgaccgt gtcctggaac	540
tctggcgccc tgacctctgg cgtgcacacc ttccctgccg tgctgcagtc ctccggcctg	600
tactccctgt cctccgtggt gacagtcccc tcctccagcc tgggcaccaa gacctacacc	660
tgtaacgtgg accacaagcc ctccaacacc aagggtggaca agcgggtgga atctaagtac	720
ggccctccct gccccccctg ccctgcccc gaatttctgg gaggcccttc cgtgtttctg	780
ttcccccaaa agcccaagga caccctgatg atctcccga ccccgaagt gacctgcgtg	840
gtggtggacg tgtccaaga agatcccag gtccagttca attggtacgt ggacggcgtg	900
gaagtgcaca acgccaagac caagcccaga gaggaacagt tcaactccac ctaccgggtg	960

23791WOPCTSEQ

gtgtccgtgc tgaccgtgct gcaccaggac tggctgaacg gcaaagaata caagtgcaaa 1020
 gtctccaaca agggcctgcc ctccagcatc gaaaagacca tctccaaggc caagggccag 1080
 cctcgcgagc cccaggtgta caccctgccc ctagccaag aagagatgac caagaaccag 1140
 gtgtccctga cctgtctggt gaaaggcttc taccctccg atatcgccgt ggaatgggag 1200
 tccaacggcc agcccagaaa caactacaag accaccccc ctgtgctgga ctccgacggc 1260
 tccttcttcc tgtactctcg gctgaccgtg gacaagtccc ggtggcaaga aggcaacgtc 1320
 ttctcctgct ctgtgatgca cgaggccctg cacaaccact acaccagaa gtcctgtcc 1380
 ctgagcctgg gcaagtga 1398

<210> 222

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 222

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

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

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

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

Gln Glu Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

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

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

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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

23791WOPCTSEQ

165

170

175

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

Ser Ser Leu₁₉₅ Gly Thr Lys Thr Tyr₂₀₀ Thr Cys Asn Val Asp₂₀₅ His Lys Pro

Ser Asn₂₁₀ Thr Lys Val Asp Lys₂₁₅ Arg Val Glu Ser Lys₂₂₀ Tyr Gly Pro Pro

Cys₂₂₅ Pro Pro Cys Pro Ala₂₃₀ Pro Glu Phe Leu Gly₂₃₅ Gly Pro Ser Val Phe₂₄₀

Leu Phe Pro Pro Lys₂₄₅ Pro Lys Asp Thr Leu₂₅₀ Met Ile Ser Arg Thr₂₅₅ Pro

Glu Val Thr Cys₂₆₀ Val Val Val Asp Val₂₆₅ Ser Gln Glu Asp Pro₂₇₀ Glu Val

Gln Phe Asn₂₇₅ Trp Tyr Val Asp Gly₂₈₀ Val Glu Val His Asn₂₈₅ Ala Lys Thr

Lys Pro₂₉₀ Arg Glu Glu Gln Phe₂₉₅ Asn Ser Thr Tyr Arg₃₀₀ Val Val Ser Val

Leu Thr Val Leu His Gln₃₁₀ Asp Trp Leu Asn Gly₃₁₅ Lys Glu Tyr Lys Cys₃₂₀

Lys Val Ser Asn₃₂₅ Gly Leu Pro Ser Ser₃₃₀ Ile Glu Lys Thr Ile₃₃₅ Ser

Lys Ala Lys Gly₃₄₀ Gln Pro Arg Glu Pro₃₄₅ Gln Val Tyr Thr Leu₃₅₀ Pro Pro

Ser Gln Glu₃₅₅ Glu Met Thr Lys Asn₃₆₀ Gln Val Ser Leu Thr₃₆₅ Cys Leu Val

Lys Gly₃₇₀ Phe Tyr Pro Ser Asp₃₇₅ Ile Ala Val Glu Trp₃₈₀ Glu Ser Asn Gly

Gln Pro Glu Asn Asn Tyr₃₉₀ Lys Thr Thr Pro Pro₃₉₅ Val Leu Asp Ser Asp₄₀₀

Gly Ser Phe Phe Leu₄₀₅ Tyr Ser Arg Leu Thr₄₁₀ Val Asp Lys Ser Arg₄₁₅ Trp

Gln Glu Gly Asn₄₂₀ Val Phe Ser Cys Ser₄₂₅ Val Met His Glu Ala₄₃₀ Leu His

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys

<210> 223
<211> 717
<212> DNA
<213> Artificial Sequence

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

<400> 223
atgtccgtgc ccaccaggt gctgggactg ctgctgctgt ggctgaccga cgccagatgc 60
gacatcgtgc tgaccagtc cccgcctcc ctggctgtgt ctcttgcca gagagccacc 120
atcagctgca aggcctccca gtccctggac tacgagggcg actccgacat gaactggtat 180
cagcagaagc ccggccagcc tcctcggtg ctgatctctg gcgcctcaa cctggaatcc 240
ggcatccctg cccggttctc cggtctggc tctggcaccg acttcaccgt gaacatccac 300
cccgtggaag aagaggacgc cgccacctac tactgccagc agtccaccga ggacccccgg 360
acctttggcg gaggcaccaa gctggaaatc aagcggaccg tggccgctcc ctccgtgttc 420
atcttccac cctccgacga gcagctgaag tccggcaccg cctccgtggt ctgcctgctg 480
aacaacttct accctcgca ggccaaggtg cagtgggaagg tggacaacgc cctgcagtcc 540
ggcaactccc aagaatccgt gaccgagcag gactccaagg acagcaccta ctccctgtcc 600
tccaccctga ccctgtcaa ggccgactac gagaagcaca aggtgtacgc ctgcgaagtg 660
accaccagg gcctgtccag cccgtgacc aagtccttca accggggcga gtgctga 717

<210> 224
<211> 218
<212> PRT
<213> Artificial Sequence

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

<400> 224
Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Pro Gly
1 5 10 15
Gln Arg Ala Thr Ile Ser Cys Lys Ala Ser Gln Ser Leu Asp Tyr Glu
20 25 30
Gly Asp Ser Asp Met Asn Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
35 40 45
Arg Leu Leu Ile Ser Gly Ala Ser Asn Leu Glu Ser Gly Ile Pro Ala
50 55 60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Val Asn Ile His
65 70 75 80

23791WOPCTSEQ

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

Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg
100 105 110

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

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

Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
145 150 155 160

Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
165 170 175

Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
180 185 190

His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
195 200 205

Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 225

<211> 717

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 225

atgtccgtgc ccaccaggt gctgggactg ctgctgctgt ggctgaccga cgccagatgc	60
gacgtggtga tgaccagtc cccctgtcc ctgcctgtga cactgggcca gcctgcctcc	120
atctcctgca aggcctccca gtccctggac tacgagggcg actccgacat gaactggttc	180
cagcagcggc ctggccagtc ccctcgga ctgatctacg ggcctccaa cctggaatcc	240
ggcgtgccc acagattctc cggctccggc tctggcaccg acttcaccct gaagatcagc	300
cgggtggaag ccgaggacgt gggcgtgtac tactgccagc agtccaccga ggacccccgg	360
acctttggcg gaggcaccaa ggtggaaatc aagcggaccg tggccgctcc ctccgtgttc	420
atcttccac cctccgacga gcagctgaag tccggcaccg cctccgtggt ctgcctgctg	480
aacaacttct accctcgca ggccaaggtg cagtgggaagg tggacaacgc cctgcagtcc	540
ggcaactccc aagaatccgt gaccgagcag gactccaagg acagcaccta ctccctgtcc	600
tccaccctga ccctgtccaa ggccgactac gagaagcaca aggtgtacgc ctgcgaagtg	660

accaccagg gcctgtccag ccccgtagacc aagtccttca accggggcga gtgctga

<210> 226

<211> 218

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 226

Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ala Ser Gln Ser Leu Asp Tyr Glu
20 25 30

Gly Asp Ser Asp Met Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser Pro
35 40 45

Arg Arg Leu Ile Tyr Gly Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
65 70 75 80

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Ser Thr
85 90 95

Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
100 105 110

Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
115 120 125

Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
130 135 140

Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
145 150 155 160

Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
165 170 175

Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
180 185 190

His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
195 200 205

Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

23791WOPCTSEQ

<210> 227
 <211> 717
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 227
 atgtccgtgc ccaccaggt gctgggactg ctgctgctgt ggctgaccga cgccagatgc 60
 gacatcgtga tgaccagac cccctgtcc tccctgtga cactgggcca gcctgcctcc 120
 atctcctgca aggcctccca gtccctggac tacgagggcg actccgacat gaactggctg 180
 cagcagcggc ctggccagcc tcctcggctg ctgatctacg ggcctccaa cctggaatcc 240
 ggcgtgcccg acagattctc tggctccggc gctggcaccg acttcaccct gaagatcagc 300
 cgggtggaag ccgaggacgt gggcgtgtac tactgccagc agtccaccga ggacccccgg 360
 acctttggcg gaggcaccaa ggtggaaatc aagcggaccg tggccgctcc ctccgtgttc 420
 atcttccac cctccgacga gcagctgaag tccggcaccg cctccgtggt ctgcctgctg 480
 aacaacttct accctcgca ggccaaggtg cagtgggaagg tggacaacgc cctgcagtcc 540
 ggcaactccc aagaatccgt gaccgagcag gactccaagg acagcaccta ctccctgtcc 600
 tccaccctga ccctgtccaa ggccgactac gagaagcaca aggtgtacgc ctgcgaagtg 660
 acccaccagg gcctgtccag ccccgtagc aagtccttca accggggcga gtgctga 717

<210> 228
 <211> 218
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 228
 Asp Ile Val Met Thr Gln Thr Pro Leu Ser Ser Pro Val Thr Leu Gly
 1 5 10 15
 Gln Pro Ala Ser Ile Ser Cys Lys Ala Ser Gln Ser Leu Asp Tyr Glu
 20 25 30
 Gly Asp Ser Asp Met Asn Trp Leu Gln Gln Arg Pro Gly Gln Pro Pro
 35 40 45
 Arg Leu Leu Ile Tyr Gly Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ala Gly Thr Asp Phe Thr Leu Lys Ile Ser
 65 70 75 80
 Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Ser Thr
 85 90 95

23791WOPCTSEQ

Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
100 105 110

Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
115 120 125

Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
130 135 140

Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
145 150 155 160

Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
165 170 175

Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
180 185 190

His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
195 200 205

Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 229

<211> 717

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 229

atgtccgtgc ccacccaggt gctgggactg ctgctgctgt ggctgaccga cgccagatgc	60
gacatcgtga tgacccagtc ccccgactcc ctggccgtgt ctctgggcca gagagccacc	120
atcaactgca aggcctccca gtccctggac tacgagggcg actccgacat gaactggtat	180
cagcagaagc ccggccagcc cccaagctg ctgatctacg gcgcctccaa cctggaatcc	240
ggcgtgcccc acagattctc cggctccggc tctggcaccg acttcaccct gaccatcagc	300
tccctgcagg ccgaggacgt ggccgtgtac tactgccagc agtccaccga ggacccccgg	360
acctttggcg gaggcacaa ggtggaaatc aagcggaccg tggccgctcc ctccgtgttc	420
atcttcccac cctccgacga gcagctgaag tccggcaccg cctccgtggt ctgcctgctg	480
aacaacttct accctgcga ggccaagggt cagtggaagg tggacaacgc cctgcagtcc	540
ggcaactccc aagaatccgt gaccgagcag gactccaagg acagcaccta ctccctgtcc	600
tccaccctga ccctgtccaa ggccgactac gagaagcaca aggtgtacgc ctgcgaagtg	660
accaccagg gcctgtccag ccccgtagcc aagtccttca accggggcga gtgctga	717

23791WOPCTSEQ

<210> 230
 <211> 218
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 230
 Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Lys Ala Ser Gln Ser Leu Asp Tyr Glu
 20 25 30
 Gly Asp Ser Asp Met Asn Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Gly Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Thr
 85 90 95
 Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
 100 105 110
 Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
 115 120 125
 Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
 130 135 140
 Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
 145 150 155 160
 Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
 165 170 175
 Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
 180 185 190
 His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
 195 200 205
 Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 210 215

<210> 231

23791WOPCTSEQ

<211> 717

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 231

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atgtccgtgc ccaccaggt gctgggactg ctgctgctgt ggctgaccga cgccagatgc      60
gacatcgtga tgaccagtc ccccctgtcc ctgcctgtga cacctggcga gcctgcctcc      120
atctcctgca aggctccca gtccctggac tacgagggcg actccgacat gaactggtat      180
ctgcagaagc ccggccagtc ccctcagctg ctgatctacg gcgcctccaa cctggaatcc      240
ggcgtgcccc acagattctc cggctccggc tctggcaccg acttcaccct gaagatcagc      300
cgggtggaag ccgaggacgt gggcgtgtac tactgccagc agtccaccga ggacccccgg      360
acctttggcg gaggcacaa ggtggaaatc aagcggaccg tggccgctcc ctccgtgttc      420
atcttcccac cctccgacga gcagctgaag tccggcaccg cctccgtggt ctgcctgctg      480
aacaacttct accctcgcga ggccaagggt cagtggaagg tggacaacgc cctgcagtcc      540
ggcaactccc aagaatccgt gaccgagcag gactccaagg acagcaccta ctccctgtcc      600
tccaccctga ccctgtccaa ggccgactac gagaagcaca aggtgtacgc ctgcgaagtg      660
accaccagg gcctgtccag ccccgtagcc aagtccttca accggggcga gtgctga      717

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<210> 232

<211> 218

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 232

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Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1           5           10          15

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Glu Pro Ala Ser Ile Ser Cys Lys Ala Ser Gln Ser Leu Asp Tyr Glu
          20          25          30

```

```

Gly Asp Ser Asp Met Asn Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro
      35          40          45

```

```

Gln Leu Leu Ile Tyr Gly Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
50          55          60

```

```

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
65          70          75          80

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```

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Ser Thr
          85          90          95

```

23791WOPCTSEQ

Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
100 105 110

Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
115 120 125

Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
130 135 140

Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
145 150 155 160

Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
165 170 175

Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
180 185 190

His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
195 200 205

Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 233
<211> 1410
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 233
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gtgcagctcg tgcagagcgg cgctgaagtg aagaagcccg gcgccagcgt gaaagtgagc 120
tgcaaggcca gcggctacac cctgaccgac tactggatgc attgggtgag acaggctcct 180
ggacagggcc tggagtggat gggcatcatc gacatcagcg acagctactc cagctacgcc 240
cagaagttcc agggcagggt gaccatgacc agggacacct ccacctccac cgtgtacatg 300
gagctgagca gcctgaggag cgaggacacc gccgtgtact actgcgccag gagccccttc 360
tacaacagca ggggcggcaa ctacttcgac tactggggac agggcaccac cgtgaccgtg 420
tcgagcgcta gcaccaaagg cccctccgtg tttcctctgg cccctgcag cagaagcacc 480
agcgagagca cagccgctct gggctgcctg gtcaaggact acttccccga gcccgtagaca 540
gtgagctgga atagcggcgc cctgacatcc ggcgtgcata ccttcctgc cgtgctgcaa 600
agctccggcc tgtattccct gtcctccgtg gtgacagtgc ccagcagctc cctgggaacc 660
aagacctaca cctgcaacgt ggaccacaaa cccagcaaca ccaaggtgga caagaggggtg 720
gaaagcaagt acggccctcc ttgccctcct tgtcctgctc ccgagttcct gggaggcccc 780

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agcgtgttcc tgttcccccc taagcccaag gacaccctca tgatctccag gacccccgag 840
 gtgacctgcg tgggtggtgga tgtgagccag gaagaccgag aggtgcagtt caactggtac 900
 gtggacggcg tggaggtgca caacgccaag accaagccca gggaggagca gttcaacagc 960
 acctacaggg tgggtgtccgt cctgaccgtg ctgcaccagg actggctgaa cggcaaagag 1020
 tacaagtgca aggtgagcaa caagggcctg cccagctcca tcgagaagac aatctccaag 1080
 gccaaagggc agcccaggga acctcaggtg tataccctgc ctcccagcca ggaggagatg 1140
 accaagaatc aggtgagcct gacctgcctg gtgaaaggat tctaccccag cgatatcgcc 1200
 gtggagtggg agagcaatgg ccagcccagag aacaactaca agaccacacc ccccgctcctc 1260
 gactccgatg gctccttttt cctgtattcc aggtctaccg tggacaagtc caggtggcag 1320
 gaaggcaacg tgtttagctg cagcgtgatg cagcaggctc tgcacaacca ctatacacag 1380
 aagagcctct ccctgtccct cggcaagtga 1410

<210> 234

<211> 123

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 234

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 Leu Thr Asp Tyr
 20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ile Ile Asp Ile Ser Asp Ser Tyr Ser Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 235

<211> 469

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 235

Met Glu Trp Ser Trp Val Phe Leu Phe Phe Leu Ser Val Thr Thr Gly
1 5 10 15Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
20 25 30Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Leu
35 40 45Thr Asp Tyr Trp Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
50 55 60Glu Trp Met Gly Ile Ile Asp Ile Ser Asp Ser Tyr Ser Ser Tyr Ala
65 70 75 80Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser
85 90 95Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
100 105 110Tyr Tyr Cys Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr
115 120 125Phe Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser
130 135 140Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr
145 150 155 160Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro
165 170 175Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val
180 185 190His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser
195 200 205Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr
210 215 220Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val
225 230 235 240Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe
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245

250

255

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
 260 265 270

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
 275 280 285

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
 290 295 300

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
 305 310 315 320

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
 325 330 335

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
 340 345 350

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
 355 360 365

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
 370 375 380

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
 385 390 395 400

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
 405 410 415

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
 420 425 430

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
 435 440 445

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
 450 455 460

Leu Ser Leu Gly Lys
 465

<210> 236

<211> 1419

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

23791WOPCTSEQ

<400> 236
atggagtggg cctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gcacagcgag 60
gtccagctgg tgcagagcgg cgccgaagtc aagaaacctg gcgagagcct gagaattttc 120
tgcaagggca gcggctatac cctgaccgac tactggatgc actgggtgag acagctgccc 180
ggcaagggcc tggagtggat gggcgccatc gacattagcg actcctacac ctctacttcc 240
cccagcttcc agggccacgt gacaatctcc gtggataaga gcatcagcac cgcctatctc 300
cagtgggtcca gcctgaaggc cagcgacacc gccatgtact actgcgccag aagccccctt 360
tacaactcca gggcgggcaa ctacttcgac tactggggcc aaggaaccac cgtcacagtg 420
tcttccgcca gcaccaagg accctccgtc ttccccctgg ctcttagcag caagagcacc 480
tccggcgga cagctgccct gggatgtctc gtgaaggatt actttcccga gcctgtcacc 540
gtgtcctgga acagcggagc cctgaccagc ggcgtgcata cattccccgc cgtgtctcag 600
agcagcggac tgtactccct gtcctccgtg gtgacagtgc cttcctccag cctgggcacc 660
cagacctata tttgcaacgt gaaccacaag cccagcaaca ccaaggtgga caagaagggtg 720
gagcccaagt cctgcgacaa aacacacacc tgccctccct gtcctgtctc cgaactcctc 780
ggaggccctt ccgtgttcc tttccccccc aagcccaagg acaccctgat gattagcaga 840
acccccgaag tgacctgtgt ggtggtcgat gtctcccatg aggaccccga ggtcaaattc 900
aactggtacg tggacggcgt ggagggtccac aatgccaaaa ccaagcccag ggaggagcag 960
tataacagca cctacagggg ggtgagcgtg ctgaccgtgc tgcaccagga ctggctgaac 1020
ggcaaggagt acaagtgcaa ggtgtccaac aaggccctgc ctgcccccat tgagaagacc 1080
atctccaagg ccaagggcca gcctagggag cccaggtgt acaccctccc tccctccagg 1140
gacgagctga ccaagaacca ggtctccctg acctgcctgg tgaagggctt ttatcccagc 1200
gacatcgccg tggagtggga aagcaacggc cagcccgaga acaattacaa gaccaccccc 1260
cccgtgctgg acagcgatgg cagcttcttc ctgtacagca agctgacagt ggacaagtcc 1320
aggtggcaac agggcaatgt cttctcctgc agcgtgatgc acgaggccct gcacaaccac 1380
tatacccaga aatccctcag cctgtcccct ggaaagtga 1419

<210> 237
<211> 453
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 237
Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15
Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Leu Thr Asp Tyr
20 25 30

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Trp Met His Trp Val Arg Gln Leu Pro Gly Lys Gly Leu Glu Trp Met
 35 40 45
 Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ser Pro Ser Phe
 50 55 60
 Gln Gly His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
 65 70 75 80
 Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
 85 90 95
 Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110
 Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125
 Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly
 130 135 140
 Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160
 Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175
 Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 180 185 190
 Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val
 195 200 205
 Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys
 210 215 220
 Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
 225 230 235 240
 Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
 245 250 255
 Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
 260 265 270
 Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
 275 280 285
 Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
 290 295 300

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Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
305 310 315 320

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
325 330 335

Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
340 345 350

Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
355 360 365

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
370 375 380

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
385 390 395 400

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
405 410 415

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
420 425 430

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
435 440 445

Leu Ser Pro Gly Lys
450

<210> 238

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 238

atggagtgga gctgggtggt cctgttcttc ctgagcgtga ccaccggcgt gcacagcgag	60
gtgcagctgg tccagagcgg agccgaggtg aagaagcccg gcgagagcct gagaatcagc	120
tgcaaaggca gcggctacac cctgaccgat tactggatgc actgggtgag gcagctgcct	180
ggcaagggcc tggagtggat gggcgccatc gacatcagcg acagctacac cagctacagc	240
cccagcttcc agggccacgt gaccatcagc gtggacaaga gcatcagcac cgcctacctg	300
cagtggagca gcctgaaggc cagcgacacc gccatgtact attgcgccag gagccccttc	360
tacaactcca ggggcgga ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgtccgcta gcaccaaagg cccctccgtg tttcctctgg cccctgcag cagaagcacc	480
agcgagagca cagccgctct gggctgcctg gtcaaggact acttccccga gcccgtagaca	540

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gtgagctgga atagcggcgc cctgacatcc ggcgtgcata ccttcctgc cgtgctgcaa      600
agctccggcc tgtattccct gtcctccgtg gtgacagtgc ccagcagctc cctgggaacc      660
aagacctaca cctgcaacgt ggaccacaaa cccagcaaca ccaaggtgga caagaggggtg      720
gaaagcaagt acggccctcc ttgccctcct tgtcctgctc ccgagttcct gggaggcccc      780
agcgtgttcc tgttcccccc taagcccaag gacaccctca tgatctccag gacccccgag      840
gtgacctgcg tggtggtgga tgtgagccag gaagacccgg aggtgcagtt caactggtac      900
gtggacggcg tggaggtgca caacgccaag accaagccca gggaggagca gttcaacagc      960
acctacaggg tgggtgtccgt cctgaccgtg ctgcaccagg actggctgaa cggcaaagag     1020
tacaagtgca aggtgagcaa caagggcctg cccagctcca tcgagaagac aatctccaag     1080
gccaagggcc agcccagga acctcaggtg tataccctgc ctcccagcca ggaggagatg     1140
accaagaatc aggtgagcct gacctgcctg gtgaaaggat tctaccccag cgatatcgcc     1200
gtggagtggg agagcaatgg ccagcccgag aacaactaca agaccacacc cccgctcctc     1260
gactccgatg gctccttttt cctgtattcc aggctcaccg tggacaagtc caggtggcag     1320
gaaggcaacg tgtttagctg cagcgtgatg cagaggctc tgcacaacca ctatacacag     1380
aagagcctct ccctgtccct cggcaagtga                                     1410

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<210> 239

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 239

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Arg Ile Ser Cys Lys Gly Ser Gly Tyr Thr Leu Thr Asp Tyr
20 25 30

Trp Met His Trp Val Arg Gln Leu Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ser Pro Ser Phe
50 55 60

Gln Gly His Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

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Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

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Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 240
<211> 708
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 240
atgagcgtgc ccaccaagt gctgggcctg ctgctgctgt ggctgaccga cgccaggtgc 60
gacatccaga tgaccagag ccctagcagc ctgagcgcca gcgtgggaga cagggtgacc 120
atcacctgca gggccagcca ggacatcagc aactacctga actggtacca gcagaagccc 180
ggcaaggtgc ccaagctgct gatctactac accagcaggc tgcacagcgg agtgcccagc 240
agatttagcg gcagcggcag cggcacagac tacaccctga ccatcagctc cctgcagccc 300
gaggacgtgg ccacctacta ctgccagcag ggcgataccc tgcccccttg gacatttggc 360
ggcggcacca aggtggagat caagcgtacg gtggctgccc cctccgtgtt catcttcccc 420
cccagcgatg agcagctgaa gagcggcaca gccagcgtgg tgtgcctgct gaacaacttc 480
taccacaggg aggccaaggt gcagtggaag gtggacaacg ccctgcagag cggcaacagc 540
caggagtccg tgaccgagca ggacagcaag gacagcacct acagcctgag cagcacactg 600
accctgagca aggccgacta cgagaagcac aaggtgtacg cctgcgaggt gacccatcag 660
ggcctgagca gcccgtgac caagagcttc aacaggggcg agtgctga 708

<210> 241
<211> 215
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 241
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Val Pro Lys Leu Leu Ile
35 40 45

Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Val Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Thr Leu Pro Pro
85 90 95

Trp Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
100 105 110

Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
115 120 125

Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu
130 135 140

Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser
145 150 155 160

Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
165 170 175

Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
180 185 190

Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys
195 200 205

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 242

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 242

atggagtgga gctgggtgtt cctgttcttc ctgagcgtga ccaccggcgt gcatagccag 60

gtgcagctgg tgcagagcgg cgctgaggtg aaaaagcccg gcgccagcgt gaaggtgagc 120

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tgcaaggcca gcggtacac cctgaccgac tactggatgc attgggtgag acaggcccct	180
ggacagggcc tggaatggat gggcgccatc gacatcagcg actcctacac cagctacgcc	240
cagaagtttc agggcagggg gaccatgacc gtggacacca gcaccagcac cgtctacatg	300
gagctgagca gcctgaggag cgaggacacc gccgtgtact actgcgccag gagccccttc	360
tacaacagca ggggcgga ctacttcgac tactggggcc agggcaccac agtgaccgtg	420
tcgtccgcta gcaccaaagg cccctccgtg tttcctctgg cccctgcag cagaagcacc	480
agcgagagca cagccgctct gggctgcctg gtcaaggact acttccccga gcccgtagaca	540
gtgagctgga atagcggcgc cctgacatcc ggcgtgcata ccttcctgc cgtgctgcaa	600
agctccggcc tgtattccct gtcctccgtg gtgacagtgc ccagcagctc cctgggaacc	660
aagacctaca cctgcaacgt ggaccacaaa cccagcaaca ccaaggtgga caagaggggtg	720
gaaagcaagt acggccctcc ttgccctcct tgtcctgctc ccgagttcct gggaggcccc	780
agcgtgttcc tgttcccccc taagcccaag gacaccctca tgatctccag gacccccgag	840
gtgacctgcg tgggtggtgga tgtgagccag gaagaccgg aggtgcagtt caactggtac	900
gtggacggcg tggaggtgca caacgccaag accaagccca gggaggagca gttcaacagc	960
acctacaggg tgggtgtccgt cctgaccgtg ctgcaccagg actggctgaa cggcaaagag	1020
tacaagtgca aggtgagcaa caagggcctg cccagctcca tcgagaagac aatctccaag	1080
gccaagggcc agcccaggga acctcaggtg tataccctgc ctcccagcca ggaggagatg	1140
accaagaatc aggtgagcct gacctgcctg gtgaaaggat tctaccccag cgatatcgcc	1200
gtggagtggg agagcaatgg ccagcccag aacaactaca agaccacacc ccccgctctc	1260
gactccgatg gtcctttttt cctgtattcc aggtcaccg tggacaagtc caggtggcag	1320
gaaggcaacg tgtttagctg cagcgtgatg cacgaggctc tgcacaacca ctatacacag	1380
aagagcctct ccctgtccct cggcaagtga	1410

<210> 243

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 243

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	Leu	Thr	Asp	Tyr
			20					25					30		

Trp	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35					40					45			

Gly	Ala	Ile	Asp	Ile	Ser	Asp	Ser	Tyr	Thr	Ser	Tyr	Ala	Gln	Lys	Phe
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

23791WOPCTSEQ

50

55

60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
 195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
 210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
 225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
 260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
 290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu

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325

330

335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
 355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
 405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
 420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
 435 440 445

Gly Lys
 450

<210> 244

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 244

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atggagtgga gctgggtggt cctgttcttc ctgagcgtga ccaccggcgt gcacagcgag      60
gtgcagctgg tccagagcgg agccgaggtg aagaagcccg gcgagagcct gaaaatcagc      120
tgcaaaggca gcggtacac cctgaccgat tactggatgc actgggtgag gcagctgcct      180
ggcaagggcc tggagtggat gggcgccatc gacatcagcg acagctacac cagctacagc      240
cccagcttcc agggccaagt gaccatcagc gtggacaaga gcatcagcac cgcctacctg      300
cagtggagca gcctgaaggc cagcgacacc gccatgtact attgcgccag gagccccttc      360
tacaactcca ggggcggcaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg      420
tcgtccgcta gcaccaaagg cccctccgtg tttcctctgg cccctgcag cagaagcacc      480
agcgagagca cagccgctct gggctgcctg gtcaaggact acttccccga gcccgtgaca      540
gtgagctgga atagcggcgc cctgacatcc ggcgtgcata ccttcctgc cgtgctgcaa      600
agctccggcc tgtattccct gtcctccgtg gtgacagtgc ccagcagctc cctgggaacc      660
aagacctaca cctgcaacgt ggaccacaaa cccagcaaca ccaaggtgga caagagggtg      720

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23791WOPCTSEQ

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gaaagcaagt acggccctcc ttgccctcct tgtcctgctc ccgagttcct gggaggcccc      780
agcgtgttcc tgttcccccc taagcccaag gacaccctca tgatctccag gacccccgag      840
gtgacctgcg tggtggtgga tgtgagccag gaagacccgg aggtgcagtt caactggtac      900
gtggacggcg tggaggtgca caacgccaag accaagccca gggaggagca gttcaacagc      960
acctacaggg tgggtgtccgt cctgaccgtg ctgcaccagg actggctgaa cggcaaagag     1020
tacaagtgca aggtgagcaa caagggcctg cccagctcca tcgagaagac aatctccaag     1080
gccaagggcc agcccaggga acctcaggtg tataccctgc ctcccagcca ggaggagatg     1140
accaagaatc aggtgagcct gacctgcctg gtgaaaggat tctaccccag cgatatcgcc     1200
gtggagtggg agagcaatgg ccagcccgag aacaactaca agaccacacc ccccgtcctc     1260
gactccgatg gtcctttttt cctgtattcc aggctcaccg tggacaagtc caggtggcag     1320
gaaggcaacg tgtttagctg cagcgtgatg cagaggctc tgcacaacca ctatacacag     1380
aagagcctct ccctgtccct cggcaagtga                                     1410

```

<210> 245

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 245

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1 5 10 15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Thr Leu Thr Asp Tyr
20 25 30

Trp Met His Trp Val Arg Gln Leu Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ser Pro Ser Phe
50 55 60

Gln Gly Gln Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

23791WOPCTSEQ

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

23791WOPCTSEQ

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
 405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
 420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
 435 440 445

Gly Lys
 450

<210> 246

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 246

atggagtggg	cctgggtggt	cctgttcttc	ctgtccgtga	ccaccggcgt	gcacagcgag	60
gtgcagctgg	tggaatccgg	aggcggactg	gtgcagcctg	gaggaagcct	gagactgagc	120
tgcgctgcct	ccggctacac	cctgaccgac	tactggatgc	actgggtgag	acaggcccct	180
ggcaagggac	tgggtgtgggt	gtccgccatc	gacatcagcg	acagctacac	cagctacgct	240
gacagcgtga	agggcagggt	caccatctcc	gtggacaacg	ccaagaacac	cctgtacctg	300
cagatgaaca	gcctgagagc	cgaggacacc	gccgtgtact	attgcgccag	aagccccctc	360
tacaacagca	ggggcggcaa	ctacttcgac	tactggggac	agggcaccac	cgtagaccgtg	420
tcgagcgcta	gcaccaaagg	cccctccgtg	tttctcttgg	ccccctgcag	cagaagcacc	480
agcgagagca	cagccgctct	gggctgcctg	gtcaaggact	acttccccga	gcccgtgaca	540
gtgagctgga	atagcggcgc	cctgacatcc	ggcgtgcata	ccttccctgc	cgtagctgcaa	600
agctccggcc	tgtattccct	gtcctccgtg	gtgacagtgc	ccagcagctc	cctgggaacc	660
aagacctaca	cctgcaacgt	ggaccacaaa	cccagcaaca	ccaaggtgga	caagaggggtg	720
gaaagcaagt	acggccctcc	ttgccctcct	tgtcctgctc	ccgagttcct	gggaggcccc	780
agcgtgttcc	tgttcccccc	taagcccaag	gacaccctca	tgatctccag	gacccccgag	840
gtgacctgcg	tggtggtgga	tgtgagccag	gaagaccggg	aggtgcagtt	caactggtac	900
gtggacggcg	tggaggtgca	caacgccaag	accaagccca	gggaggagca	gttcaacagc	960
acctacaggg	tgggtgtccgt	cctgaccgtg	ctgcaccagg	actggctgaa	cggcaaagag	1020
tacaagtgca	aggtgagcaa	caagggcctg	cccagctcca	tcgagaagac	aatctccaag	1080
gccaagggcc	agcccaggga	acctcaggtg	tataccctgc	ctcccagcca	ggaggagatg	1140
accaagaatc	aggtgagcct	gacctgcctg	gtgaaaggat	tctaccccag	cgatatcgcc	1200
gtggagtggg	agagcaatgg	ccagcccagag	aacaactaca	agaccacacc	ccccgtcctc	1260

23791WOPCTSEQ

gactccgatg gctccttttt cctgtattcc aggctcaccg tggacaagtc caggtggcag 1320
gaaggcaacg tgtttagctg cagcgtgatg cagcaggctc tgcacaacca ctatacacag 1380
aagagcctct ccctgtccct cggcaagtga 1410

<210> 247
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 247
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Tyr Thr Leu Thr Asp Tyr
20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Val Trp Val
35 40 45

Ser Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Val Asp Asn Ala Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

23791WOPCTSEQ

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
 210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
 225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
 260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
 290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
 325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
 355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 385 390 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
 405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
 420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
 435 440 445

Gly Lys
 450

<210> 248
 <211> 1410
 <212> DNA

23791WOPCTSEQ

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 248

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atggagtgga gctgggtctt cctgttcttc ctgagcgtga ccaccggcgt gcacagccag      60
gtgcagctgg tggagagcgg aggaggcctg gtgaagcctg gaggcagcct gaggctgagc      120
tgtgctgcca gcggctacac cctgaccgac tactggatgc actggatcag gcaggcccct      180
ggaaagggcc tggagtgggt gagcgccatc gacatcagcg acagctacat cagctacgcc      240
gacagcgtga agggcaggtt caccatcagc gtggacaacg ccaagaacag cctgtacctg      300
cagatgaaca gcctcagggc cgaggatacc gccgtgtact actgcgccag gagccccctt      360
tacaacagca ggggcggcaa ctacttcgac tactggggcc agggaaccac agtgaccgtg      420
tcgagcgcta gcaccaaagg cccctccgtg tttcctctgg cccctgcag cagaagcacc      480
agcgagagca cagccgctct gggctgcctg gtcaaggact acttccccga gcccgtgaca      540
gtgagctgga atagcggcgc cctgacatcc ggcgtgcata cttccctgc cgtgctgcaa      600
agctccggcc tgtattccct gtcctccgtg gtgacagtgc ccagcagctc cctgggaacc      660
aagacctaca cctgcaacgt ggaccacaaa cccagcaaca ccaagggtgga caagaggggtg      720
gaaagcaagt acggccctcc ttgccctcct tgtcctgctc ccgagttcct gggaggcccc      780
agcgtgttcc tgttcccccc taagcccaag gacaccctca tgatctccag gacccccgag      840
gtgacctgcg tggtggtgga tgtgagccag gaagaccggg aggtgcagtt caactggtac      900
gtggacggcg tggaggtgca caacgccaag accaagccca gggaggagca gttcaacagc      960
acctacaggg tgggtgtccgt cctgaccgtg ctgcaccagg actggctgaa cggcaaagag     1020
tacaagtgca aggtgagcaa caagggcctg cccagctcca tcgagaagac aatctccaag     1080
gccaagggcc agcccaggga acctcaggtg tataccctgc ctcccagcca ggaggagatg     1140
accaagaatc aggtgagcct gacctgcctg gtgaaaggat tctaccccag cgatatcgcc     1200
gtggagtggg agagcaatgg ccagcccag aacaactaca agaccacacc ccccgtcctc     1260
gactccgatg gtcctttttt cctgtattcc aggctcaccg tggacaagtc caggtggcag     1320
gaaggcaacg tgtttagctg cagcgtgatg cagcaggctc tgcacaacca ctatacacag     1380
aagagcctct ccctgtccct cggcaagtga                                     1410

```

<210> 249

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 249

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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1           5           10           15

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23791WOPCTSEQ

Ser Leu Arg Leu₂₀ Ser Cys Ala Ala Ser₂₅ Gly Tyr Thr Leu Thr₃₀ Asp Tyr
 Trp Met His₃₅ Trp Ile Arg Gln Ala₄₀ Pro Gly Lys Gly Leu₄₅ Glu Trp Val
 Ser Ala Ile Asp Ile Ser Asp₅₅ Ser Tyr Ile Ser Tyr₆₀ Ala Asp Ser Val
 Lys Gly Arg Phe Thr Ile₇₀ Ser Val Asp Asn Ala₇₅ Lys Asn Ser Leu Tyr₈₀
 Leu Gln Met Asn Ser₈₅ Leu Arg Ala Glu Asp₉₀ Thr Ala Val Tyr Tyr₉₅ Cys
 Ala Arg Ser Pro₁₀₀ Phe Tyr Asn Ser Arg₁₀₅ Gly Gly Asn Tyr Phe₁₁₀ Asp Tyr
 Trp Gly Gln₁₁₅ Gly Thr Thr Val Thr₁₂₀ Val Ser Ser Ala Ser₁₂₅ Thr Lys Gly
 Pro Ser₁₃₀ Val Phe Pro Leu Ala₁₃₅ Pro Cys Ser Arg Ser₁₄₀ Thr Ser Glu Ser
 Thr Ala Ala Leu Gly Cys₁₅₀ Leu Val Lys Asp Tyr₁₅₅ Phe Pro Glu Pro Val₁₆₀
 Thr Val Ser Trp Asn₁₆₅ Ser Gly Ala Leu Thr₁₇₀ Ser Gly Val His Thr₁₇₅ Phe
 Pro Ala Val Leu₁₈₀ Gln Ser Ser Gly Leu₁₈₅ Tyr Ser Leu Ser Ser₁₉₀ Val Val
 Thr Val Pro₁₉₅ Ser Ser Ser Leu Gly₂₀₀ Thr Lys Thr Tyr Thr₂₀₅ Cys Asn Val
 Asp His₂₁₀ Lys Pro Ser Asn Thr₂₁₅ Lys Val Asp Lys Arg₂₂₀ Val Glu Ser Lys
 Tyr Gly Pro Pro Cys Pro₂₃₀ Pro Cys Pro Ala Pro₂₃₅ Glu Phe Leu Gly Gly₂₄₀
 Pro Ser Val Phe Leu₂₄₅ Phe Pro Pro Lys Pro₂₅₀ Lys Asp Thr Leu Met₂₅₅ Ile
 Ser Arg Thr Pro₂₆₀ Glu Val Thr Cys Val₂₆₅ Val Val Asp Val Ser₂₇₀ Gln Glu
 Asp Pro Glu Val Gln Phe Asn Trp₂₈₀ Tyr Val Asp Gly Val₂₈₅ Glu Val His

23791WOPCTSEQ

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 250
<211> 1431
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 250
atggagtggg cctgggtgtt cctgttcttc ctgagcgtga ccaccggcgt gcactccgag 60
gtgcagctgg tgcagagcgg cgctgaggtg aagaagcccg gcgagtcctt gaagatcagc 120
tgcaagggca gcggcagcag cttcaccgac tactacatca actgggtgag gcagatgcct 180
ggcaagggcc tggagtggat gggctggatc taccgccgga gcggcaacac catctactcc 240
cccagcttcc agggccaggt gaccatcagc gtggacaaga gcatcagcac cgcctacctg 300
cagtggagca gcctgaaggc cagcgacacc gccatgtact actgcgccag ggaggccgac 360

23791WOPCTSEQ

tacgatgacg ccctggacta ttggggccag ggcaccaccg tgacagtgtc gagctggggc	420
cagggaaacca ccgtgaccgt gtcgagcgct agcaccaaag gcccctccgt gtttcctctg	480
gccccctgca gcagaagcac cagcgagagc acagccgctc tgggctgcct ggtcaaggac	540
tacttccccg agcccgtgac agtgagctgg aatagcggcg ccctgacatc cggcgtgcat	600
accttccctg ccgtgctgca aagctccggc ctgtattccc tgtcctccgt ggtgacagtg	660
cccagcagct ccctgggaac caagacctac acctgcaacg tggaccacaa acccagcaac	720
accaaggtgg acaagagggg ggaaagcaag tacggccctc cttgccctcc ttgtcctgct	780
cccgagttcc tgggaggccc cagcgtgttc ctgttcccc ctaagcccaa ggacaccctc	840
atgatctcca ggacccccga ggtgacctgc gtggtggtgg atgtgagcca ggaagaccg	900
gaggtgcagt tcaactggta cgtggacggc gtggaggtgc acaacgcaa gaccaagccc	960
agggaggagc agttcaacag cacctacagg gtggtgtccg tcctgaccgt gctgcaccag	1020
gactggctga acggcaaaga gtacaagtgc aaggtgagca acaagggcct gccagctcc	1080
atcgagaaga caatctcaa ggccaagggc cagcccaggg aacctcaggt gtataccctg	1140
cctcccagcc aggaggagat gaccaagaat caggtgagcc tgacctgcct ggtgaaagga	1200
ttctaccca gcgatatcg cgtggagtgg gagagcaatg gccagcccga gaacaactac	1260
aagaccacac cccccgtcct cgactccgat ggctcctttt tcctgtattc caggctcacc	1320
gtggacaagt ccaggtggca ggaaggcaac gtgtttagct gcagcgtgat gcacgaggct	1380
ctgcacaacc actatacaca gaagagcctc tccctgtccc tcggcaagtg a	1431

<210> 251

<211> 457

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 251

Glu	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Glu
1				5					10					15	

Ser	Leu	Lys	Ile	Ser	Cys	Lys	Gly	Ser	Gly	Ser	Ser	Phe	Thr	Asp	Tyr
			20					25					30		

Tyr	Ile	Asn	Trp	Val	Arg	Gln	Met	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Met
		35					40					45			

Gly	Trp	Ile	Tyr	Pro	Gly	Ser	Gly	Asn	Thr	Ile	Tyr	Ser	Pro	Ser	Phe
	50					55					60				

Gln	Gly	Gln	Val	Thr	Ile	Ser	Val	Asp	Lys	Ser	Ile	Ser	Thr	Ala	Tyr
65					70					75					80

Leu	Gln	Trp	Ser	Ser	Leu	Lys	Ala	Ser	Asp	Thr	Ala	Met	Tyr	Tyr	Cys
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

23791WOPCTSEQ

85

90

95

Ala Arg Glu Ala Asp Tyr Asp Asp Ala Leu Asp Tyr Trp Gly Gln Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Trp Gly Gln Gly Thr Thr Val Thr Val
 115 120 125
 Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys
 130 135 140
 Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys
 145 150 155 160
 Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
 165 170 175
 Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
 180 185 190
 Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
 195 200 205
 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val
 210 215 220
 Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro
 225 230 235 240
 Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys
 245 250 255
 Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 260 265 270
 Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr
 275 280 285
 Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 290 295 300
 Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
 305 310 315 320
 Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 325 330 335
 Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 340 345 350
 Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met
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Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
370 375 380

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
385 390 395 400

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
405 410 415

Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val
420 425 430

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
435 440 445

Lys Ser Leu Ser Leu Ser Leu Gly Lys
450 455

<210> 252
<211> 1398
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 252
atggagtgga gctgggtggt cctgttcttc ctgagcgtga ccaccggcgt gcactcccag 60
gtgcagctgg tgcagagcgg agccgaggtg aagaagcctg gcgccagcgt gaaggtgtcc 120
tgcaaggcca gcggcagctc cttcaccgac tactacatca actgggtgag gcaggcccct 180
ggacagggac tggagtggat gggctggatt taccgccgga gcggcaacac catctacgcc 240
cagaagtcc agggcaggtg gaccagcacc gtggacacca gcatcagcac cgcctacatg 300
gagctgagca ggctgaggag cgacgacacc gtggtgtact actgcgccag ggaggccgac 360
tacgacgatg ccctggacta ctggggccag ggcaccacag tgaccgtgtc gagcgctagc 420
accaaaggcc cctccgtgtt tcctctggcc ccctgcagca gaagcaccag cgagagcaca 480
gccgctctgg gctgcctggt caaggactac ttccccgagc ccgtgacagt gagctggaat 540
agcggcgccc tgacatccgg cgtgcatacc ttccctgccg tgctgcaaag ctccggcctg 600
tattccctgt cctccgtggt gacagtgcgc agcagctccc tgggaaccaa gacctacacc 660
tgcaacgtgg accacaaacc cagcaacacc aaggtggaca agagggtgga aagcaagtac 720
ggccctcctt gccctccttg tcctgctccc gagttccttg gaggccccag cgtgttcctg 780
ttcccccta agcccaagga caccctcatg atctccagga cccccgaggt gacctgcgtg 840
gtggtggatg tgagccagga agaccggag gtgcagttca actggtacgt ggacggcgtg 900
gaggtgcaca acgccaagac caagcccagg gaggagcagt tcaacagcac ctacagggtg 960

23791WOPCTSEQ

gtgtccgtcc tgaccgtgct gcaccaggac tggctgaacg gcaaagagta caagtgaag	1020
gtgagcaaca agggcctgcc cagctccatc gagaagacaa tctccaaggc caagggccag	1080
cccaggggaac ctcaggtgta taccctgcct cccagccagg aggagatgac caagaatcag	1140
gtgagcctga cctgcctggt gaaaggattc taccacagcg atatcgccgt ggagtgggag	1200
agcaatggcc agcccagaaa caactacaag accacacccc ccgtcctcga ctccgatggc	1260
tcctttttcc tgtattccag gctcaccgtg gacaagtcca ggtggcagga aggcaacgtg	1320
tttagctgca gcgtgatgca cgaggctctg cacaaccact atacacagaa gagcctctcc	1380
ctgtccctcg gcaagtga	1398

<210> 253

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 253

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	Ser	Ser	Phe	Thr	Asp	Tyr
			20					25					30		

Tyr	Ile	Asn	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35					40					45			

Gly	Trp	Ile	Tyr	Pro	Gly	Ser	Gly	Asn	Thr	Ile	Tyr	Ala	Gln	Lys	Phe
	50					55					60				

Gln	Gly	Arg	Val	Thr	Ser	Thr	Val	Asp	Thr	Ser	Ile	Ser	Thr	Ala	Tyr
65					70					75					80

Met	Glu	Leu	Ser	Arg	Leu	Arg	Ser	Asp	Asp	Thr	Val	Val	Tyr	Tyr	Cys
				85					90					95	

Ala	Arg	Glu	Ala	Asp	Tyr	Asp	Asp	Ala	Leu	Asp	Tyr	Trp	Gly	Gln	Gly
			100					105					110		

Thr	Thr	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe
		115					120					125			

Pro	Leu	Ala	Pro	Cys	Ser	Arg	Ser	Thr	Ser	Glu	Ser	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

23791WOPCTSEQ

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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205

Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
210 215 220

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
245 250 255

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
290 295 300

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
305 310 315 320

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
340 345 350

Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
355 360 365

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
370 375 380

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
385 390 395 400

Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
405 410 415

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

23791WOPCTSEQ

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445

<210> 254
 <211> 1410
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polynucleotide

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<400> 254
atggagtgga gctgggtggt cctgttcttc ctgagcgtga ccaccggcgt gcacagccag      60
gtgcagctgg tgcagagcgg agccgaggtg aagaagcccg gcgcgagcgt gaaggtgagc      120
tgcaaggtga gcggctacac cctgaccgac tactggatgc actgggtgag acaggccccc      180
ggaaagggcc tggaatggat gggcgccatc gacatcagcg acagctacac aagctacgcc      240
cagaagtcc agggcaggtg gaccatgacc gtggacacca gcaccgacac cgcctacatg      300
gagctgagca gcctgaggag cgaggacaca gccgtctact actgcgccac cagccccttc      360
tacaacagca ggggcgggcaa ctacttcgac tactggggcc agggcaccac agtgaccgtg      420
tcgtccgcta gcaccaaagg cccctccgtg tttcctctgg cccctgcag cagaagcacc      480
agcgagagca cagccgctct gggctgcctg gtcaaggact acttccccga gcccgtgaca      540
gtgagctgga atagcggcgc cctgacatcc ggcgtgcata ctttcctgc cgtgctgcaa      600
agctccggcc tgtattccct gtcctccgtg gtgacagtgc ccagcagctc cctgggaacc      660
aagacctaca cctgcaacgt ggaccacaaa cccagcaaca ccaaggtgga caagaggggtg      720
gaaagcaagt acggccctcc ttgccctcct tgtcctgctc ccgagttcct gggaggcccc      780
agcgtgttcc tgttcccccc taagcccaag gacaccctca tgatctccag gacccccgag      840
gtgacctgcg tggtggtgga tgtgagccag gaagaccgg aggtgcagtt caactggtac      900
gtggacggcg tggaggtgca caacgccaag accaagccca gggaggagca gttcaacagc      960
acctacaggg tgggtgtccgt cctgaccgtg ctgcaccagg actggctgaa cggcaaagag     1020
tacaagtgca aggtgagcaa caagggcctg cccagctcca tcgagaagac aatctccaag     1080
gccaagggcc agcccagga acctcaggtg tataccctgc ctcccagcca ggaggagatg     1140
accaagaatc aggtgagcct gacctgcctg gtgaaaggat tctaccccag cgatatcgcc     1200
gtggagtggg agagcaatgg ccagcccag aacaactaca agaccacacc ccccgtcctc     1260
gactccgatg gtcctttttt cctgtattcc aggtctaccg tggacaagtc caggtggcag     1320
gaaggcaacg tgtttagctg cagcgtgatg cacgaggctc tgcacaacca ctatacacag     1380
aagagcctct ccctgtccct cggcaagtga                                1410
  
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<210> 255
 <211> 450
 <212> PRT
 <213> Artificial Sequence

23791WOPCTSEQ

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 255

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 Val Ser Gly Tyr Thr Leu Thr Asp Tyr
 20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Asp Thr Ala Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Thr Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
 195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
 210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
 225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 245 250 255

23791WOPCTSEQ

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 256

<211> 708

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 256

atgagcgtgc ccaccaagt gctgggcctg ctgctgctgt ggctgaccga cgccaggtgc 60

gacatccaga tgaccagag ccctagcagc ctgagcgcca gcgtgggaga cagggtgacc 120

atcacctgca gggccagcca ggacatcagc aactacctga actggtacca gcagaagccc 180

23791WOPCTSEQ

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ggcaaggccc ccaagctgct gatctactac accagcaggc tgcacagcgg agtgcccagc      240
agatttagcg gcagcggcag cggcacagac tacaccttca ccatcagctc cctgcagccc      300
gaggacatcg ccacctacta ctgccagcag ggcgataccc tgcccccttg gacatttggc      360
ggcggcacca aggtggagat caagcgtacg gtggctgccc cctccgtggt catcttcccc      420
cccagcgatg agcagctgaa gagcggcaca gccagcgtgg tgtgcctgct gaacaacttc      480
taccccaggg aggccaaggt gcagtggaag gtggacaacg ccctgcagag cggcaacagc      540
caggagtccg tgaccgagca ggacagcaag gacagcacct acagcctgag cagcacactg      600
accctgagca aggccgacta cgagaagcac aaggtgtacg cctgcgaggt gacccatcag      660
ggcctgagca gccccgtgac caagagcttc aacaggggcg agtgctga      708

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<210> 257

<211> 215

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 257

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr 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 Gly Asp Thr Leu Pro Pro
85 90 95

Trp Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
100 105 110

Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
115 120 125

Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu
130 135 140

Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser
145 150 155 160

23791WOPCTSEQ

Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
 165 170 175

Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
 180 185 190

Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys
 195 200 205

Ser Phe Asn Arg Gly Glu Cys
 210 215

<210> 258

<211> 708

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 258

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atgagcgtgc ccaccaagt gctgggcctg ctgctgctgt ggctgaccga cgccaggtgc      60
gacatccaga tgaccagag ccctagcagc ctgagcgcca gcgtgggaga cagggtgacc      120
atcacctgca gggccagcca ggacatcagc aactacctga actggtacca gcagaagccc      180
ggcaaggccc ccaagctgct gatctactac accagcaggc tgcacagcgg agtgcccagc      240
agatttagcg gcagcggcag cggcacagac tacaccctga ccatcagctc cctgcagccc      300
gaggactttg ccacctacta ctgccagcag ggcgataccc tgcccccttg gacatttggc      360
ggcggcacca aggtggagat caagcgtacg gtggctgccc cctccgtggt catcttcccc      420
cccagcgatg agcagctgaa gagcggcaca gccagcgtgg tgtgcctgct gaacaacttc      480
taccacaggg aggccaaggt gcagtggaag gtggacaacg ccctgcagag cggcaacagc      540
caggagtccg tgaccgagca ggacagcaag gacagcacct acagcctgag cagcacactg      600
accctgagca aggccgacta cgagaagcac aaggtgtacg cctgcgaggt gacccatcag      660
ggcctgagca gcccctgac caagagcttc aacaggggcg agtgctga      708

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<210> 259

<211> 215

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 259

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
 Page 239

20 23791WOPCTSEQ 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Thr Leu Pro Pro
85 90 95

Trp Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
100 105 110

Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
115 120 125

Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu
130 135 140

Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser
145 150 155 160

Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
165 170 175

Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
180 185 190

Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys
195 200 205

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 260
<211> 708
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 260
atgagcgtgc ccaccaagt gctgggcctg ctgctgctgt ggctgaccga cgccaggtgc 60
gacatccaga tgaccagag ccctagcagc ctgagcgcca gcgtagggaga cagggtgacc 120
atcacctgca gggccagcca ggacatcagc aactacctga actggtttca gcagaagccc 180
ggcaaggccc ccaagagcct gatctactac accagcaggc tgcacagcgg agtgcccagc 240

23791WOPCTSEQ

agatttagcg gcagcggcag cggcacagac tacaccctga ccatcagctc cctgcagccc 300
gaggactttg ccacctacta ctgccagcag ggcgataccc tgcccccttg gacatttggc 360
ggcggcacca aggtggagat caagcgtacg gtggctgccc cctccgtggt catcttcccc 420
cccagcgatg agcagctgaa gagcggcaca gccagcgtgg tgtgcctgct gaacaacttc 480
taccacaggg aggccaaggt gcagtgggaag gtggacaacg ccctgcagag cggcaacagc 540
caggagtccg tgaccgagca ggacagcaag gacagcacct acagcctgag cagcacactg 600
accctgagca aggccgacta cgagaagcac aaggtgtacg cctgcgaggt gacccatcag 660
ggcctgagca gccccgtgac caagagcttc aacaggggcg agtgctga 708

<210> 261

<211> 215

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 261

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

Leu Asn Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile
35 40 45

Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Thr Leu Pro Pro
85 90 95

Trp Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
100 105 110

Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
115 120 125

Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu
130 135 140

Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser
145 150 155 160

23791WOPCTSEQ

Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
165 170 175

Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
180 185 190

Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys
195 200 205

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 262

<211> 708

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 262

atgagcgtgc ccaccaagt gctgggcctg ctgctgctgt ggctgaccga cgccaggtgc	60
gacatccaga tgaccagag ccctagcagc ctgagcgcca gcgtgggaga cagggtgacc	120
atcacctgca gggccagcca ggacatcagc aactacctga actggtacca gcagaagccc	180
ggcaaggtgc ccaagctgct gatctactac accagcaggc tgcacagcgg agtgcccagc	240
agatttagcg gcagcggcag cggcacagac tacaccctga ccatcagctc cctgcagccc	300
gaggacgtgg ccacctacta ctgccagcag ggcgataccc tgcccccttg gacatttggc	360
ggcggcacca aggtggagat caagcgtacg gtggctgccc cctccgtgtt catcttcccc	420
cccagcgatg agcagctgaa gagcggcaca gccagcgtgg tgtgcctgct gaacaacttc	480
taccccaggg aggccaaggt gcagtggaag gtggacaacg ccctgcagag cggcaacagc	540
caggagtccg tgaccgagca ggacagcaag gacagcacct acagcctgag cagcacactg	600
accctgagca aggccgacta cgagaagcac aaggtgtacg cctgcgaggt gacccatcag	660
ggcctgagca gcccctgac caagagcttc aacaggggag agtgctga	708

<210> 263

<211> 215

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 263

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
20 25 30

23791WOPCTSEQ

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Val Pro Lys Leu Leu Ile
35 40 45

Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Val Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Thr Leu Pro Pro
85 90 95

Trp Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
100 105 110

Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
115 120 125

Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu
130 135 140

Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser
145 150 155 160

Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
165 170 175

Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
180 185 190

Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys
195 200 205

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 264

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 264

atggagtgga gctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gactctccag 60

gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc 120

tgcaaggcca gcggctatac cctgaccgac tactatatgc actgggtgcg gcaggctcct 180

ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240

cagaagttcc aggggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg 300

23791WOPCTSEQ

gagctgtcct ccctgcgag cgaggatacc gccgtgtact actgtgccag gagcccccttc	360
tacaacagca ggggcgga aa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgcct ccaccaaggg accttcctg ttccccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gccctgacc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttctctgc cgtgctgcag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtga caagcgggtg	720
gagagcaa at acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc	780
tccgtgttcc tgttcccccc caagcctaag gatacactga tgatctcccg gacccccgag	840
gtgacatgcg tgggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat	900
gtggacggcg tggaagtga caatgctaag acaaagcctc gggaggagca gttcaacagc	960
acataccggg tgggtgagcgt gctcacagt ctgcaccagg actgggtcaa cggcaaggag	1020
tataagtga aggtctcaa caaggcctc cccagcagca tcgagaagac catcagcaag	1080
gccaagggcc aaccaggga gcctcaggtg tacaccctc ctctagcca ggaggagatg	1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat ttaccaccag cgacatcgcc	1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc	1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa	1320
gaaggcaacg tgttcagctg tagcgtgatg cacgaggccc tgcataacca ctacacccaa	1380
aagagcctct ccctgtccct gggcaagtga	1410

<210> 265

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 265

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	Leu	Thr	Asp	Tyr
			20					25					30		

Tyr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35					40					45			

Gly	Ala	Ile	Asp	Ile	Ser	Asp	Ser	Tyr	Thr	Ser	Tyr	Ala	Gln	Lys	Phe
	50					55					60				

Gln	Gly	Arg	Val	Thr	Met	Thr	Val	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr
65					70					75					80

23791WOPCTSEQ

Met Glu Leu Ser Ser₈₅ Leu Arg Ser Glu Asp₉₀ Thr Ala Val Tyr Tyr₉₅ Cys
Ala Arg Ser Pro₁₀₀ Phe Tyr Asn Ser Arg₁₀₅ Gly Gly Asn Tyr Phe₁₁₀ Asp Tyr
Trp Gly Gln₁₁₅ Gly Thr Thr Val Thr₁₂₀ Val Ser Ser Ala Ser₁₂₅ Thr Lys Gly
Pro Ser₁₃₀ Val Phe Pro Leu Ala₁₃₅ Pro Cys Ser Arg Ser₁₄₀ Thr Ser Glu Ser
Thr₁₄₅ Ala Ala Leu Gly Cys₁₅₀ Leu Val Lys Asp Tyr₁₅₅ Phe Pro Glu Pro Val₁₆₀
Thr Val Ser Trp Asn₁₆₅ Ser Gly Ala Leu Thr₁₇₀ Ser Gly Val His Thr₁₇₅ Phe
Pro Ala Val Leu₁₈₀ Gln Ser Ser Gly Leu₁₈₅ Tyr Ser Leu Ser Ser₁₉₀ Val Val
Thr Val Pro₁₉₅ Ser Ser Ser Leu Gly₂₀₀ Thr Lys Thr Tyr Thr₂₀₅ Cys Asn Val
Asp His₂₁₀ Lys Pro Ser Asn Thr₂₁₅ Lys Val Asp Lys Arg₂₂₀ Val Glu Ser Lys
Tyr₂₂₅ Gly Pro Pro Cys Pro₂₃₀ Pro Cys Pro Ala Pro₂₃₅ Glu Phe Leu Gly Gly₂₄₀
Pro Ser Val Phe Leu₂₄₅ Phe Pro Pro Lys Pro₂₅₀ Lys Asp Thr Leu Met₂₅₅ Ile
Ser Arg Thr Pro₂₆₀ Glu Val Thr Cys Val₂₆₅ Val Val Asp Val Ser₂₇₀ Gln Glu
Asp Pro Glu₂₇₅ Val Gln Phe Asn Trp₂₈₀ Tyr Val Asp Gly Val₂₈₅ Glu Val His
Asn Ala₂₉₀ Lys Thr Lys Pro Arg₂₉₅ Glu Glu Gln Phe Asn₃₀₀ Ser Thr Tyr Arg
Val₃₀₅ Val Ser Val Leu Thr₃₁₀ Val Leu His Gln Asp₃₁₅ Trp Leu Asn Gly Lys₃₂₀
Glu Tyr Lys Cys Lys₃₂₅ Val Ser Asn Lys Gly₃₃₀ Leu Pro Ser Ser Ile₃₃₅ Glu
Lys Thr Ile Ser₃₄₀ Lys Ala Lys Gly Gln₃₄₅ Pro Arg Glu Pro Gln₃₅₀ Val Tyr

23791WOPCTSEQ

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 266

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 266

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tgcaaggcca gcggctatac cctgaccgac taccagatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc	360
tacaacagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgctt ccaccaaggg accttcctgt tccccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtagcc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttcctgc cgtgtgtcag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg	720
gagagcaaat acggccccc ttgtccccc tgtcctgccc ctgagttcct gggaggaccc	780
tccgtgttcc tgttccccc caagcctaag gatacactga tgatctcccg gacccccgag	840

23791WOPCTSEQ

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 gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc 960
 acataccggg tggtgagcgt gctcacagtg ctgcaccagg actgggtcaa cggcaaggag 1020
 tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag 1080
 gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctcctagcca ggaggagatg 1140
 accaagaacc aagtgtccct gacctgtctc gtgaagggat tttaccccag cgacatcgcc 1200
 gtcgaatggg aatccaacgg acagcccgag aacaactaca aaaccacccc tcccgtgctc 1260
 gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
 gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa 1380
 aagagcctct ccctgtccct gggcaagtga 1410

<210> 267

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 267

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 Leu Thr Asp Tyr
 20 25 30

Gln Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
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145		150		155		160									
Thr	Val	Ser	Trp	Asn ₁₆₅	Ser	Gly	Ala	Leu	Thr ₁₇₀	Ser	Gly	Val	His	Thr ₁₇₅	Phe
Pro	Ala	Val	Leu ₁₈₀	Gln	Ser	Ser	Gly	Leu ₁₈₅	Tyr	Ser	Leu	Ser	Ser ₁₉₀	Val	Val
Thr	Val	Pro ₁₉₅	Ser	Ser	Ser	Leu	Gly ₂₀₀	Thr	Lys	Thr	Tyr	Thr ₂₀₅	Cys	Asn	Val
Asp	His ₂₁₀	Lys	Pro	Ser	Asn	Thr ₂₁₅	Lys	Val	Asp	Lys	Arg ₂₂₀	Val	Glu	Ser	Lys
Tyr ₂₂₅	Gly	Pro	Pro	Cys	Pro ₂₃₀	Pro	Cys	Pro	Ala	Pro ₂₃₅	Glu	Phe	Leu	Gly	Gly ₂₄₀
Pro	Ser	Val	Phe	Leu ₂₄₅	Phe	Pro	Pro	Lys	Pro ₂₅₀	Lys	Asp	Thr	Leu	Met ₂₅₅	Ile
Ser	Arg	Thr	Pro ₂₆₀	Glu	Val	Thr	Cys	Val ₂₆₅	Val	Val	Asp	Val	Ser ₂₇₀	Gln	Glu
Asp	Pro	Glu ₂₇₅	Val	Gln	Phe	Asn	Trp ₂₈₀	Tyr	Val	Asp	Gly	Val ₂₈₅	Glu	Val	His
Asn	Ala ₂₉₀	Lys	Thr	Lys	Pro	Arg ₂₉₅	Glu	Glu	Gln	Phe	Asn ₃₀₀	Ser	Thr	Tyr	Arg
Val ₃₀₅	Val	Ser	Val	Leu	Thr ₃₁₀	Val	Leu	His	Gln	Asp ₃₁₅	Trp	Leu	Asn	Gly	Lys ₃₂₀
Glu	Tyr	Lys	Cys	Lys ₃₂₅	Val	Ser	Asn	Lys	Gly ₃₃₀	Leu	Pro	Ser	Ser	Ile ₃₃₅	Glu
Lys	Thr	Ile	Ser ₃₄₀	Lys	Ala	Lys	Gly	Gln ₃₄₅	Pro	Arg	Glu	Pro	Gln ₃₅₀	Val	Tyr
Thr	Leu	Pro ₃₅₅	Pro	Ser	Gln	Glu	Glu ₃₆₀	Met	Thr	Lys	Asn	Gln ₃₆₅	Val	Ser	Leu
Thr	Cys ₃₇₀	Leu	Val	Lys	Gly	Phe ₃₇₅	Tyr	Pro	Ser	Asp	Ile ₃₈₀	Ala	Val	Glu	Trp
Glu ₃₈₅	Ser	Asn	Gly	Gln	Pro ₃₉₀	Glu	Asn	Asn	Tyr	Lys ₃₉₅	Thr	Thr	Pro	Pro	Val ₄₀₀
Leu	Asp	Ser	Asp	Gly ₄₀₅	Ser	Phe	Phe	Leu	Tyr ₄₁₀	Ser	Arg	Leu	Thr	Val ₄₁₅	Asp
Lys	Ser	Arg	Trp	Gln	Glu	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 268
<211> 1410
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 268
atggagtgga gctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag 60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcgctccgt gaaggtgagc 120
tgcaaggcca gcggctatac cctgaccgac tacttcatgc actgggtgcg gcaggctcct 180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240
cagaagttcc aggggaagggg gacaatgacc gtggatacca gcacctccac cgtgtacatg 300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc 360
tacaacagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg 420
tcgagcgcct ccaccaaggg accttccgtg ttccccctgg ctccctgctc caggagcaca 480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttccctga gcccgtagacc 540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cttttcctgc cgtgctgcag 600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc 660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg 720
gagagcaa at acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc 780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag 840
gtgacatgcg tgggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat 900
gtggacggcg tggaagtga caatgctaag acaaagcctc gggaggagca gttcaacagc 960
acataccggg tggtagcgt gtcacagtg ctgcaccagg actggctcaa cggcaaggag 1020
tataagtga aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag 1080
gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctccctagcca ggaggagatg 1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat ttaccctcag cgacatcgcc 1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc 1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
gaaggcaacg tgttcagctg tagcgtgatg cacgaggccc tgcataacca ctacacccaa 1380
aagagcctct ccctgtccct gggcaagtga 1410

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<210> 269
 <211> 450
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 269
 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 Leu Thr Asp Tyr
 20 25 30

Phe Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
 195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
 210 215 220

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Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 270

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

23791WOPCTSEQ

<400> 270
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tgcaaggcca gcggctatac cctgaccgac tacctgatgc actgggtgcg gcaggctcct 180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240
cagaagtcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg 300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc 360
tacaacagca ggggcggaac ctacttcgac tactggggcc agggcacaac cgtgaccgtg 420
tcgagcgct ccaccaaggg accttcctg ttccccctg ctccctgctc caggagcaca 480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtagc 540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttcctgc cgtgtgcag 600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc 660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtga caagcgggtg 720
gagagcaa atcgcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc 780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctccc gacccccgag 840
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acataccggg tggtagcgt gtcacagtgt ctgaccagg actgggtcaa cggcaaggag 1020
tataagtga aggtctcaa caaggcctc cccagcagca tcgagaagac catcagcaag 1080
gccaagggcc aaccaggga gcctcaggtg tacaccctc ctctagcca ggaggagatg 1140
accaagaacc aagtgtccct gacctgtctc gtgaagggtt tttaccccag cgacatcgcc 1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc 1260
gatagcgacg gcagcttttt cctgtattcc aggtgaccg tggacaagtc ccggtggcaa 1320
gaaggcaacg tgttcagctg tagcgtgatg cagaggccc tgcataacca ctacacccaa 1380
aagagcctct ccctgtcctt gggcaagtga 1410

<210> 271
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 271
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 Leu Thr Asp Tyr
20 25 30

23791WOPCTSEQ

Leu Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45
 Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60
 Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80
 Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110
 Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125
 Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140
 Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160
 Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175
 Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 180 185 190
 Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
 195 200 205
 Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
 210 215 220
 Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
 225 230 235 240
 Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 245 250 255
 Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
 260 265 270
 Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 275 280 285
 Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
 290 295 300

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Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 272

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 272

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gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc 120

tgcaaggcca gcggtatata cctgaccgac tacatcatgc actgggtgcg gcaggctcct 180

ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240

cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg 300

gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc 360

tacaacagca ggggcgaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg 420

tcgagcgctt ccaccaaggg accttcctgt tccccctgg ctccctgctc caggagcaca 480

tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtagcc 540

23791WOPCTSEQ

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gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cctttcctgc cgtgctgcag      600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc      660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg      720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc      780
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gtgacatgcg tggtggtcga tgtgtcccag gaggaccccc aggtgcagtt taactggtat      900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc      960
acataccggg tggtgagcgt gctcacagtg ctgcaccagg actggctcaa cggcaaggag     1020
tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag     1080
gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctctagcca ggaggagatg     1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat ttaccaccag cgacatcgcc     1200
gtcgaatggg aatccaacgg acagcccgag aacaactaca aaaccacccc tcccggtgctc     1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa     1320
gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa     1380
aagagcctct ccctgtccct gggcaagtga                                     1410

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<210> 273

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 273

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 Leu Thr Asp Tyr
 20 25 30

Ile Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

23791WOPCTSEQ

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125
 Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140
 Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160
 Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175
 Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 180 185 190
 Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
 195 200 205
 Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
 210 215 220
 Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
 225 230 235 240
 Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 245 250 255
 Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
 260 265 270
 Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 275 280 285
 Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
 290 295 300
 Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 305 310 315 320
 Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
 325 330 335
 Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 340 345 350
 Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
 355 360 365
 Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 370 375 380

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Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 274

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 274

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gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc	120
tgcaaggcca gcggctatac cctgaccgac tacgtgatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc	360
tacaacagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgcct ccaccaaggg accttcctgt tccccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttccctga gcccgtagacc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cttttcctgc cgtgctgcag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtga caagcgggtg	720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc	780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag	840
gtgacatgcg tggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat	900
gtggacggcg tggaagtga caatgctaag acaaagcctc gggaggagca gttcaacagc	960
acataccggg tggtagcgt gtcacagtg ctgcaccagg actggctcaa cggcaaggag	1020
tataagtgca aggtctcaa caaggcctc cccagcagca tcgagaagac catcagcaag	1080

23791WOPCTSEQ

gccaaagggcc aaccagggga gcctcaggtg tacaccctcc ctcctagcca ggaggagatg 1140
 accaagaacc aagtgtccct gacctgtctc gtgaagggat tttaccccag cgacatcgcc 1200
 gtcgaatggg aatccaacgg acagcccgag aacaactaca aaaccacccc tcccggtgctc 1260
 gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
 gaaggcaacg tggtcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa 1380
 aagagcctct ccctgtccct gggcaagtga 1410

<210> 275

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 275

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 Leu Thr Asp Tyr
 20 25 30

Val Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val

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180

185

190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys

450

<210> 276
 <211> 1410
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 276
 atggagtgga gctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag 60
 gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc 120
 tgcaaggcca gcggctatac cctgaccgac tactggatgc actgggtgcg gcaggctcct 180
 ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240
 cagaagtcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg 300
 gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc 360
 tacgatagca ggggcgaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg 420
 tcgagcgct ccaccaaggg accttcctg ttccccctgg ctccctgctc caggagcaca 480
 tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtagc 540
 gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttcctgc cgtgtgcag 600
 agtccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag ctcggaacc 660
 aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtga caagcgggtg 720
 gagagcaa atcggcccc ttgtcccc ttgtcctgcc ctgagttcct gggaggaccc 780
 tccgtgttcc tgttcccc caagcctaag gataactga tgatctccg gacccccgag 840
 gtgacatgcg tgggtggtcga tgtgtcccag gaggacccg aggtgcagtt taactggtat 900
 gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc 960
 acataccggg tggtagcgt gtcacagtgt ctgaccagg actggctcaa cggcaaggag 1020
 tataagtgca aggtctcaa caagggcctc cccagcagca tcgagaagac catcagcaag 1080
 gccaagggcc aaccaggga gcctcagggtg tacaccctc ctctagcca ggaggagatg 1140
 accaagaacc aagtgtccct gacctgtctc gtgaagggtat ttaccaccag cgacatcgcc 1200
 gtcgaatggg aatccaacgg acagcccgag aacaactaca aaaccacccc tcccggtgctc 1260
 gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
 gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa 1380
 aagagcctct ccctgtccct gggcaagtga 1410

<210> 277
 <211> 450
 <212> PRT
 <213> Artificial Sequence

<220>

23791WOPCTSEQ

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 277

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 Leu Thr Asp Tyr
20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Asp Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

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Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 278
<211> 1410
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 278
atggagtgga gctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag 60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc 120
tgcaaggcca gcggctatac cctgaccgac tactggatgc actgggtgcg gcaggctcct 180

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ggacagggcc	tggaatggat	gggcgctatt	gacatcagcg	atagctacac	cagctacgcc	240
cagaagttcc	aggggaaggg	gacaatgacc	gtggatacca	gcacctccac	cgtgtacatg	300
gagctgtcct	ccctgcggag	cgaggatacc	gccgtgtact	actgtgccag	gagccccctt	360
tactccagca	ggggcggaaa	ctacttcgac	tactggggcc	agggcacaac	cgtgaccgtg	420
tcgagcgcct	ccaccaaggg	accttcctgt	ttccccctgg	ctccctgctc	caggagcaca	480
tccgagagca	cagctgcctt	gggctgtctg	gtgaaggatt	atttccctga	gcccgtgacc	540
gtgtcctgga	acagcggcgc	cctcacctcc	ggagtgcaca	cctttcctgc	cgtgctgcag	600
agctccggcc	tgtacagcct	gtcctccgtg	gtgacagtgc	ctagcagcag	cctcggaacc	660
aagacctaca	catgcaacgt	cgaccataag	cccagcaaca	ccaaggtgga	caagcgggtg	720
gagagcaa	acggcccccc	ttgtcccccc	tgtcctgccc	ctgagttcct	gggaggaccc	780
tccgtgttcc	tgttcccccc	caagcctaag	gatacactga	tgatctcccg	gacccccgag	840
gtgacatg	tggtggtcga	tgtgtcccag	gaggaccccc	aggtgcagtt	taactggtat	900
gtggacggcg	tggaagtgca	caatgctaag	acaaagcctc	gggaggagca	gttcaacagc	960
acataccggg	tggtgagcgt	gctcacagt	ctgcaccagg	actgggtcaa	cggcaaggag	1020
tataagtgca	aggtctccaa	caagggcctc	cccagcagca	tcgagaagac	catcagcaag	1080
gccaagggcc	aaccagggga	gcctcaggtg	tacaccctcc	ctcctagcca	ggaggagatg	1140
accaagaacc	aagtgtccct	gacctgtctc	gtgaagggat	tttaccctag	cgacatcgcc	1200
gtcgaatggg	aatccaacgg	acagccccgag	aacaactaca	aaaccacccc	tcccgtgctc	1260
gatagcgacg	gcagcttttt	cctgtattcc	aggctgaccg	tggacaagtc	ccggtggcaa	1320
gaaggcaacg	tgttcagctg	tagcgtgatg	cacgaggccc	tgcataacca	ctacacccaa	1380
aagagcctct	ccctgtccct	gggcaagtga				1410

<210> 279

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 279

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 Leu Thr Asp Tyr
20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60

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Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80
 Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Ser Pro Phe Tyr Ser Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110
 Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125
 Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140
 Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160
 Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175
 Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 180 185 190
 Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
 195 200 205
 Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
 210 215 220
 Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
 225 230 235 240
 Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 245 250 255
 Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
 260 265 270
 Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 275 280 285
 Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
 290 295 300
 Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 305 310 315 320
 Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
 325 330 335

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Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 280

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 280

atggagtgga gctgggtggt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc	120
tgcaaggcca gcggctatac cctgaccgac tactggatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagtcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc	360
tacttttagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgct ccaccaagg accttccgtg ttccccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtagc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttctctgc cgtgtgcag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg	720
gagagcaaat acggccccc ttgtccccc tgtcctgcc ctgagttcct gggaggaccc	780

23791WOPCTSEQ

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tccgtgttcc tgttcccccc caagcctaag gatacactga tgatctcccg gacccccgag      840
gtgacatgcg tgggtggtcga tgtgtcccag gaggaccccc aggtgcagtt taactggtat      900
gtggacggcg tggaagtgcg caatgctaag acaaagcctc gggaggagca gttcaacagc      960
acataccggg tggtgagcgt gtcacacgtg ctgcaccagg actgggtcaa cggcaaggag     1020
tataagtgcg aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag     1080
gccaagggcc aaccagggga gcctcaggtg tacaccctcc ctcctagcca ggaggagatg     1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat tttaccccag cgacatcgcc     1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc     1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa     1320
gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa     1380
aagagcctct ccctgtccct gggcaagtga                                     1410

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<210> 281

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 281

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 Leu Thr Asp Tyr
20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Phe Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

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Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

23791WOPCTSEQ

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
 420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
 435 440 445

Gly Lys
 450

<210> 282

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 282

atggagtgga gctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gactctccag	60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc	120
tgcaaggcca gcggctatac cctgaccgac tactggatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagttcc aggggaaggt gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc	360
tacgaaagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgcct ccaccaaggg accttcctgtg ttccccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttccctga gcccgtagacc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttctctgc cgtgtctgag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctacgagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg	720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc	780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag	840
gtgacatgcg tggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat	900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc	960
acataccggg tggtagcggt gtcacagtg ctgcaccagg actggctcaa cggcaaggag	1020
tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag	1080
gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctctagcca ggaggagatg	1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat ttaccaccag cgacatcgcc	1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccggtgctc	1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa	1320

23791WOPCTSEQ

gaaggcaacg tggttcagctg tagcgtgatg cacgaggccc tgcataacca ctacacccaa 1380
aagagcctct ccctgtccct gggcaagtga 1410

<210> 283
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 283
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 Leu Thr Asp Tyr
20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Glu Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
Page 269

23791WOPCTSEQ
220

210

215

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 284
<211> 1410
<212> DNA
<213> Artificial Sequence

23791WOPCTSEQ

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 284

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atggagtgga gctgggtggt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag      60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc      120
tgcaaggcca gcggctatac cctgaccgac tactggatgc actgggtgcg gcaggctcct      180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc      240
cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg      300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc      360
taccaaagca ggggcgga aa ctacttcgac tactggggcc agggcacaac cgtgaccgtg      420
tcgagcgcct ccaccaaggg accttcctgtg tccccctgg ctccctgctc caggagcaca      480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gccctgacc      540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttcctgc cgtgtgcag      600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc      660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtgga caagcgggtg      720
gagagcaa at acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc      780
tccgtgttcc tgttcccccc caagcctaag gatacactga tgatctccc gacccccgag      840
gtgacatgcg tgggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat      900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc      960
acataccggg tggtgagcgt gctcacagtg ctgcaccagg actgggtcaa cggcaaggag     1020
tataagtgca aggtctccaa caaggcctc cccagcagca tcgagaagac catcagcaag     1080
gccaagggcc aaccagga gcctcaggtg tacaccctcc ctctagcca ggaggagatg     1140
accaagaacc aagtgtccct gacctgtctc gtgaagggtat tttaccccag cgacatcgcc     1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc     1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa     1320
gaaggcaacg tgttcagctg tagcgtgatg cagaggccc tgcataacca ctacacccaa     1380
aagagcctct ccctgtccct gggcaagtga                                     1410

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<210> 285

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 285

```

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1           5           10           15

```

23791WOPCTSEQ

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Leu Thr Asp Tyr
20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Gln Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

23791WOPCTSEQ

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 286

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 286

atggagtgga gctgggtggt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc	120
tgcaaggcca gcggctatac cctgaccgac tactggatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagtcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc	360
tacaggagca ggggcgaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420

23791WOPCTSEQ

tcgagcgcct ccaccaaggg accttccgtg ttccccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttccctga gcccgtagacc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cttttcctgc cgtgctgcag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg	720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc	780
tccgtgttcc tgttcccccc caagcctaag gatacactga tgatctcccg gacccccgag	840
gtgacatgcg tgggtggtcga tgtgtcccag gaggaccccg aggtgcagtt taactggtat	900
gtggacggcg tggaagtga caatgctaag acaaagcctc gggaggagca gttcaacagc	960
acataccggg tggtgagcgt gctcacagtg ctgcaccagg actggctcaa cggcaaggag	1020
tataagtga aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag	1080
gccaagggcc aaccagga gcctcaggtg tacaccctcc ctccctagcca ggaggagatg	1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat ttaccaccag cgacatcgcc	1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc	1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa	1320
gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa	1380
aagagcctct ccctgtccct gggcaagtga	1410

<210> 287

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 287

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	Leu	Thr	Asp	Tyr
			20					25					30		

Trp	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35					40					45			

Gly	Ala	Ile	Asp	Ile	Ser	Asp	Ser	Tyr	Thr	Ser	Tyr	Ala	Gln	Lys	Phe
	50					55					60				

Gln	Gly	Arg	Val	Thr	Met	Thr	Val	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr
65					70					75					80

Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
				85					90					95	

23791WOPCTSEQ

Ala Arg Ser Pro Phe Tyr Arg Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

23791WOPCTSEQ

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
 405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
 420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
 435 440 445

Gly Lys
 450

<210> 288

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 288

atggagtgga gctgggtggt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc	120
tgcaaggcca gcggctatac cctgaccgac tactatatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc	360
tacgatagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgcct ccaccaaggg accttcctg ttccccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttccctga gcccgtagacc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttccctgc cgtgctgcag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtgga caagcgggtg	720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc	780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag	840
gtgacatgcg tgggtggtcga tgtgtcccag gaggaccccg aggtgcagtt taactggtat	900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc	960
acataccggg tgggtgagcgt gctcacagtg ctgcaccagg actggctcaa cggcaaggag	1020

23791WOPCTSEQ

tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag 1080
 gccaagggcc aaccagggga gcctcaggtg tacaccctcc ctcttagcca ggaggagatg 1140
 accaagaacc aagtgtccct gacctgtctc gtgaagggat tttaccccag cgacatcgcc 1200
 gtcgaatggg aatccaacgg acagcccgag aacaactaca aaaccacccc tcccggtgctc 1260
 gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
 gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa 1380
 aagagcctct ccctgtccct gggcaagtga 1410

<210> 289

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 289

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 Leu Thr Asp Tyr
 20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Pro Phe Tyr Asp Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175

23791WOPCTSEQ

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

23791WOPCTSEQ

Gly Lys
450

<210> 290

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 290

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atggagtgga gctgggtggt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag      60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc      120
tgcaaggcca gcggtatac cctgaccgac tactatatgc actgggtgcg gcaggctcct      180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc      240
cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg      300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctt      360
tactccagca ggggcgaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg      420
tcgagcgctt ccaccaaggg accttcctgt tccccctgg ctccctgctc caggagcaca      480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtgacc      540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cctttcctgc cgtgtgtcag      600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc      660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtgga caagcgggtg      720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc      780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag      840
gtgacatgcg tgggtggtcga tgtgtcccag gaggaccccg aggtgcagtt taactggtat      900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc      960
acataccggg tggtgagcgt gtcacagtg ctgcaccagg actggctcaa cggcaaggag     1020
tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag     1080
gccaagggcc aaccagga gcctcaggtg tacaccctcc ctctagcca ggaggagatg     1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat ttaccaccag cgacatcgcc     1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc     1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa     1320
gaaggcaacg tgttcagctg tagcgtgatg cacgaggccc tgcataacca ctacacccaa     1380
aagagcctct ccctgtccct gggcaagtga                                     1410

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<210> 291

<211> 450

<212> PRT

23791WOPCTSEQ

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 291

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 Leu Thr Asp Tyr
20 25 30Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95Ala Arg Ser Pro Phe Tyr Ser Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
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23791WOPCTSEQ

245

250

255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
 260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
 290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
 325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
 355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
 405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
 420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
 435 440 445

Gly Lys
 450

<210> 292

<211> 1410

<212> DNA

<213> Artificial sequence

<220>

<223> Description of Artificial sequence: Synthetic polynucleotide

<400> 292

atggagtgga gctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag 60

gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc 120

23791WOPCTSEQ

tgcaaggcca gcggctatac cctgaccgac tactatatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagttcc aggggaaggg gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc	360
tacttttagca ggggcggaac ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgcct ccaccaaggg accttcctgt tttcccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgcctt gggctgtctg gtgaaggatt atttccctga gcccgtagacc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cttttcctgc cgtgtgtcag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg	720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc	780
tccgtgttcc tgttcccccc caagcctaag gatacactga tgatctcccg gacccccgag	840
gtgacatgcg tgggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat	900
gtggacggcg tggaagtga caatgctaag acaaagcctc gggaggagca gttcaacagc	960
acataccggg tggtgagcgt gtcacagtgt ctgcaccagg actgggtcaa cggcaaggag	1020
tataagtga aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag	1080
gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctccctagcca ggaggagatg	1140
accaagaacc aagtgtccct gacctgtctc gtgaagggtt tttaccccag cgacatcgcc	1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc	1260
gatagcgacg gcagcttttt cctgtattcc aggtgaccg tggacaagtc ccggtggcaa	1320
gaaggcaacg tgttcagctg tagcgtgatg cacgaggccc tgcataacca ctacacccaa	1380
aagagcctct ccctgtccct gggcaagtga	1410

<210> 293

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 293

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	Leu	Thr	Asp	Tyr
			20					25					30		

Tyr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35					40					45			

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Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Phe Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

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Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 294

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 294

atggagtgga gctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc	120
tgcaaggcca gcggctatac cctgaccgac tactatatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc	360
tacgaaagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgcct ccaccaaggg accttcctgt tccccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gccctgacc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttcctgc cgtgctgcag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc	660

23791WOPCTSEQ

aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg 720
gagagcaa at acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc 780
tccgtgttcc tgttcccccc caagcctaag gatacactga tgatctcccg gacccccgag 840
gtgacatgcg tgggtggtcga tgtgtcccag gaggaccccg aggtgcagtt taactggtat 900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc 960
acataccggg tggtgagcgt gctcacagtg ctgcaccagg actgggtcaa cggcaaggag 1020
tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag 1080
gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctcctagcca ggaggagatg 1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat ttaccaccag cgacatcgcc 1200
gtcgaatggg aatccaacgg acagcccgag aacaactaca aaaccacccc tcccggtgctc 1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa 1380
aagagcctct ccctgtccct gggcaagtga 1410

<210> 295

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 295

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 Leu Thr Asp Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Glu Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

23791WOPCTSEQ

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

23791WOPCTSEQ

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 296

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 296

atggagtgga gctgggtggt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc	120
tgcaaggcca gcggctatac cctgaccgac tactatatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc	360
taccaagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgcct ccaccaaggg accttcctg tttcccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttccctga gccctgacc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cttttcctgc cgtgctgcag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtgga caagcgggtg	720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc	780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag	840
gtgacatgcg tgggtggtcga tgtgtcccag gaggaccccg aggtgcagtt taactggtat	900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc	960
acataccggg tggtagcgt gtcacagtg ctgcaccagg actggctcaa cggcaaggag	1020
tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag	1080
gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctccctagcca ggaggagatg	1140
accaagaacc aagtgtccct gacctgtctc gtgaagggtat tttaccccag cgacatcgcc	1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc	1260

23791WOPCTSEQ

gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
 gaaggcaacg tgttcagctg tagcgtgatg cacgaggccc tgcataacca ctacacccaa 1380
 aagagcctct ccctgtccct gggcaagtga 1410

<210> 297
 <211> 450
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 297
 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 Leu Thr Asp Tyr
 20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Pro Phe Tyr Gln Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
 195 200 205

23791WOPCTSEQ

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
 210 215 220
 Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
 225 230 235 240
 Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 245 250 255
 Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
 260 265 270
 Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 275 280 285
 Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
 290 295 300
 Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 305 310 315 320
 Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
 325 330 335
 Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 340 345 350
 Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
 355 360 365
 Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 370 375 380
 Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 385 390 395 400
 Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
 405 410 415
 Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
 420 425 430
 Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
 435 440 445
 Gly Lys
 450

<210> 298
 <211> 1410

23791WOPCTSEQ

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 298

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atggagtgga gctgggtggt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag      60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc      120
tgcaaggcca gcggctatac cctgaccgac tactatatgc actgggtgcg gcaggctcct      180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc      240
cagaagttcc aggaagggg gacaatgacc gtggatacca gcacctccac cgtgtacatg      300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc      360
tacaggagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg      420
tctagcgctt ccaccaaggg accttcctgt ttccccctgg ctccctgctc caggagcaca      480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttccctga gcccgtagacc      540
gtgtccttga acagcggcgc cctcacctcc ggagtgcaca cttttcctgc cgtgtgtcag      600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc      660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg      720
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tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag      840
gtgacatgcg tgggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat      900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc      960
acataccggg tggtagcgtg gctcacagtg ctgcaccagg actgggtcaa cggcaaggag     1020
tataagtgca aggtctcaa caagggcctc cccagcagca tcgagaagac catcagcaag     1080
gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctctagcca ggaggagatg     1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat ttacccccag cgacatcgcc     1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc     1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa     1320
gaaggcaacg tgttcagctg tagcgtgatg cacgaggccc tgcataacca ctacacccaa     1380
aagagcctct ccctgtccct gggcaagtga                                     1410

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<210> 299

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 299

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala

1				5					10					15		
Ser	Val	Lys	Val 20	Ser	Cys	Lys	Ala	Ser 25	Gly	Tyr	Thr	Leu	Thr 30	Asp	Tyr	
Tyr	Met	His 35	Trp	Val	Arg	Gln	Ala 40	Pro	Gly	Gln	Gly	Leu 45	Glu	Trp	Met	
Gly	Ala 50	Ile	Asp	Ile	Ser	Asp 55	Ser	Tyr	Thr	Ser	Tyr 60	Ala	Gln	Lys	Phe	
Gln 65	Gly	Arg	Val	Thr	Met 70	Thr	Val	Asp	Thr	Ser 75	Thr	Ser	Thr	Val	Tyr 80	
Met	Glu	Leu	Ser	Ser 85	Leu	Arg	Ser	Glu	Asp 90	Thr	Ala	Val	Tyr	Tyr 95	Cys	
Ala	Arg	Ser	Pro 100	Phe	Tyr	Arg	Ser	Arg 105	Gly	Gly	Asn	Tyr	Phe 110	Asp	Tyr	
Trp	Gly	Gln 115	Gly	Thr	Thr	Val	Thr 120	Val	Ser	Ser	Ala	Ser 125	Thr	Lys	Gly	
Pro	Ser 130	Val	Phe	Pro	Leu	Ala 135	Pro	Cys	Ser	Arg	Ser 140	Thr	Ser	Glu	Ser	
Thr 145	Ala	Ala	Leu	Gly	Cys 150	Leu	Val	Lys	Asp	Tyr 155	Phe	Pro	Glu	Pro	Val 160	
Thr	Val	Ser	Trp	Asn 165	Ser	Gly	Ala	Leu	Thr 170	Ser	Gly	Val	His	Thr 175	Phe	
Pro	Ala	Val	Leu 180	Gln	Ser	Ser	Gly	Leu 185	Tyr	Ser	Leu	Ser	Ser 190	Val	Val	
Thr	Val	Pro 195	Ser	Ser	Ser	Leu	Gly 200	Thr	Lys	Thr	Tyr	Thr 205	Cys	Asn	Val	
Asp	His 210	Lys	Pro	Ser	Asn	Thr 215	Lys	Val	Asp	Lys	Arg 220	Val	Glu	Ser	Lys	
Tyr 225	Gly	Pro	Pro	Cys	Pro 230	Pro	Cys	Pro	Ala	Pro 235	Glu	Phe	Leu	Gly	Gly 240	
Pro	Ser	Val	Phe	Leu 245	Phe	Pro	Pro	Lys	Pro 250	Lys	Asp	Thr	Leu	Met 255	Ile	
Ser	Arg	Thr	Pro 260	Glu	Val	Thr	Cys	Val 265	Val	Val	Asp	Val	Ser 270	Gln	Glu	
Asp	Pro	Glu	Val	Gln	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	

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275

280

285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
 290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
 325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
 355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 385 390 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
 405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
 420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
 435 440 445

Gly Lys
 450

<210> 300

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 300

atggagtgga gctgggtggt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag 60

gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc 120

tgcaaggcca gcggtatac cctgaccgac taccagatgc actgggtgcg gcaggctcct 180

ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240

cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg 300

gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc 360

23791WOPCTSEQ

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tacgatagca ggggcggaac ctacttcgac tactggggcc agggcacaac cgtgaccgtg      420
tcgagcgcct ccaccaaggg accttcctgtg ttccccctgg ctccctgctc caggagcaca      480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtagacc      540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cctttcctgc cgtgctgcag      600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc      660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg      720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc      780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag      840
gtgacatgcg tgggtggtcga tgtgtcccag gaggaccccc aggtgcagtt taactggtat      900
gtggacggcg tggaagtga caatgctaag acaaagcctc gggaggagca gttcaacagc      960
acataccggg tggtagcgt gctcacagtg ctgcaccagg actggctcaa cggcaaggag     1020
tataagtga aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag     1080
gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctccctagcca ggaggagatg     1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat ttaccaccag cgacatcgcc     1200
gtcgaatggg aatccaacgg acagcccgag aacaactaca aaaccacccc tcccgtagctc     1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa     1320
gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa     1380
aagagcctct ccctgtccct gggcaagtga                                     1410

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<210> 301

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 301

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 Leu Thr Asp Tyr
 20 25 30

Gln Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

23791WOPCTSEQ

Met Glu Leu Ser Ser₈₅ Leu Arg Ser Glu Asp₉₀ Thr Ala Val Tyr Tyr₉₅ Cys

Ala Arg Ser Pro₁₀₀ Phe Tyr Asp Ser Arg₁₀₅ Gly Gly Asn Tyr Phe₁₁₀ Asp Tyr

Trp Gly Gln₁₁₅ Gly Thr Thr Val Thr₁₂₀ Val Ser Ser Ala Ser₁₂₅ Thr Lys Gly

Pro Ser₁₃₀ Val Phe Pro Leu Ala₁₃₅ Pro Cys Ser Arg Ser₁₄₀ Thr Ser Glu Ser

Thr Ala Ala Leu Gly Cys₁₅₀ Leu Val Lys Asp Tyr₁₅₅ Phe Pro Glu Pro Val₁₆₀

Thr Val Ser Trp Asn₁₆₅ Ser Gly Ala Leu Thr₁₇₀ Ser Gly Val His Thr₁₇₅ Phe

Pro Ala Val Leu₁₈₀ Gln Ser Ser Gly Leu₁₈₅ Tyr Ser Leu Ser Ser₁₉₀ Val Val

Thr Val Pro₁₉₅ Ser Ser Ser Leu Gly₂₀₀ Thr Lys Thr Tyr Thr₂₀₅ Cys Asn Val

Asp His₂₁₀ Lys Pro Ser Asn Thr₂₁₅ Lys Val Asp Lys Arg₂₂₀ Val Glu Ser Lys

Tyr Gly Pro Pro Cys Pro₂₃₀ Pro Cys Pro Ala Pro₂₃₅ Glu Phe Leu Gly Gly₂₄₀

Pro Ser Val Phe Leu₂₄₅ Phe Pro Pro Lys Pro₂₅₀ Lys Asp Thr Leu Met₂₅₅ Ile

Ser Arg Thr Pro₂₆₀ Glu Val Thr Cys Val₂₆₅ Val Val Asp Val Ser₂₇₀ Gln Glu

Asp Pro Glu Val Gln Phe Asn Trp₂₈₀ Tyr Val Asp Gly Val₂₈₅ Glu Val His

Asn Ala₂₉₀ Lys Thr Lys Pro Arg₂₉₅ Glu Glu Gln Phe Asn₃₀₀ Ser Thr Tyr Arg

Val Val Ser Val Leu Thr₃₁₀ Val Leu His Gln Asp₃₁₅ Trp Leu Asn Gly Lys₃₂₀

Glu Tyr Lys Cys Lys₃₂₅ Val Ser Asn Lys Gly₃₃₀ Leu Pro Ser Ser Ile₃₃₅ Glu

Lys Thr Ile Ser₃₄₀ Lys Ala Lys Gly Gln₃₄₅ Pro Arg Glu Pro Gln₃₅₀ Val Tyr

23791WOPCTSEQ

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
 355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
 405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
 420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
 435 440 445

Gly Lys
 450

<210> 302

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 302

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gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc	120
tgcaaggcca gcggctatac cctgaccgac taccagatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagttcc agggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc	360
tactccagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgcct ccaccaaggg accttcctgtg ttccccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttccctga gcccgtagacc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttcctgc cgtgctgcag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtga caagcgggtg	720
gagagcaa at acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc	780
tccgtgttcc tgttcccccc caagcctaag gatacactga tgatctcccg gacccccgag	840
gtgacatgcg tgggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat	900

23791WOPCTSEQ

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gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc      960
acataccggg tggtgagcgt gctcacagtg ctgcaccagg actggctcaa cggcaaggag      1020
tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag      1080
gccaagggcc aaccagggga gcctcaggtg tacaccctcc ctctagcca ggaggagatg      1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat tttaccccag cgacatcgcc      1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc      1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa      1320
gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa      1380
aagagcctct ccctgtccct gggcaagtga      1410

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<210> 303

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 303

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 Leu Thr Asp Tyr
20 25 30

Gln Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Ser Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

23791WOPCTSEQ

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

23791WOPCTSEQ

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
 435 440 445

Gly Lys
 450

<210> 304
 <211> 1410
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 304
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 gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc 120
 tgcaaggcca gcggctatac cctgaccgac taccagatgc actgggtgcg gcaggctcct 180
 ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240
 cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg 300
 gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctt 360
 tacgaaagca ggggcgaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg 420
 tcgagcgct ccaccaagg accttcctgtg tccccctgg ctccctgctc caggagcaca 480
 tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtagc 540
 gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttcctgc cgtgtgcag 600
 agtccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc 660
 aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtgga caagcgggtg 720
 gagagcaa atcgcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc 780
 tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag 840
 gtgacatgcg tgggtggtcga tgtgtcccag gaggaccccg aggtgcagtt taactggtat 900
 gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc 960
 acataccggg tggtagcgt gtcacagtgt ctgaccagg actggctcaa cggcaaggag 1020
 tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag 1080
 gccaaaggcc aaccaggga gcctcagggtg tacaccctcc ctctagcca ggaggagatg 1140
 accaagaacc aagtgtccct gacctgtctc gtgaagggtat ttaccaccag cgacatcgcc 1200
 gtcgaatggg aatccaacgg acagcccgag aacaactaca aaaccacccc tcccgtgctc 1260
 gatagcgacg gcagcttttt cctgtatttc aggctgaccg tggacaagtc ccggtggcaa 1320
 gaaggcaacg tgttcagctg tagcgtgatg cacgaggccc tgcataacca ctacacccaa 1380
 aagagcctct ccctgtccct gggcaagtga 1410

23791WOPCTSEQ

<210> 305

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 305

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 Leu Thr Asp Tyr
20 25 30Gln Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95Ala Arg Ser Pro Phe Tyr Glu Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

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Pro Ser Val Phe Leu₂₄₅ Phe Pro Pro Lys Pro₂₅₀ Lys Asp Thr Leu Met₂₅₅ Ile
 Ser Arg Thr Pro₂₆₀ Glu Val Thr Cys Val₂₆₅ Val Val Asp Val Ser₂₇₀ Gln Glu
 Asp Pro Glu₂₇₅ Val Gln Phe Asn Trp₂₈₀ Tyr Val Asp Gly Val₂₈₅ Glu Val His
 Asn Ala₂₉₀ Lys Thr Lys Pro Arg₂₉₅ Glu Glu Gln Phe Asn₃₀₀ Ser Thr Tyr Arg
 Val₃₀₅ Val Ser Val Leu Thr₃₁₀ Val Leu His Gln Asp₃₁₅ Trp Leu Asn Gly Lys₃₂₀
 Glu Tyr Lys Cys Lys₃₂₅ Val Ser Asn Lys Gly₃₃₀ Leu Pro Ser Ser Ile₃₃₅ Glu
 Lys Thr Ile Ser₃₄₀ Lys Ala Lys Gly Gln₃₄₅ Pro Arg Glu Pro Gln₃₅₀ Val Tyr
 Thr Leu Pro₃₅₅ Pro Ser Gln Glu Glu₃₆₀ Met Thr Lys Asn Gln₃₆₅ Val Ser Leu
 Thr Cys₃₇₀ Leu Val Lys Gly Phe₃₇₅ Tyr Pro Ser Asp Ile₃₈₀ Ala Val Glu Trp
 Glu₃₈₅ Ser Asn Gly Gln Pro₃₉₀ Glu Asn Asn Tyr Lys₃₉₅ Thr Thr Pro Pro Val₄₀₀
 Leu Asp Ser Asp Gly₄₀₅ Ser Phe Phe Leu Tyr₄₁₀ Ser Arg Leu Thr Val₄₁₅ Asp
 Lys Ser Arg Trp₄₂₀ Gln Glu Gly Asn Val₄₂₅ Phe Ser Cys Ser Val₄₃₀ Met His
 Glu Ala Leu₄₃₅ His Asn His Tyr Thr₄₄₀ Gln Lys Ser Leu Ser₄₄₅ Leu Ser Leu
 Gly Lys₄₅₀

<210> 306

<211> 1410

<212> DNA

<213> Artificial sequence

<220>

<223> Description of Artificial sequence: Synthetic polynucleotide

<400> 306

23791WOPCTSEQ

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atggagtgga gctgggtggt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag      60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc      120
tgcaaggcca gcggctatac cctgaccgac taccagatgc actgggtgcg gcaggctcct      180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc      240
cagaagttcc aggggaaggg gacaatgacc gtggatacca gcacctccac cgtgtacatg      300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc      360
taccaaagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg      420
tcgagcgcct ccaccaaggg accttcctg tttcccctgg ctccctgctc caggagcaca      480
tccgagagca cagctgcctt gggctgtctg gtgaaggatt atttccctga gcccgtagcc      540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cttttcctgc cgtgtgcag      600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc      660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg      720
gagagcaa at acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc      780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag      840
gtgacatgcg tgggtggtcga tgtgtcccag gaggaccccc aggtgcagtt taactggtat      900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc      960
acataccggg tgggtgagcgt gctcacagtg ctgcaccagg actggctcaa cggcaaggag     1020
tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag     1080
gccaagggcc aaccagggga gcctcaggtg tacaccctcc ctccctagcca ggaggagatg     1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat tttaccccag cgacatcgcc     1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc     1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa     1320
gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa     1380
aagagcctct ccctgtccct gggcaagtga                                     1410

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<210> 307

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 307

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 Leu Thr Asp Tyr
20 25 30

Gln Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
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35

40

45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60
 Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80
 Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Ser Pro Phe Tyr Gln Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110
 Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125
 Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140
 Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160
 Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175
 Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 180 185 190
 Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
 195 200 205
 Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
 210 215 220
 Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
 225 230 235 240
 Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 245 250 255
 Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
 260 265 270
 Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 275 280 285
 Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
 290 295 300
 Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys

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305 310 315 320
 Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
 325 330 335
 Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 340 345 350
 Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
 355 360 365
 Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 370 375 380
 Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 385 390 395 400
 Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
 405 410 415
 Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
 420 425 430
 Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
 435 440 445
 Gly Lys
 450

<210> 308
 <211> 1410
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 308
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 gtgcaactgg tgagtcctcg cgccgaagtg aagaagcctg gcgcctccgt gaaggtgagc 120
 tgcaaggcca gcggctatac cctgaccgac taccagatgc actgggtgcg gcaggctcct 180
 ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240
 cagaagtcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg 300
 gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc 360
 tacaggagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg 420
 tcgagcgcct ccaccaaggg accttcctgt tttcccctgg ctccctgctc caggagcaca 480
 tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtagacc 540
 gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cttttcctgc cgtgctgcag 600

23791WOPCTSEQ

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agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcgggaacc      660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcggggtg      720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc      780
tccgtgttcc tggtcccccc caagcctaag gatacactga tgatctcccg gacccccgag      840
gtgacatgcg tgggtggtcga tgtgtcccag gaggaccccg aggtgcagtt taactggtat      900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc      960
acataccggg tggtgagcgt gctcacagtg ctgcaccagg actgggtcaa cggcaaggag     1020
tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag     1080
gccaagggcc aaccagggga gcctcaggtg tacaccctcc ctcctagcca ggaggagatg     1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat ttaccgccag cgacatcgcc     1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc     1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa     1320
gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa     1380
aagagcctct ccctgtccct gggcaagtga                                     1410

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<210> 309

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 309

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 Leu Thr Asp Tyr
 20 25 30

Gln Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Pro Phe Tyr Arg Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

23791WOPCTSEQ

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

23791WOPCTSEQ

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 310

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 310

atggagtgga gctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg gcgcctccgt gaaggtgagc	120
tgcaaggcca gcggctatac cctgaccgac tacttcatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagttcc aggggaaggt gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctt	360
tacgatagca ggggcgaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgcct ccaccaaggg accttcctgtg ttccccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgcctt gggctgtctg gtgaaggatt atttcctga gcccgtagc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cttttcctgc cgtgtctgag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg	720
gagagcaaatt acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc	780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag	840
gtgacatgcg tgggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat	900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc	960
acataccggg tggtagcgt gctcacagt ctgcaccagg actgggtcaa cggcaaggag	1020
tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag	1080
gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctccagcca ggaggagatg	1140

23791WOPCTSEQ

accaagaacc aagtgtccct gacctgtctc gtgaagggat tttaccccag cgacatcgcc 1200
 gtcgaatggg aatccaacgg acagcccgag aacaactaca aaaccacccc tcccgtgctc 1260
 gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
 gaaggcaacg tgttcagctg tagcgtgatg cacgaggccc tgcataacca ctacacccaa 1380
 aagagcctct ccctgtccct gggcaagtga 1410

<210> 311

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 311

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 Leu Thr Asp Tyr
 20 25 30

Phe Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Pro Phe Tyr Asp Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 180 185 190

23791WOPCTSEQ

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

23791WOPCTSEQ

<210> 312
 <211> 1410
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 312
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 gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc 120
 tgcaaggcca gcggctatac cctgaccgac tacttcatgc actgggtgcg gcaggctcct 180
 ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240
 cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg 300
 gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc 360
 tactccagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg 420
 tcgagcgctt ccaccaaggg accttcctgt tccccctgg ctccctgctc caggagcaca 480
 tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtagcc 540
 gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttcctgc cgtgtctgag 600
 agtccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc 660
 aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtgga caagcgggtg 720
 gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc 780
 tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag 840
 gtgacatgcg tgggtggtcga tgtgtcccag gaggaccccg aggtgcagtt taactggtat 900
 gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc 960
 acataccggg tggtgagcgt gctcacagtg ctgcaccagg actgggtcaa cggcaaggag 1020
 tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag 1080
 gccaagggcc aaccagggga gcctcaggtg tacaccctcc ctccctagcca ggaggagatg 1140
 accaagaacc aagtgtccct gacctgtctc gtgaagggat ttaccaccag cgacatcgcc 1200
 gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc 1260
 gatagcgacg gcagcttttt cctgtattcc aggtgaccg tggacaagtc ccggtggcaa 1320
 gaaggcaacg tgttcagctg tagcgtgatg cagaggccc tgcataacca ctacacccaa 1380
 aagagcctct ccctgtccct gggcaagtga 1410

<210> 313
 <211> 450
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

23791WOPCTSEQ

<400> 313

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 Leu Thr Asp Tyr
20 25 30

Phe Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Ser Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

23791WOPCTSEQ

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 314

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 314

atggagtgga gctgggtggt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag 60

gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc 120

tgcaaggcca gcggctatac cctgaccgac tacttcatgc actgggtgcg gcaggctcct 180

ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240

23791WOPCTSEQ

cagaagttcc aggggaagggg gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagcccccttc	360
tacttttagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgcct ccaccaaggg accttccgtg ttccccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttccctga gcccgtagacc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cttttcctgc cgtgctgcag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg	720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc	780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag	840
gtgacatgcg tggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat	900
gtggacggcg tggaagtga caatgctaag acaaagcctc gggaggagca gttcaacagc	960
acataccggg tggtgagcgt gtcacagtg ctgcaccagg actggctcaa cggcaaggag	1020
tataagtga aggtctcaa caagggcctc cccagcagca tcgagaagac catcagcaag	1080
gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctccctagcca ggaggagatg	1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat ttaccaccag cgacatcgcc	1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc	1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa	1320
gaaggcaacg tgttcagctg tagcgtgatg cacgaggccc tgcataacca ctacacccaa	1380
aagagcctct ccctgtccct gggcaagtga	1410

<210> 315

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 315

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	Leu	Thr	Asp	Tyr
			20					25					30		

Phe	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35					40					45			

Gly	Ala	Ile	Asp	Ile	Ser	Asp	Ser	Tyr	Thr	Ser	Tyr	Ala	Gln	Lys	Phe
	50					55					60				

Gln	Gly	Arg	Val	Thr	Met	Thr	Val	Asp	Thr	Ser	Thr	Ser	Thr	Val	Tyr
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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23791WOPCTSEQ

65 70 75 80
 Met Glu Leu Ser Ser₈₅ Leu Arg Ser Glu Asp₉₀ Thr Ala Val Tyr Tyr₉₅ Cys
 Ala Arg Ser Pro₁₀₀ Phe Tyr Phe Ser Arg₁₀₅ Gly Gly Asn Tyr Phe₁₁₀ Asp Tyr
 Trp Gly Gln₁₁₅ Gly Thr Thr Val Thr₁₂₀ Val Ser Ser Ala Ser₁₂₅ Thr Lys Gly
 Pro Ser₁₃₀ Val Phe Pro Leu Ala₁₃₅ Pro Cys Ser Arg Ser₁₄₀ Thr Ser Glu Ser
 Thr Ala Ala Leu Gly Cys₁₅₀ Leu Val Lys Asp Tyr₁₅₅ Phe Pro Glu Pro Val₁₆₀
 Thr Val Ser Trp Asn₁₆₅ Ser Gly Ala Leu Thr₁₇₀ Ser Gly Val His Thr₁₇₅ Phe
 Pro Ala Val Leu₁₈₀ Gln Ser Ser Gly Leu₁₈₅ Tyr Ser Leu Ser Ser₁₉₀ Val Val
 Thr Val Pro₁₉₅ Ser Ser Ser Leu Gly₂₀₀ Thr Lys Thr Tyr Thr₂₀₅ Cys Asn Val
 Asp His₂₁₀ Lys Pro Ser Asn Thr₂₁₅ Lys Val Asp Lys Arg₂₂₀ Val Glu Ser Lys
 Tyr Gly Pro Pro Cys Pro₂₃₀ Pro Cys Pro Ala Pro₂₃₅ Glu Phe Leu Gly Gly₂₄₀
 Pro Ser Val Phe Leu₂₄₅ Phe Pro Pro Lys Pro₂₅₀ Lys Asp Thr Leu Met₂₅₅ Ile
 Ser Arg Thr Pro₂₆₀ Glu Val Thr Cys Val₂₆₅ Val Val Asp Val Ser₂₇₀ Gln Glu
 Asp Pro Glu₂₇₅ Val Gln Phe Asn Trp₂₈₀ Tyr Val Asp Gly Val₂₈₅ Glu Val His
 Asn Ala₂₉₀ Lys Thr Lys Pro Arg₂₉₅ Glu Glu Gln Phe Asn₃₀₀ Ser Thr Tyr Arg
 Val Val Ser Val Leu Thr₃₁₀ Val Leu His Gln Asp₃₁₅ Trp Leu Asn Gly Lys₃₂₀
 Glu Tyr Lys Cys Lys₃₂₅ Val Ser Asn Lys Gly₃₃₀ Leu Pro Ser Ser Ile₃₃₅ Glu
 Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 Page 313

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 316
<211> 1410
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 316
atggagtgga gctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gactctccag 60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc 120
tgcaaggcca gcggctatac cctgaccgac tacttcatgc actgggtgcg gcaggctcct 180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240
cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg 300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc 360
tacgaaagca ggggcggaac ctacttcgac tactggggcc agggcacaac cgtgaccgtg 420
tcgagcgcct ccaccaaggg accttcctg ttccccctgg ctccctgctc caggagcaca 480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gccctgacc 540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttcctgc cgtgctgcag 600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc 660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtga caagcgggtg 720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc 780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctccg gacccccgag 840

23791WOPCTSEQ

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gtgacatgcg tgggtggcga tgtgtcccag gaggaccccg aggtgcagtt taactggtat      900
gtggacggcg tggaaagtga caatgctaag acaaagcctc gggaggagca gttcaacagc      960
acataccggg tggtgagcgt gctcacagtg ctgcaccagg actgggtcaa cggcaaggag     1020
tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag     1080
gccaagggcc aaccagggga gcctcaggtg tacaccctcc ctctagcca ggaggagatg     1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat tttaccccag cgacatcgcc     1200
gtcgaatggg aatccaacgg acagcccagag aacaactaca aaaccacccc tcccgtgctc     1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa     1320
gaaggcaacg tgttcagctg tagcgtgatg cagaggccc tgcataacca ctacacccaa     1380
aagagcctct ccctgtccct gggcaagtga                                     1410

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<210> 317

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 317

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 Leu Thr Asp Tyr
 20 25 30

Phe Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Pro Phe Tyr Glu Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140

23791WOPCTSEQ

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

23791WOPCTSEQ

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
 420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
 435 440 445

Gly Lys
 450

<210> 318

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 318

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gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc	120
tgcaaggcca gcggctatac cctgaccgac tacttcatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc	360
taccaaagca ggggcgaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgctt ccaccaaggg accttccgtg ttccccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtagcc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttcctgc cgtgtgcag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtgga caagcgggtg	720
gagagcaaat acggccccc ttgtccccc tgtcctgccc ctgagttcct gggaggaccc	780
tccgtgttcc tgttccccc caagcctaag gataactga tgatctcccg gacccccgag	840
gtgacatgcg tgggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat	900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc	960
acataccggg tggtagcgt gtcacagtg ctgcaccagg actggctcaa cggcaaggag	1020
tataagtgca aggtctccaa caaggcctc cccagcagca tcgagaagac catcagcaag	1080
gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctctagcca ggaggagatg	1140
accaagaacc aagtgtccct gacctgtctc gtgaagggtat ttaccaccag cgacatcgcc	1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc	1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa	1320
gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa	1380

aagagcctct ccctgtccct gggcaagtga

1410

<210> 319

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 319

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 Leu Thr Asp Tyr
20 25 30Phe Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95Ala Arg Ser Pro Phe Tyr Gln Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

23791WOPCTSEQ

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
 225 230 235 240
 Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 245 250 255
 Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
 260 265 270
 Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 275 280 285
 Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
 290 295 300
 Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 305 310 315 320
 Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
 325 330 335
 Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 340 345 350
 Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
 355 360 365
 Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 370 375 380
 Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 385 390 395 400
 Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
 405 410 415
 Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
 420 425 430
 Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
 435 440 445
 Gly Lys
 450

<210> 320

<211> 1410

<212> DNA

<213> Artificial sequence

<220>

<223> Description of Artificial sequence: Synthetic

23791WOPCTSEQ

polynucleotide

<400> 320

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gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc      120
tgcaaggcca gcggctatac cctgaccgac tacttcatgc actgggtgcg gcaggctcct      180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc      240
cagaagtcc aggaaggggt gacaatgacc gtggatacca gcacctccac cgtgtacatg      300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc      360
tacaggagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg      420
tcgagcgcct ccaccaaggg accttcctgt tccccctgg ctccctgctc caggagcaca      480
tccgagagca cagctgcctt gggctgtctg gtgaaggatt atttcctga gcccgtagacc      540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttctctgc cgtgctgcag      600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag ctcggaacc      660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg      720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc      780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag      840
gtgacatgcg tggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat      900
gtggacggcg tggaagtga caatgctaag acaaagcctc gggaggagca gttcaacagc      960
acataccggg tggtgagcgt gtcacagtgt ctgcaccagg actggctcaa cggcaaggag     1020
tataagtga aggtctcaa caagggcctc cccagcagca tcgagaagac catcagcaag     1080
gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctctagcca ggaggagatg     1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat ttaccaccag cgacatcgcc     1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc     1260
gatagcgacg gcagcttttt cctgtattcc aggtgaccg tggacaagtc ccggtggcaa     1320
gaaggcaacg tgttcagctg tagcgtgatg cacgaggccc tgcataacca ctacacccaa     1380
aagagcctct ccctgtccct gggcaagtga                                     1410

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<210> 321

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 321

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Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1           5           10           15

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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Leu Thr Asp Tyr
           20           25           30

```


23791WOPCTSEQ

Phe Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45
 Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60
 Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80
 Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Ser Pro Phe Tyr Arg Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110
 Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125
 Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140
 Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160
 Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175
 Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 180 185 190
 Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
 195 200 205
 Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
 210 215 220
 Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
 225 230 235 240
 Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 245 250 255
 Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
 260 265 270
 Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 275 280 285
 Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
 290 295 300

23791WOPCTSEQ

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 322

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 322

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gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc	120
tgcaaggcca gcggctatac cctgaccgac tacctgatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc	360
tacgatagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgcct ccaccaaggg accttcctgtg ttccccctgg ctccctgctc caggagcaca	480

23791WOPCTSEQ

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tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtagacc 540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cctttcctgc cgtgctgcag 600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc 660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg 720
gagagcaaatt acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc 780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag 840
gtgacatgcg tgggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat 900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc 960
acataccggg tggtgagcgt gctcacagtg ctgcaccagg actgggtcaa cggcaaggag 1020
tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag 1080
gccaagggcc aaccagggga gcctcaggtg tacaccctcc ctcctagcca ggaggagatg 1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat ttaccaccag cgacatcgcc 1200
gtcgaatggg aatccaacgg acagcccgag aacaactaca aaaccacccc tcccgtagtc 1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa 1380
aagagcctct ccctgtccct gggcaagtga 1410

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<210> 323

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 323

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 Leu Thr Asp Tyr
20 25 30

Leu Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Asp Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
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23791WOPCTSEQ

100

105

110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp

23791WOPCTSEQ
380

370

375

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 324

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 324

atggagtgga gctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc	120
tgcaaggcca gcggctatac cctgaccgac tacctgatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc	360
tactccagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgct ccaccaaggg accttcctg ttccccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gccctgacc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cctttcctgc cgtgctgcag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctacgagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtgga caagcgggtg	720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc	780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctccg gacccccgag	840
gtgacatgcg tgggtggtcga tgtgtcccag gaggaccccg aggtgcagtt taactggtat	900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc	960
acataccggg tggtagcgt gtcacagtg ctgcaccagg actggctcaa cggcaaggag	1020
tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag	1080

23791WOPCTSEQ

gccaaagggcc aaccagggga gcctcaggtg tacaccctcc ctccctagcca ggaggagatg 1140
 accaagaacc aagtgtccct gacctgtctc gtgaagggat ttaccgccag cgacatcgcc 1200
 gtcgaatggg aatccaacgg acagcccgag aacaactaca aaaccacccc tcccggtgctc 1260
 gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
 gaaggcaacg tgttcagctg tagcgtgatg cagaggccc tgcataacca ctacacccaa 1380
 aagagcctct ccctgtccct gggcaagtga 1410

<210> 325

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 325

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 Leu Thr Asp Tyr
 20 25 30

Leu Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Pro Phe Tyr Ser Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175

23791WOPCTSEQ

Pro Ala Val Leu₁₈₀ Gln Ser Ser Gly Leu₁₈₅ Tyr Ser Leu Ser₁₉₀ Val Val

Thr Val Pro₁₉₅ Ser Ser Ser Leu Gly₂₀₀ Thr Lys Thr Tyr Thr₂₀₅ Cys Asn Val

Asp His₂₁₀ Lys Pro Ser Asn Thr₂₁₅ Lys Val Asp Lys Arg₂₂₀ Val Glu Ser Lys

Tyr Gly Pro Pro Cys Pro₂₃₀ Pro Cys Pro Ala Pro₂₃₅ Glu Phe Leu Gly Gly₂₄₀

Pro Ser Val Phe Leu₂₄₅ Phe Pro Pro Lys Pro₂₅₀ Lys Asp Thr Leu Met₂₅₅ Ile

Ser Arg Thr Pro₂₆₀ Glu Val Thr Cys Val₂₆₅ Val Val Asp Val Ser₂₇₀ Gln Glu

Asp Pro Glu₂₇₅ Val Gln Phe Asn Trp₂₈₀ Tyr Val Asp Gly Val₂₈₅ Glu Val His

Asn Ala₂₉₀ Lys Thr Lys Pro Arg₂₉₅ Glu Glu Gln Phe Asn₃₀₀ Ser Thr Tyr Arg

Val Val Ser Val Leu Thr₃₁₀ Val Leu His Gln Asp₃₁₅ Trp Leu Asn Gly Lys₃₂₀

Glu Tyr Lys Cys Lys₃₂₅ Val Ser Asn Lys Gly₃₃₀ Leu Pro Ser Ser Ile₃₃₅ Glu

Lys Thr Ile Ser₃₄₀ Lys Ala Lys Gly Gln₃₄₅ Pro Arg Glu Pro Gln₃₅₀ Val Tyr

Thr Leu Pro₃₅₅ Pro Ser Gln Glu Glu₃₆₀ Met Thr Lys Asn Gln₃₆₅ Val Ser Leu

Thr Cys₃₇₀ Leu Val Lys Gly Phe₃₇₅ Tyr Pro Ser Asp Ile₃₈₀ Ala Val Glu Trp

Glu Ser Asn Gly Gln Pro₃₉₀ Glu Asn Asn Tyr Lys₃₉₅ Thr Thr Pro Pro Val₄₀₀

Leu Asp Ser Asp Gly₄₀₅ Ser Phe Phe Leu Tyr₄₁₀ Ser Arg Leu Thr Val₄₁₅ Asp

Lys Ser Arg Trp₄₂₀ Gln Glu Gly Asn Val₄₂₅ Phe Ser Cys Ser Val₄₃₀ Met His

Glu Ala Leu₄₃₅ His Asn His Tyr Thr₄₄₀ Gln Lys Ser Leu Ser₄₄₅ Leu Ser Leu

23791WOPCTSEQ

Gly Lys
450

<210> 326
 <211> 1410
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 326
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 tgcaaggcca gcggctatac cctgaccgac tacctgatgc actgggtgcg gcaggctcct 180
 ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240
 cagaagtcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg 300
 gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc 360
 tacttttagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg 420
 tctagcgct ccaccaagg accttccgtg tccccctgg ctccctgctc caggagcaca 480
 tccgagagca cagctgccct gggctgtctg gtgaaggatt atttccctga gccctgacc 540
 gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttctctgc cgtgtgtcag 600
 agtccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc 660
 aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtga caagcgggtg 720
 gagagcaa atcggccccct ttgtccccct tgtcctgccc ctgagttcct gggaggacct 780
 tccgtgttcc tgttccccct caagcctaag gataactga tgatctcccg gacccccgag 840
 gtgacatgcg tgggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat 900
 gtggacggcg tggaagtga caatgctaag acaaagcctc gggaggagca gttcaacagc 960
 acataccggg tggtagcgt gctcacagt ctgcaccagg actggctcaa cggcaaggag 1020
 tataagtga aggtctcaa caaggcctc cccagcagca tcgagaagac catcagcaag 1080
 gccaaaggcc aaccaggga gcctcaggtg tacaccctc ctctagcca ggaggagatg 1140
 accaagaacc aagtgtccct gacctgtctc gtgaagggt tttaccccag cgacatcgcc 1200
 gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc 1260
 gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
 gaaggcaacg tgttcagctg tagcgtgatg cacgaggccc tgcataacca ctacacccaa 1380
 aagagcctct ccctgtccct gggcaagtga 1410

<210> 327
 <211> 450
 <212> PRT
 <213> Artificial Sequence

23791WOPCTSEQ

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 327

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 Leu Thr Asp Tyr
 20 25 30

Leu Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Pro Phe Tyr Phe Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
 195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
 210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
 225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 245 250 255

23791WOPCTSEQ

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 328

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 328

atggagtgga gctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag 60

gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc 120

tgcaaggcca gcggtatac cctgaccgac tacctgatgc actgggtgcg gcaggctcct 180

23791WOPCTSEQ

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ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc      240
cagaagttcc aggggaagggg gacaatgacc gtggatacca gcacctccac cgtgtacatg      300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc      360
tacgaaagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg      420
tcgagcgcct ccaccaaggg accttcctgtg ttccccctgg ctccctgctc caggagcaca      480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtagacc      540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cttttcctgc cgtgtctgcag      600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc      660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg      720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc      780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag      840
gtgacatgcg tggtggtcga tgtgtcccag gaggaccccg aggtgcagtt taactggtat      900
gtggacggcg tggaagtga caatgctaag acaaagcctc gggaggagca gttcaacagc      960
acataccggg tggtgagcgt gtcacagtg ctgcaccagg actggctcaa cggcaaggag     1020
tataagtga aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag     1080
gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctcctagcca ggaggagatg     1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat tttaccccag cgacatcgcc     1200
gtcgaatggg aatccaacgg acagcccgag aacaactaca aaaccacccc tcccgtgctc     1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa     1320
gaaggcaacg tgttcagctg tagcgtgatg caggaggccc tgcataacca ctacacccaa     1380
aagagcctct ccctgtccct gggcaagtga                                     1410

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<210> 329

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 329

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 Leu Thr Asp Tyr
 20 25 30

Leu Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

23791WOPCTSEQ

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Glu Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

23791WOPCTSEQ

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 330

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 330

atggagtgga gctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc	120
tgcaaggcca gcggctatac cctgaccgac tacctgatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagttcc agggaagggg gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc	360
taccaaagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgcct ccaccaaggg accttcctgt tttcccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtagacc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cttttcctgc cgtgctgcag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtgga caagcgggtg	720

23791WOPCTSEQ

gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc 780
 tccgtgttcc tgttcccccc caagcctaag gatacactga tgatctcccg gacccccgag 840
 gtgacatgcg tgggtggtcga tgtgtcccag gaggaccccc aggtgcagtt taactggtat 900
 gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc 960
 acataccggg tggtgagcgt gctcacagtg ctgcaccagg actgggtcaa cggcaaggag 1020
 tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag 1080
 gccaagggcc aaccagggga gcctcaggtg tacaccctcc ctctagcca ggaggagatg 1140
 accaagaacc aagtgtccct gacctgtctc gtgaagggat tttaccccag cgacatcgcc 1200
 gtcgaatggg aatccaacgg acagccccgag aacaactaca aaaccacccc tcccggtgctc 1260
 gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
 gaaggcaacg tgttcagctg tagcgtgatg cagaggccc tgcataacca ctacacccaa 1380
 aagagcctct ccctgtcctt gggcaagtga 1410

<210> 331

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 331

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 Leu Thr Asp Tyr
 20 25 30

Leu Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Pro Phe Tyr Gln Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 Page 334

23791WOPCTSEQ
140

130

135

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
Page 335

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
 420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
 435 440 445

Gly Lys
 450

<210> 332

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 332

atggagtgga gctgggtggt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag	60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc	120
tgcaaggcca gcggctatac cctgaccgac tacctgatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctt	360
tacaggagca ggggcgaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgct ccaccaaggg accttcctgtg ttccccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttccctga gcccgtagacc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttcctgc cgtgtgcag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggaggga caagcgggtg	720
gagagcaaatacggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc	780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag	840
gtgacatgcg tggtaggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat	900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc	960
acataccggg tggtagcgt gctcacagt ctgcaccagg actgggtcaa cggcaaggag	1020
tataagtgca aggtctccaa caaggcctc cccagcagca tcgagaagac catcagcaag	1080
gccaagggcc aaccaggga gcctcaggtg tacaccctc ctctagcca ggaggagatg	1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat ttaccccag cgacatcgcc	1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc	1260
gatagcgacg gcagcttttt cctgtatttc aggtgaccg tggacaagtc ccggtggcaa	1320

23791WOPCTSEQ

gaaggcaacg tggtcagctg tagcgtgatg cacgaggccc tgcataacca ctacacccaa 1380
aagagcctct ccctgtccct gggcaagtga 1410

<210> 333
<211> 450
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 333
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 Leu Thr Asp Tyr
20 25 30

Leu Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Arg Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

23791WOPCTSEQ

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
 210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
 225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
 260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
 290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
 325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
 355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
 405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
 420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
 435 440 445

Gly Lys
 450

<210> 334
 <211> 1410
 <212> DNA
 <213> Artificial sequence

23791WOPCTSEQ

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 334

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atggagtgga gctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag      60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc      120
tgcaaggcca gcggctatac cctgaccgac tacatcatgc actgggtgcg gcaggctcct      180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc      240
cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg      300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc      360
tacgatagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg      420
tctagcgcct ccaccaaggg accttcctgtg tccccctgg ctccctgctc caggagcaca      480
tccgagagca cagctgcctt gggctgtctg gtgaaggatt atttcctga gcccgtagcc      540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttcctgc cgtgtgcag      600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc      660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtgga caagcgggtg      720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc      780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag      840
gtgacatgcg tggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat      900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc      960
acataccggg tggtgagcgt gtcacagtg ctgcaccagg actggctcaa cggcaaggag     1020
tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag     1080
gccaagggcc aaccagga gcctcaggtg tacaccctcc ctccagcca ggaggagatg     1140
accaagaacc aagtgtccct gacctgtctc gtgaagggtat ttaccaccag cgacatcgcc     1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc     1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa     1320
gaaggcaacg tgttcagctg tagcgtgatg cagaggccc tgcataacca ctacaccaa     1380
aagagcctct ccctgtcctt gggcaagtga                                     1410

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<210> 335

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 335

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Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1           5           10           15

```

23791WOPCTSEQ

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Leu Thr Asp Tyr
20 25 30

Ile Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Asp Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

23791WOPCTSEQ

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 336

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 336

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gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc 120

tgcaaggcca gcggctatac cctgaccgac tacatcatgc actgggtgcg gcaggctcct 180

ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240

cagaagtcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg 300

gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc 360

tactccagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg 420

23791WOPCTSEQ

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tcgagcgctt ccaccaaggg accttccgtg ttccccctgg ctccctgctc caggagcaca      480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttccctga gcccgtagacc      540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cctttcctgc cgtgctgcag      600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc      660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcggggtg      720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc      780
tccgtgttcc tggtcccccc caagcctaag gataactga tgatctcccg gacccccgag      840
gtgacatgcg tgggtggcga tgtgtcccag gaggaccccg aggtgcagtt taactggtat      900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc      960
acataccggg tggtgagcgt gtcacagtg ctgcaccagg actggctcaa cggcaaggag     1020
tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag     1080
gccaagggcc aaccagggga gcctcaggtg tacaccctcc ctcctagcca ggaggagatg     1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat tttaccccag cgacatcgcc     1200
gtcgaatggg aatccaacgg acagccccgag aacaactaca aaaccacccc tcccgtgctc     1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa     1320
gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa     1380
aagagcctct ccctgtccct gggcaagtga                                     1410

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<210> 337

<211> 469

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 337

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Met Glu Trp Ser Trp Val Phe Leu Phe Phe Leu Ser Val Thr Thr Gly
1           5           10          15

```

```

Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
          20          25          30

```

```

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Leu
          35          40          45

```

```

Thr Asp Tyr Ile Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
          50          55          60

```

```

Glu Trp Met Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala
65          70          75          80

```

```

Gln Lys Phe Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser
          85          90          95

```

23791WOPCTSEQ

Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Ser Pro Phe Tyr Ser Ser Arg Gly Gly Asn Tyr
115 120 125

Phe Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser
130 135 140

Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr
145 150 155 160

Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro
165 170 175

Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val
180 185 190

His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser
195 200 205

Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr
210 215 220

Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val
225 230 235 240

Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe
245 250 255

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
260 265 270

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
275 280 285

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
290 295 300

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
305 310 315 320

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
325 330 335

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
340 345 350

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
355 360 365

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Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
370 375 380

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
385 390 395 400

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
405 410 415

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
420 425 430

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
435 440 445

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
450 455 460

Leu Ser Leu Gly Lys
465

<210> 338

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 338

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tgcaaggcca gcggctatac cctgaccgac tacgtgatgc actgggtgcg gcaggctcct	180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc	240
cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg	300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc	360
tacgaaagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg	420
tcgagcgcct ccaccaaggg accttcctg ttccccctgg ctccctgctc caggagcaca	480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtagcc	540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttcctgc cgtgtgcag	600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc	660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg	720
gagagcaaat acggccccc ttgtccccc tgtcctgccc ctgagttcct gggaggaccc	780
tccgtgttcc tgttccccc caagcctaag gataactga tgatctccg gaccccag	840

23791WOPCTSEQ

gtgacatgcg tgggtggtcga tgtgtcccag gaggaccccc aggtgcagtt taactggtat 900
 gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc 960
 acataccggg tggtgagcgt gctcacagtg ctgcaccagg actgggtcaa cggcaaggag 1020
 tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag 1080
 gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctcctagcca ggaggagatg 1140
 accaagaacc aagtgtccct gacctgtctc gtgaagggat tttaccccag cgacatcgcc 1200
 gtcgaatggg aatccaacgg acagcccgag aacaactaca aaaccacccc tcccggtgctc 1260
 gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
 gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa 1380
 aagagcctct ccctgtccct gggcaagtga 1410

<210> 339

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 339

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 Leu Thr Asp Tyr
 20 25 30

Val Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Pro Phe Tyr Glu Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val

23791WOPCTSEQ

145		150		155		160									
Thr	Val	Ser	Trp	Asn 165	Ser	Gly	Ala	Leu	Thr 170	Ser	Gly	Val	His	Thr 175	Phe
Pro	Ala	Val	Leu 180	Gln	Ser	Ser	Gly	Leu 185	Tyr	Ser	Leu	Ser	Ser 190	Val	Val
Thr	Val	Pro 195	Ser	Ser	Ser	Leu	Gly 200	Thr	Lys	Thr	Tyr	Thr 205	Cys	Asn	Val
Asp	His 210	Lys	Pro	Ser	Asn	Thr 215	Lys	Val	Asp	Lys	Arg 220	Val	Glu	Ser	Lys
Tyr 225	Gly	Pro	Pro	Cys	Pro 230	Pro	Cys	Pro	Ala	Pro 235	Glu	Phe	Leu	Gly	Gly 240
Pro	Ser	Val	Phe	Leu 245	Phe	Pro	Pro	Lys	Pro 250	Lys	Asp	Thr	Leu	Met 255	Ile
Ser	Arg	Thr	Pro 260	Glu	Val	Thr	Cys	Val 265	Val	Val	Asp	Val	Ser 270	Gln	Glu
Asp	Pro	Glu 275	Val	Gln	Phe	Asn	Trp 280	Tyr	Val	Asp	Gly	Val 285	Glu	Val	His
Asn	Ala 290	Lys	Thr	Lys	Pro	Arg 295	Glu	Glu	Gln	Phe	Asn 300	Ser	Thr	Tyr	Arg
Val 305	Val	Ser	Val	Leu	Thr 310	Val	Leu	His	Gln	Asp 315	Trp	Leu	Asn	Gly	Lys 320
Glu	Tyr	Lys	Cys	Lys 325	Val	Ser	Asn	Lys	Gly 330	Leu	Pro	Ser	Ser	Ile 335	Glu
Lys	Thr	Ile	Ser 340	Lys	Ala	Lys	Gly	Gln 345	Pro	Arg	Glu	Pro	Gln 350	Val	Tyr
Thr	Leu	Pro 355	Pro	Ser	Gln	Glu	Glu 360	Met	Thr	Lys	Asn	Gln 365	Val	Ser	Leu
Thr	Cys 370	Leu	Val	Lys	Gly	Phe 375	Tyr	Pro	Ser	Asp	Ile 380	Ala	Val	Glu	Trp
Glu 385	Ser	Asn	Gly	Gln	Pro 390	Glu	Asn	Asn	Tyr	Lys 395	Thr	Thr	Pro	Pro	Val 400
Leu	Asp	Ser	Asp	Gly 405	Ser	Phe	Phe	Leu	Tyr 410	Ser	Arg	Leu	Thr	Val 415	Asp
Lys	Ser	Arg	Trp	Gln	Glu	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 340
<211> 1410
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 340
atggagtgga gctgggtggt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag 60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcgctccgt gaaggtgagc 120
tgcaaggcca gcggctatac cctgaccgac tacgtgatgc actgggtgcg gcaggctcct 180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240
cagaagtcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg 300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc 360
taccaaagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg 420
tcgagcgcct ccaccaaggg accttcctgtg tttcccctgg ctccctgctc caggagcaca 480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttccctga gcccgtagacc 540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cttttcctgc cgtgctgcag 600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc 660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtgga caagcgggtg 720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc 780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag 840
gtgacatgcg tgggtggtcga tgtgtcccag gaggaccccg aggtgcagtt taactggtat 900
gtggacggcg tggaagtga caatgctaag acaaagcctc gggaggagca gttcaacagc 960
acataccggg tggtagcgt gtcacagtg ctgcaccagg actggctcaa cggcaaggag 1020
tataagtga aggtctccaa caaggcctc cccagcagca tcgagaagac catcagcaag 1080
gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctccctagcca ggaggagatg 1140
accaagaacc aagtgtccct gacctgtctc gtgaagggtg tttaccccag cgacatcgcc 1200
gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc 1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa 1380
aagagcctct ccctgtccct gggcaagtga 1410

23791WOPCTSEQ

<210> 341
 <211> 450
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 341
 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 Leu Thr Asp Tyr
 20 25 30
 Val Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45
 Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60
 Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80
 Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Ser Pro Phe Tyr Gln Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110
 Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125
 Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140
 Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160
 Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175
 Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 180 185 190
 Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
 195 200 205
 Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
 210 215 220

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Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 342

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

23791WOPCTSEQ

<400> 342
 atggagtgga gctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gactcccag 60
 gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc 120
 tgcaaggcca gcggctatac cctgaccgac tacgtgatgc actgggtgcg gcaggctcct 180
 ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240
 cagaagttcc aggaagggg gacaatgacc gtggatacca gcacctccac cgtgtacatg 300
 gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc 360
 tacaggagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg 420
 tcgagcgcct ccaccaaggg accttcctgtg tccccctgg ctccctgctc caggagcaca 480
 tccgagagca cagctgccct gggctgtctg gtgaaggatt atttccctga gcccgtagacc 540
 gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttctcctg cgtgtgtcag 600
 agtccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc 660
 aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg 720
 gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc 780
 tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag 840
 gtgacatgcg tggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat 900
 gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc 960
 acataccggg tggtagcgt gtcacagtg ctgcaccagg actggctcaa cggcaaggag 1020
 tataagtga aggtctcaa caagggcctc cccagcagca tcgagaagac catcagcaag 1080
 gccaagggcc aaccaggga gcctcaggtg tacaccctc ctctagcca ggaggagatg 1140
 accaagaacc aagtgtccct gacctgtctc gtgaagggat tttaccccag cgacatcgcc 1200
 gtcgaatggg aatccaacgg acagcccag aacaactaca aaaccacccc tcccgtgctc 1260
 gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
 gaaggcaacg tgttcagctg tagcgtgatg cacgaggccc tgcataacca ctacacccaa 1380
 aagagcctct ccctgtcctt gggcaagtga 1410

<210> 343
 <211> 450
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 343
 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 Leu Thr Asp Tyr
 20 25 30

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Val Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Arg Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

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Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 344

<211> 1410

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 344

atggagtgga gctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag 60

gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc 120

tgcaaggcca gcggtatata cctgaccgac tacgctatgc actgggtgcg gcaggctcct 180

ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240

cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg 300

gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccttc 360

tacaacagca ggggcgaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg 420

tcgagcgctt ccaccaaggg accttcctgt tccccctgg ctccctgctc caggagcaca 480

tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtagcc 540

23791WOPCTSEQ

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gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cctttcctgc cgtgctgcag      600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc      660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaaggtgga caagcgggtg      720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc      780
tccgtgttcc tgttcccccc caagcctaag gatacactga tgatctcccg gacccccgag      840
gtgacatgcg tggtggtcga tgtgtcccag gaggaccccc aggtgcagtt taactggtat      900
gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc      960
acataccggg tggtgagcgt gctcacagtg ctgcaccagg actggctcaa cggcaaggag     1020
tataagtgca aggtctccaa caagggcctc cccagcagca tcgagaagac catcagcaag     1080
gccaagggcc aaccaggga gcctcaggtg tacaccctcc ctctagcca ggaggagatg     1140
accaagaacc aagtgtccct gacctgtctc gtgaagggat ttaccaccag cgacatcgcc     1200
gtcgaatggg aatccaacgg acagcccgag aacaactaca aaaccacccc tcccggtgctc     1260
gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa     1320
gaaggcaacg tgttcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa     1380
aagagcctct ccctgtccct gggcaagtga                                     1410

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<210> 345

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 345

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 Leu Thr Asp Tyr
20 25 30

Ala Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

23791WOPCTSEQ

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125
 Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140
 Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160
 Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175
 Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
 180 185 190
 Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
 195 200 205
 Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
 210 215 220
 Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
 225 230 235 240
 Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 245 250 255
 Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
 260 265 270
 Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 275 280 285
 Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
 290 295 300
 Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 305 310 315 320
 Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
 325 330 335
 Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 340 345 350
 Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
 355 360 365
 Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 370 375 380

23791WOPCTSEQ

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 346
<211> 1410
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 346
atggagtgga gctgggtggt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag 60
gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc 120
tgcaaggcca gcggctatac cctgaccgac tactccatgc actgggtgcg gcaggctcct 180
ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240
cagaagttcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg 300
gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc 360
tacaacagca ggggcggaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg 420
tcgagcgcct ccaccaaggg accttcctgt tccccctgg ctccctgctc caggagcaca 480
tccgagagca cagctgccct gggctgtctg gtgaaggatt atttccctga gcccgtagacc 540
gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca cttttcctgc cgtgctgcag 600
agctccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag cctcggaacc 660
aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtga caagcgggtg 720
gagagcaaat acggcccccc ttgtcccccc tgtcctgccc ctgagttcct gggaggaccc 780
tccgtgttcc tgttcccccc caagcctaag gataactga tgatctcccg gacccccgag 840
gtgacatgcg tggtggtcga tgtgtcccag gaggacccc aggtgcagtt taactggtat 900
gtggacggcg tggaagtga caatgctaag acaaagcctc gggaggagca gttcaacagc 960
acataccggg tggtagcgt gtcacagtg ctgcaccagg actggctcaa cggcaaggag 1020
tataagtgca aggtctcaa caaggcctc cccagcagca tcgagaagac catcagcaag 1080

23791WOPCTSEQ

gccaaagggcc aaccagggga gcctcaggtg tacaccctcc ctcctagcca ggaggagatg 1140
 accaagaacc aagtgtccct gacctgtctc gtgaagggat tttaccccag cgacatcgcc 1200
 gtcgaatggg aatccaacgg acagcccgag aacaactaca aaaccacccc tcccggtgctc 1260
 gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
 gaaggcaacg tggtcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa 1380
 aagagcctct ccctgtccct gggcaagtga 1410

<210> 347

<211> 450

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 347

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 Leu Thr Asp Tyr
 20 25 30

Ser Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
 100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
 130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
 145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
 165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
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23791WOPCTSEQ

180

185

190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys

450

<210> 348
 <211> 1410
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 348
 atggagtgga gctgggtgtt cctgtttttc ctgtccgtga ccaccggcgt gcactcccag 60
 gtgcaactgg tgcagtccgg cgccgaagtg aagaagcctg ggcctccgt gaaggtgagc 120
 tgcaaggcca gcggctatac cctgaccgac tacgacatgc actgggtgcg gcaggctcct 180
 ggacagggcc tggaatggat gggcgctatt gacatcagcg atagctacac cagctacgcc 240
 cagaagtcc aggaagggt gacaatgacc gtggatacca gcacctccac cgtgtacatg 300
 gagctgtcct ccctgcggag cgaggatacc gccgtgtact actgtgccag gagccccctc 360
 tacaacagca ggggcgaaa ctacttcgac tactggggcc agggcacaac cgtgaccgtg 420
 tcgagcgct ccaccaagg accttcctg ttccccctg ctccctgctc caggagcaca 480
 tccgagagca cagctgccct gggctgtctg gtgaaggatt atttcctga gcccgtagc 540
 gtgtcctgga acagcggcgc cctcacctcc ggagtgcaca ctttcctgc cgtgtgcag 600
 agtccggcc tgtacagcct gtcctccgtg gtgacagtgc ctagcagcag ctcggaacc 660
 aagacctaca catgcaacgt cgaccataag cccagcaaca ccaagggtga caagcgggtg 720
 gagagcaa atcggcccc ttgtcccc tgtcctgccc ctgagttcct gggaggaccc 780
 tccgtgttcc tggtcccc caagcctaag gataactga tgatctccg gacccccgag 840
 gtgacatgcg tgggtggtcga tgtgtcccag gaggacccg aggtgcagtt taactggtat 900
 gtggacggcg tggaagtgca caatgctaag acaaagcctc gggaggagca gttcaacagc 960
 acataccggg tggtagcgt gtcacagtg ctgaccagg actggctcaa cggcaaggag 1020
 tataagtgca aggtctcaa caagggcctc cccagcagca tcgagaagac catcagcaag 1080
 gccaagggcc aaccaggga gcctcagggtg tacaccctc ctccctagcca ggaggagatg 1140
 accaagaacc aagtgtccct gacctgtctc gtgaagggtat ttaccctcag cgacatcgcc 1200
 gtcgaatggg aatccaacgg acagcccgag aacaactaca aaaccacccc tcccgctgctc 1260
 gatagcgacg gcagcttttt cctgtattcc aggctgaccg tggacaagtc ccggtggcaa 1320
 gaaggcaacg tggtcagctg tagcgtgatg cagcaggccc tgcataacca ctacacccaa 1380
 aagagcctct ccctgtccct gggcaagtga 1410

<210> 349
 <211> 450
 <212> PRT
 <213> Artificial Sequence

<220>

23791WOPCTSEQ

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 349

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 Leu Thr Asp Tyr
20 25 30

Asp Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Ile Ser Asp Ser Tyr Thr Ser Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Pro Phe Tyr Asn Ser Arg Gly Gly Asn Tyr Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
115 120 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
130 135 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145 150 155 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
165 170 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
180 185 190

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
195 200 205

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
210 215 220

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
225 230 235 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
245 250 255

23791WOPCTSEQ

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
260 265 270

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
275 280 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
290 295 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305 310 315 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
325 330 335

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
340 345 350

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
355 360 365

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
370 375 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385 390 395 400

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
405 410 415

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
420 425 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
435 440 445

Gly Lys
450

<210> 350

<211> 708

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 350

atgtccgtgc ccaccaagt gctgggcctg ctgctgctgt ggctgaccga cgccaggtgc 60

gacatccaga tgaccagag ccctagcagc ctgagcgcca gcgtgggaga cagggtgacc 120

atcacctgta gggccagcca ggacatcagc aactacctga actggtacca gcagaagccc 180

23791WOPCTSEQ

```

ggcaaggccc ccaagctgct gatctactac accagcaggc tgcacagcgg cgtgcccagc      240
agattcagcg gaagcggcag cggcaccgac ttcaccttca ccatctccag cctgcagccc      300
gaggacatcg ccacctacta ctgtcagcag ggcgacaccc tgcccccttg gacattcgga      360
ggcggcacca aggtggagat caagcgtacg gtggctgccc cctccgtggt catcttcccc      420
cccagcgatg agcagctgaa gagcggcaca gccagcgtgg tgtgcctgct gaacaacttc      480
taccacaggg aggccaaggt gcagtggaag gtggacaacg ccctgcagag cggcaacagc      540
caggagtccg tgaccgagca ggacagcaag gacagcacct acagcctgag cagcacactg      600
accctgagca aggccgacta cgagaagcac aaggtgtacg cctgcgaggt gacccatcag      660
ggcctgagca gccccgtgac caagagcttc aacaggggcg agtgctga      708

```

<210> 351

<211> 215

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 351

```

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1           5           10          15

```

```

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
          20          25          30

```

```

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
          35          40          45

```

```

Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
          50          55          60

```

```

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro
65          70          75          80

```

```

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Gly Asp Thr Leu Pro Pro
          85          90          95

```

```

Trp Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
          100          105          110

```

```

Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
          115          120          125

```

```

Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu
          130          135          140

```

```

Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser
          145          150          155          160

```

23791WOPCTSEQ

Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
 165 170 175

Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
 180 185 190

Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys
 195 200 205

Ser Phe Asn Arg Gly Glu Cys
 210 215

<210> 352

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 352

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gtgcagctgg	tgcagagcgg	agccgaggtg	aagaagcctg	gcgccagcgt	gaaggtgtcc	120
tgcaaggcca	gcggcagctc	cttcaccgac	tactacatcc	actgggtgag	acaggcccct	180
ggccagggac	tggagtggat	gggcaggatt	taccccgga	gcggcaatag	caactacgcc	240
cagaagtcc	agggcagggg	gaccagcacc	agggacacca	gcatcagcac	cgcctacatg	300
gagctgagca	ggctgaggag	cgacgacacc	gtcgtgtact	actgcgccag	ggaggccgac	360
tacgacgatg	ccctggacta	ctggggacag	ggaaccaccg	tgaccgtgtc	gagcgctagc	420
accaaaggcc	cctccgtggt	tcctctggcc	ccctgcagca	gaagcaccag	cgagagcaca	480
gccgctctgg	gctgcctggg	caaggactac	ttccccgagc	ccgtgacagt	gagctggaat	540
agcggcgccc	tgacatccgg	cgtgcatacc	ttccctgccg	tgctgcaaag	ctccggcctg	600
tattccctgt	cctccgtggg	gacagtgtcc	agcagctccc	tgggaaccaa	gacctacacc	660
tgcaacgtgg	accacaaacc	cagcaacacc	aaggtggaca	agaggggtga	aagcaagtac	720
ggccctcctt	gccctccttg	tcctgctccc	gagttcctgg	gaggccccag	cgtgttcctg	780
ttcccccta	agcccaagga	caccctcatg	atctccagga	cccccgaggt	gacctgcgtg	840
gtggtggatg	tgagccagga	agaccgggag	gtgcagttca	actggtacgt	ggacggcgtg	900
gaggtgcaca	acgccaagac	caagcccagg	gaggagcagt	tcaacagcac	ctacagggtg	960
gtgtccgtcc	tgaccgtgct	gcaccaggac	tggtgaacg	gcaaagagta	caagtgaag	1020
gtgagcaaca	agggcctgcc	cagctccatc	gagaagacaa	tctccaaggc	caagggccag	1080
cccaggaac	ctcaggtgta	taccctgcct	cccagccagg	aggagatgac	caagaatcag	1140
gtgagcctga	cctgcctggg	gaaaggattc	taccccgagc	atatcgccgt	ggagtgggag	1200
agcaatggcc	agcccagaaa	caactacaag	accacacccc	ccgtcctcga	ctccgatggc	1260

23791WOPCTSEQ

tcctttttcc tgtattccag gctcaccgtg gacaagtcca ggtggcagga aggcaacgtg 1320
 ttttagctgca gcgtgatgca cgaggctctg cacaaccact atacacagaa gagcctctcc 1380
 ctgtccctcg gcaagtga 1398

<210> 353
 <211> 446
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 353
 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 Ser Ser Phe Thr Asp Tyr
 20 25 30

Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Arg Ile Tyr Pro Gly Ser Gly Asn Ser Asn Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Ser Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
 65 70 75 80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Val Val Tyr Tyr Cys
 85 90 95

Ala Arg Glu Ala Asp Tyr Asp Asp Ala Leu Asp Tyr Trp Gly Gln Gly
 100 105 110

Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205

23791WOPCTSEQ

Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 355 360 365
 Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 370 375 380
 Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 385 390 395 400
 Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
 405 410 415
 Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445

<210> 354

<211> 1407

<212> DNA

<213> Artificial Sequence

<220>

23791WOPCTSEQ

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 354

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atggagtgga gctgggtggt cctcttcttc ctgagcgtca ccaccggcgt ccactccgaa      60
gtgcagctgg tgcagagcgg cgccgaggtg aagaagcctg gcgagagcct gaaaatcagc      120
tgcaagggaa gcggtccag cttcaccgac tactacatca actgggtgag gcagatgcct      180
ggcaagggcc tcgagtggat gggctggatc taccgga gcggaatac aatctacagc      240
cccagcttcc agggccaagt gacaatcagc gtggataagt ccatctccac cgcctacctg      300
caatggagct ccctcaaggc cagcgacacc gccatgtatt attgcgctag ggaggccgac      360
tacgacgatg ccctggacta ctggggccaa ggaaccaccg tcacagtgtc gtccgccagc      420
accaagggac cctccgtctt ccccctggct cctagcagca agagcacctc cggcggaaca      480
gctgccctgg gatgtctcgt gaaggattac tttcccgagc ctgtcaccgt gtcctggaac      540
agcggagccc tgaccagcgg cgtgcataca ttccccgccg tgctgcagag cagcggactg      600
tactccctgt cctccgtggt gacagtgcct tcctccagcc tgggcacca gacctatatt      660
tgcaacgtga accacaagcc cagcaacacc aaggtggaca agaaggtgga gcccaagtcc      720
tgcgacaaaa cacacacctg ccctccctgt cctgctcccg aactcctcgg aggcccttcc      780
gtgttcctgt tccccccaa gcccaaggac accctgatga ttagcagaac cccgaagtg      840
acctgtgtgg tggtcgatgt ctcccatgag gaccccgagg tcaaattcaa ctggtacgtg      900
gacggcgtgg aggtccacaa tgccaaaacc aagcccaggg aggagcagta taacagcacc      960
tacaggggtg tgagcgtgct gaccgtgctg caccaggact ggctgaacgg caaggagtac     1020
aagtgcagg tgtccaacaa ggccctgcct gccccattg agaagaccat ctccaaggcc     1080
aagggccagc ctagggagcc ccaggtgtac accctccctc cctccaggga cgagctgacc     1140
aagaaccagg tctccctgac ctgcctggtg aagggctttt atcccagcga catcgccgtg     1200
gagtgggaaa gcaacggcca gcccgagaac aattacaaga ccaccccccc cgtgctggac     1260
agcgatggca gcttcttctt gtacagcaag ctgacagtgg acaagtccag gtggcaacag     1320
ggcaatgtct tctcctgcag cgtgatgcac gaggccctgc acaaccacta taccagaaa     1380
tccctcagcc tgtcccctgg aaagtga                                     1407

```

<210> 355

<211> 449

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 355

```

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
1           5           10          15

```

```

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Ser Ser Phe Thr Asp Tyr

```

23791WOPCTSEQ
25

20

30

Tyr Ile Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Tyr Pro Gly Ser Gly Asn Thr Ile Tyr Ser Pro Ser Phe
50 55 60

Gln Gly Gln Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Glu Ala Asp Tyr Asp Asp Ala Leu Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Thr 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 Lys 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
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23791WOPCTSEQ
300

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 Asp Glu Leu 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> 356

<211> 1431

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 356

atggagtggg cctgggtggt cctgttcttc ctgagcgtga ccaccggcgt gactccgag 60

gtgcagctgg tgcagagcgg cgctgaggtg aagaagcccg gcgagtcctt gaagatcagc 120

tgcaagggca gcggcagcag cttcaccgac tactacatca actgggtgag gcagatgcct 180

ggcaagggcc tggagtggat gggctggatc taccgccgga gcggcaacac catctactcc 240

cccagcttcc agggccaggt gaccatcagc gtggacaaga gcatcagcac cgcctacctg 300

cagtggagca gcctgaaggc cagcgacacc gccatgtact actgcgccag ggaggccgac 360

tacgatgacg ccctggacta ttggggccag ggcaccaccg tgacagtgtc gagctggggc 420

cagggaaacca ccgtgaccgt gtcgagcgct agcaccaaag gccctccgt gtttcctctg 480

23791WOPCTSEQ

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 tacttccccg agcccgtgac agtgagctgg aatagcggcg ccctgacatc cggcgtgcat 600
 accttccctg ccgtgctgca aagctccggc ctgtattccc tgtcctccgt ggtgacagtg 660
 cccagcagct ccctgggaac caagacctac acctgcaacg tggaccacaa acccagcaac 720
 accaaggtgg acaagagggg ggaaagcaag tacggccctc cttgccctcc ttgtcctgct 780
 cccgagttcc tgggaggccc cagcgtgttc ctgttcccc ctaagcccaa ggacaccctc 840
 atgatctcca ggacccccga ggtgacctgc gtggtggtgg atgtgagcca ggaagaccg 900
 gaggtgcagt tcaactggta cgtggacggc gtggaggtgc acaacgcaa gaccaagccc 960
 agggaggagc agttcaacag cacctacagg gtggtgtccg tcctgaccgt gctgcaccag 1020
 gactggctga acggcaaaga gtacaagtgc aaggtgagca acaaggcct gccagctcc 1080
 atcgagaaga caatctcaa ggccaagggc cagcccaggg aacctcaggt gtataccctg 1140
 cctcccagcc aggaggagat gaccaagaat caggtgagcc tgacctgcct ggtgaaagga 1200
 ttctaccca gcgatatcg cgtggagtgg gagagcaatg gccagcccga gaacaactac 1260
 aagaccacac cccccgtcct cgactccgat ggctcctttt tcctgtattc caggctcacc 1320
 gtggacaagt ccaggtggca ggaaggcaac gtgttttagct gcagcgtgat gcacgaggct 1380
 ctgcacaacc actatacaca gaagagcctc tccctgtccc tcggcaagtg a 1431

<210> 357

<211> 457

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 357

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Glu
 1 5 10 15

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Ser Ser Phe Thr Asp Tyr
 20 25 30

Tyr Ile Asn Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
 35 40 45

Gly Trp Ile Tyr Pro Gly Ser Gly Asn Thr Ile Tyr Ser Pro Ser Phe
 50 55 60

Gln Gly Gln Val Thr Ile Ser Val Asp Lys Ser Ile Ser Thr Ala Tyr
 65 70 75 80

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
 85 90 95

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Ala Arg Glu Ala Asp Tyr Asp Asp Ala Leu Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser Trp Gly Gln Gly Thr Thr Val Thr Val
115 120 125

Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys
130 135 140

Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys
145 150 155 160

Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
165 170 175

Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu
180 185 190

Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr
195 200 205

Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val
210 215 220

Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro
225 230 235 240

Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys
245 250 255

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
260 265 270

Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr
275 280 285

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
290 295 300

Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
305 310 315 320

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
325 330 335

Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
340 345 350

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met
355 360 365

23791WOPCTSEQ

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 370 375 380

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
 385 390 395 400

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 405 410 415

Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val
 420 425 430

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 435 440 445

Lys Ser Leu Ser Leu Ser Leu Gly Lys
 450 455

<210> 358

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 358

atggagtgga gctgggtggt cctgttcttc ctgagcgtga ccaccggcgt gcactcccag	60
gtgcagctgg tgcagagcgg agccgaggtg aagaagcctg gcgccagcgt gaaggtgtcc	120
tgcaaggcca gcggcagctc cttcaccgac tactacatca actgggtgag gcaggcccct	180
ggacagggac tggagtggat gggctggatt taccgccgga gcggcaacac catctacgcc	240
cagaagttcc agggcagggg gaccagcacc gtggacacca gcatcagcac cgcctacatg	300
gagctgagca ggctgaggag cgacgacacc gtggtgtact actgcgccag ggaggccgac	360
tacgacgatg ccctggacta ctggggccag ggcaccacag tgaccgtgtc gagcgctagc	420
accaaaggcc cctccgtggt tcctctggcc ccctgcagca gaagcaccag cgagagcaca	480
gccgctctgg gctgcctggt caaggactac ttccccgagc ccgtgacagt gagctggaat	540
agcggcgccc tgacatccgg cgtgcatacc ttccctgccg tgctgcaaag ctccggcctg	600
tattccctgt cctccgtggt gacagtgcc agcagctccc tgggaaccaa gacctacacc	660
tgcaacgtgg accacaaacc cagcaacacc aaggtggaca agagggtgga aagcaagtac	720
ggccctcctt gccctccttg tcctgctccc gagttcctgg gaggccccag cgtgttcctg	780
ttcccccta agccaagga caccctcatg atctccagga ccccgagggt gacctgcgtg	840
gtggtggatg tgagccagga agaccggag gtgcagttca actggtacgt ggacggcgtg	900
gaggtgcaca acgccaagac caagcccagg gaggagcagt tcaacagcac ctacaggggtg	960
gtgtccgtcc tgaccgtgct gcaccaggac tggctgaacg gcaaagagta caagtgaag	1020

23791WOPCTSEQ

gtgagcaaca agggcctgcc cagctccatc gagaagacaa tctccaaggc caagggccag 1080
cccaggggaac ctgaggtgta taccctgcct cccagccagg aggagatgac caagaatcag 1140
gtgagcctga cctgcctggt gaaaggattc taccacagcg atatcgccgt ggagtgggag 1200
agcaatggcc agcccagaaa caactacaag accacacccc ccgtcctcga ctccgatggc 1260
tcctttttcc tgtattccag gctcaccgtg gacaagtcca ggtggcagga aggcaacgtg 1320
tttagctgca gcgtgatgca cgaggctctg cacaaccact atacacagaa gagcctctcc 1380
ctgtccctcg gcaagtga 1398

<210> 359

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 359

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 Ser Ser Phe Thr Asp Tyr
20 25 30

Tyr Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Tyr Pro Gly Ser Gly Asn Thr Ile Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ser Thr Val Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Val Val Tyr Tyr Cys
85 90 95

Ala Arg Glu Ala Asp Tyr Asp Asp Ala Leu Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
115 120 125

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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

23791WOPCTSEQ

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 355 360 365
 Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 370 375 380
 Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 385 390 395 400
 Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
 405 410 415
 Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445

23791WOPCTSEQ

<210> 360
 <211> 1398
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 360
 atggagtgga gctgggtggt cctgttcttc ctgagcgtga ccaccggcgt gcactcccag 60
 gtgcaactgg tgcagagcgg cgccgaggtg aagaaacccg gagccagcgt gaaggtgagc 120
 tgcaaggcca gcggcagcag cttcaccgac tactacatca actgggtgag acaggcccct 180
 ggacagggcc tggagtggat gggctggatc taccgccgca gcggcaacac catctacgcc 240
 cagaagtttc agggcaggtt gaccatgacc gtggacacca gcaccagcac cgtgtacatg 300
 gagctgagca gcctgagaag cgaggacacc gccgtgtact actgcgccag agaggccgat 360
 tacgacgacg ccctggacta ctggggccag ggaaccaccg tgaccgtgtc gagcgctagc 420
 accaaaggcc cctccgtggt tcctctggcc ccctgcagca gaagcaccag cgagagcaca 480
 gccgctctgg gctgcctggt caaggactac ttccccgagc ccgtgacagt gagctggaat 540
 agcggcgccc tgacatccgg cgtgcatacc ttccctgccg tgctgcaaag ctccggcctg 600
 tattccctgt cctccgtggt gacagtgtcc agcagctccc tgggaaccaa gacctacacc 660
 tgcaacgtgg accacaaacc cagcaacacc aaggtggaca agagggtgga aagcaagtac 720
 ggccctcctt gccctccttg tcctgtctcc gagttcctgg gaggccccag cgtgttcctg 780
 ttcccccta agccaagga caccctcatg atctccagga ccccgagggt gacctgcgtg 840
 gtggtggatg tgagccagga agaccggag gtgcagttca actggtacgt ggacggcgtg 900
 gaggtgcaca acgccaagac caagcccagg gaggagcagt tcaacagcac ctacaggggtg 960
 gtgtccgtcc tgaccgtgct gcaccaggac tggctgaacg gcaaagagta caagtgaag 1020
 gtgagcaaca agggcctgcc cagctccatc gagaagacaa tctccaaggc caagggccag 1080
 cccagggaac ctgaggtgta taccctgcct ccagccagg aggagatgac caagaatcag 1140
 gtgagcctga cctgcctggt gaaaggattc taccccagcg atatcgccgt ggagtgggag 1200
 agcaatggcc agcccagaa caactacaag accacacccc ccgtcctcga ctccgatggc 1260
 tcctttttcc tgtattccag gtcaccgtg gacaagtcca ggtggcagga aggcaacgtg 1320
 tttagctgca gcgtgatgca cgaggctctg cacaaccact atacacagaa gagcctctcc 1380
 ctgtccctcg gcaagtga 1398

<210> 361
 <211> 446
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

23791WOPCTSEQ

<400> 361
 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 Ser Ser Phe Thr Asp Tyr
 20 25 30
 Tyr Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45
 Gly Trp Ile Tyr Pro Gly Ser Gly Asn Thr Ile Tyr Ala Gln Lys Phe
 50 55 60
 Gln Gly Arg Val Thr Met Thr Val Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80
 Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Glu Ala Asp Tyr Asp Asp Ala Leu Asp Tyr Trp Gly Gln Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270

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Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
290 295 300

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
305 310 315 320

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
340 345 350

Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
355 360 365

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
370 375 380

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
385 390 395 400

Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
405 410 415

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
435 440 445

<210> 362

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 362

atggagtgga gctgggtgtt cctgttcttc ctcagcgtga ccaccggcgt gcacagccag	60
gtgcagctgg tgcagagcgg cgccgaagtg aaaaagcccg gcgccagcgt caaggtgagc	120
tgcaaggcca gcggcagcag cttcaccgac tactacatca actgggtgag gcaggccacc	180
ggacagggac tggagtggat gggctggatc taccgga gcggaacac catctacgcc	240
cagaagttcc agggcagggg gaccatgacc gtggacacca gcatcagcac cgcctacatg	300
gagctgagca gcctgaggtc cgaggacacc gccgtgtact actgcgccag ggaagccgac	360

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tacgacgacg ccctggacta ctggggacag ggcaccaccg tgaccgtgtc gagcgctagc	420
accaaaggcc cctccgtgtt tcctctggcc ccctgcagca gaagcaccag cgagagcaca	480
gccgctctgg gctgcctggt caaggactac ttccccgagc ccgtgacagt gagctggaat	540
agcggcgccc tgacatccgg cgtgcatacc ttccctgccg tgctgcaaag ctccggcctg	600
tattccctgt cctccgtggt gacagtgtccc agcagctccc tgggaaccaa gacctacacc	660
tgcaacgtgg accacaaacc cagcaacacc aaggtggaca agagggtgga aagcaagtac	720
ggccctcctt gccctccttg tcctgtctccc gagttcctgg gaggccccag cgtgttcctg	780
ttcccccta agccaagga caccctcatg atctccagga ccccgagggt gacctgcgtg	840
gtggtggatg tgagccagga agaccggag gtgcagttca actggtacgt ggacggcgtg	900
gaggtgcaca acgccaagac caagcccagg gaggagcagt tcaacagcac ctacaggggtg	960
gtgtccgtcc tgaccgtgct gcaccaggac tggctgaacg gcaaagagta caagtgaag	1020
gtgagcaaca agggcctgcc cagctccatc gagaagacaa tctccaaggc caagggccag	1080
cccagggAAC ctCaggtgta taccctgcct cccagccagg aggagatgac caagaatcag	1140
gtgagcctga cctgcctggt gaaaggattc taccCCagcg atatcgccgt ggagtgggag	1200
agcaatggcc agcccagaa caactacaag accacacccc ccgtcctcga ctccgatggc	1260
tcctttttcc tgtattccag gctcaccgtg gacaagtcca ggtggcagga aggcaacgtg	1320
tttagctgca gcgtgatgca cgaggctctg cacaaccact atacacagaa gagcctctcc	1380
ctgtccctcg gcaagtga	1398

<210> 363

<211> 446

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 363

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	Ser	Ser	Phe	Thr	Asp	Tyr
			20					25					30		

Tyr	Ile	Asn	Trp	Val	Arg	Gln	Ala	Thr	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35					40					45			

Gly	Trp	Ile	Tyr	Pro	Gly	Ser	Gly	Asn	Thr	Ile	Tyr	Ala	Gln	Lys	Phe
	50					55					60				

Gln	Gly	Arg	Val	Thr	Met	Thr	Val	Asp	Thr	Ser	Ile	Ser	Thr	Ala	Tyr
65					70					75					80

Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys

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85

90

95

Ala Arg Glu Ala Asp Tyr Asp Asp Ala Leu Asp Tyr Trp Gly Gln Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val

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355

360

365

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 370 375 380

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 385 390 395 400

Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
 405 410 415

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445

<210> 364

<211> 1398

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 364

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atggagtgga gctgggtgtt cctgttcttc ctgagcgtga ccacaggcgt gcacagccag      60
gtgcagctgg tgcaaagcgg cgccgaggtg aagaaacctg gcgccagcgt gaaagtgagc      120
tgcaaggcct ccggctcctc cttcaccgac tactacatca actgggtgag gcaggcccct      180
ggccagagac tcgagtggat gggctggatc taccgccgga gcggaacac catctactcc      240
cagaagtcc aggaagggt gaccatcacc gtggacacca gcgccagcac cgcctacatg      300
gagctgagca gcctgagaag cgaggatacc gccgtgtact actgcgccag ggaggccgac      360
tatgacgacg ccctggacta ctggggacag ggcaccaccg tgaccgtgtc gagcgctagc      420
accaaaggcc cctccgtgtt tcctctggcc ccctgcagca gaagcaccag cgagagcaca      480
gccgctctgg gctgcctggt caaggactac ttccccgagc ccgtgacagt gagctggaat      540
agcggcgccc tgacatccgg cgtgcatacc ttccctgccg tgctgcaaag ctccggcctg      600
tattccctgt cctccgtggt gacagtgtcc agcagctccc tgggaaccaa gacctacacc      660
tgcaacgtgg accacaaacc cagcaacacc aaggtggaca agagggtgga aagcaagtac      720
ggccctcctt gccctccttg tcctgctccc gagttcctgg gaggccccag cgtgttcctg      780
ttcccccta agccaagga caccctcatg atctccagga ccccgaggt gacctgcgtg      840
gtggtggatg tgagccagga agaccggag gtgcagttca actggtacgt ggacggcgtg      900
gaggtgcaca acgccaagac caagcccagg gaggagcagt tcaacagcac ctacagggtg      960
gtgtccgtcc tgaccgtgct gcaccaggac tggctgaacg gcaaagagta caagtgaag      1020
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23791WOPCTSEQ

cccaggggaac ctcaggtgta taccctgcct cccagccagg aggagatgac caagaatcag 1140
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 agcaatggcc agcccagaaa caactacaag accacacccc ccgtcctcga ctccgatggc 1260
 tcctttttcc tgtattccag gctcaccgtg gacaagtcca ggtggcagga aggcaacgtg 1320
 ttttagctgca gcgtgatgca cgaggctctg cacaaccact atacacagaa gagcctctcc 1380
 ctgtccctcg gcaagtga 1398

<210> 365
 <211> 446
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 365
 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 Ser Ser Phe Thr Asp Tyr
 20 25 30
 Tyr Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Arg Leu Glu Trp Met
 35 40 45
 Gly Trp Ile Tyr Pro Gly Ser Gly Asn Thr Ile Tyr Ser Gln Lys Phe
 50 55 60
 Gln Gly Arg Val Thr Ile Thr Val Asp Thr Ser Ala Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Glu Ala Asp Tyr Asp Asp Ala Leu Asp Tyr Trp Gly Gln Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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

23791WOPCTSEQ

Gln Ser Ser Gly₁₈₀ Leu Tyr Ser Leu Ser₁₈₅ Ser Val Val Thr Val₁₉₀ Pro Ser

Ser Ser Leu₁₉₅ Gly Thr Lys Thr Tyr₂₀₀ Thr Cys Asn Val Asp₂₀₅ His Lys Pro

Ser Asn₂₁₀ Thr Lys Val Asp Lys₂₁₅ Arg Val Glu Ser Lys₂₂₀ Tyr Gly Pro Pro

Cys₂₂₅ Pro Pro Cys Pro Ala₂₃₀ Pro Glu Phe Leu Gly₂₃₅ Gly Pro Ser Val Phe₂₄₀

Leu Phe Pro Pro Lys₂₄₅ Pro Lys Asp Thr Leu₂₅₀ Met Ile Ser Arg Thr₂₅₅ Pro

Glu Val Thr Cys₂₆₀ Val Val Val Asp Val₂₆₅ Ser Gln Glu Asp Pro₂₇₀ Glu Val

Gln Phe Asn₂₇₅ Trp Tyr Val Asp Gly₂₈₀ Val Glu Val His Asn₂₈₅ Ala Lys Thr

Lys Pro₂₉₀ Arg Glu Glu Gln Phe₂₉₅ Asn Ser Thr Tyr Arg₃₀₀ Val Val Ser Val

Leu Thr Val Leu His Gln₃₁₀ Asp Trp Leu Asn Gly₃₁₅ Lys Glu Tyr Lys Cys₃₂₀

Lys Val Ser Asn Lys₃₂₅ Gly Leu Pro Ser Ser₃₃₀ Ile Glu Lys Thr Ile₃₃₅ Ser

Lys Ala Lys Gly₃₄₀ Gln Pro Arg Glu Pro₃₄₅ Gln Val Tyr Thr Leu₃₅₀ Pro Pro

Ser Gln Glu₃₅₅ Glu Met Thr Lys Asn₃₆₀ Gln Val Ser Leu Thr₃₆₅ Cys Leu Val

Lys Gly₃₇₀ Phe Tyr Pro Ser Asp₃₇₅ Ile Ala Val Glu Trp₃₈₀ Glu Ser Asn Gly

Gln Pro Glu Asn Asn Tyr₃₉₀ Lys Thr Thr Pro Pro₃₉₅ Val Leu Asp Ser Asp₄₀₀

Gly Ser Phe Phe Leu₄₀₅ Tyr Ser Arg Leu Thr₄₁₀ Val Asp Lys Ser Arg₄₁₅ Trp

Gln Glu Gly Asn₄₂₀ Val Phe Ser Cys Ser₄₂₅ Val Met His Glu Ala₄₃₀ Leu His

Asn His Tyr₄₃₅ Thr Gln Lys Ser Leu₄₄₀ Ser Leu Ser Leu Gly₄₄₅ Lys

23791WOPCTSEQ

<210> 366
 <211> 1398
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 366
 atggagtggg cctgggtggt cctgttcttc ctgagcgtga ccaccggcgt gcacagccag 60
 atgcagctgg tgcagagcgg cgccgaggtg aagaagaccg gcagctccgt gaaggtgagc 120
 tgcaaggcca gcggcagcag cttcaccgac tactacatca actgggtgag acaggcccct 180
 ggacaggccc tggagtggat gggctggatc taccgccgga gcggcaacac catctacgcc 240
 cagaagttcc aggacagggg gaccattacc gtggacagga gcagctccac cgcctacatg 300
 gagctgagca gcctgaggag cgaggacacc gccatgtact actgcgccag ggaggccgac 360
 tacgacgacg ctctggacta ctggggccag ggcacaaccg tgaccgtgtc gagcgctagc 420
 accaaaggcc cctccgtggt tcctctggcc ccctgcagca gaagcaccag cgagagcaca 480
 gccgctctgg gctgcctggt caaggactac ttccccgagc ccgtgacagt gagctggaat 540
 agcggcgccc tgacatccgg cgtgcatacc ttccctgccg tgctgcaaag ctccggcctg 600
 tattccctgt cctccgtggt gacagtgtcc agcagctccc tgggaaccaa gacctacacc 660
 tgcaacgtgg accacaaacc cagcaacacc aagggtggaca agaggggtgga aagcaagtac 720
 ggccctcctt gccctccttg tcctgctccc gagttcctgg gaggccccag cgtgttcctg 780
 ttcccccta agcccaagga caccctcatg atctccagga ccccgaggt gacctgcgtg 840
 gtggtggatg tgagccagga agaccggag gtgcagttca actggtacgt ggacggcgtg 900
 gaggtgcaca acgccaagac caagcccagg gaggagcagt tcaacagcac ctacagggtg 960
 gtgtccgtcc tgaccgtgct gcaccaggac tggctgaacg gcaaagagta caagtgaag 1020
 gtgagcaaca agggcctgcc cagctccatc gagaagacaa tctccaaggc caagggccag 1080
 cccagggaac ctgaggtgta taccctgcct cccagccagg aggagatgac caagaatcag 1140
 gtgagcctga cctgcctggt gaaaggattc taccgccg atctcgcgt ggagtgggag 1200
 agcaatggcc agcccagaa caactacaag accacacccc ccgtcctcga ctccgatggc 1260
 tcctttttcc tgtattccag gctcaccgtg gacaagtcca ggtggcagga aggcaacgtg 1320
 tttagctgca gcgtgatgca cgaggctctg cacaaccact atacacagaa gagcctctcc 1380
 ctgtccctcg gcaagtga 1398

<210> 367
 <211> 446
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

23791WOPCTSEQ

<400> 367

Gln Met Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Thr Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Ser Ser Phe Thr Asp Tyr
20 25 30

Tyr Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Ala Leu Glu Trp Met
35 40 45

Gly Trp Ile Tyr Pro Gly Ser Gly Asn Thr Ile Tyr Ala Gln Lys Phe
50 55 60

Gln Asp Arg Val Thr Ile Thr Val Asp Arg Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Glu Ala Asp Tyr Asp Asp Ala Leu Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
115 120 125

Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser 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 Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
195 200 205

Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
210 215 220

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
225 230 235 240

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
245 250 255

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

23791WOPCTSEQ

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
290 295 300

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
305 310 315 320

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
325 330 335

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
340 345 350

Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
355 360 365

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
370 375 380

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
385 390 395 400

Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
405 410 415

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
435 440 445

<210> 368

<211> 720

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 368

atgagcgtgc ccaccaggt gctgggactg ctgctgctgt ggctgaccga cgccaggtgc 60

gacatcgtga tgaccagac acccctgagc ctgagcgtga cacctggcca gcctgccagc 120

atcagctgca ggagcagcaa gagcctgctg cacagcgacg gcaacaccta cctgtactgg 180

tacctgcaga agcccgcca gcctcctcag ctgctgatct acaggatgag caacctggcc 240

tccggcgtgc ctgacaggtt cagcggaagc ggcagcggca ccgacttcac cctgaagatc 300

agcagagtgg aggccgagga cgtcggcgtg tactactgca tgcagcacct ggagtacccc 360

ttcaccttcg gcggcggcac caaggtggag atcaagcgta cggtggctgc ccctccgtg 420

23791WOPCTSEQ

ttcatcttcc cccccagcga tgagcagctg aagagcggca cagccagcgt ggtgtgcctg	480
ctgaacaact tctaccccag ggaggccaag gtgcagtggg aggtggacaa cgcctgcag	540
agcggcaaca gccaggagtc cgtgaccgag caggacagca aggacagcac ctacagcctg	600
agcagcacac tgaccctgag caaggccgac tacgagaagc acaaggtgta cgcctgcgag	660
gtgacccatc agggcctgag cagccccgtg accaagagct tcaacagggg cgagtgtgta	720

<210> 369

<211> 219

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 369

Asp	Ile	Val	Met	Thr	Gln	Thr	Pro	Leu	Ser	Leu	Ser	Val	Thr	Pro	Gly
1				5				10						15	

Gln	Pro	Ala	Ser	Ile	Ser	Cys	Arg	Ser	Ser	Lys	Ser	Leu	Leu	His	Ser
			20					25					30		

Asp	Gly	Asn	Thr	Tyr	Leu	Tyr	Trp	Tyr	Leu	Gln	Lys	Pro	Gly	Gln	Pro
		35					40					45			

Pro	Gln	Leu	Leu	Ile	Tyr	Arg	Met	Ser	Asn	Leu	Ala	Ser	Gly	Val	Pro
	50					55					60				

Asp	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Lys	Ile
65					70					75					80

Ser	Arg	Val	Glu	Ala	Glu	Asp	Val	Gly	Val	Tyr	Tyr	Cys	Met	Gln	His
			85						90					95	

Leu	Glu	Tyr	Pro	Phe	Thr	Phe	Gly	Gly	Gly	Thr	Lys	Val	Glu	Ile	Lys
			100					105					110		

Arg	Thr	Val	Ala	Ala	Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu
		115					120					125			

Gln	Leu	Lys	Ser	Gly	Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe
	130					135					140				

Tyr	Pro	Arg	Glu	Ala	Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln
145					150					155					160

Ser	Gly	Asn	Ser	Gln	Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser
				165					170					175	

Thr	Tyr	Ser	Leu	Ser	Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu
			180					185					190		

23791WOPCTSEQ

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
 195 200 205

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 210 215

<210> 370
 <211> 708
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 370
 atgtccgtgc ccaccaggt gctgggactg ctgctgctgt ggctgaccga cgccaggtgc 60
 gacatccaga tgaccagag ccctagcagc ctgagcgcta gcgtgggcga cagggtgacc 120
 atcacctgta gggccagcca gagcatcggc acctccatcc actggtacca gcagaagccc 180
 ggcaaggccc ccaagctgct gatctactac gcctccgaga gcatcagcgg cgtgcctagc 240
 agatttagcg gcagcggcag cggcaccgac tttaccctga ccatctccag cctgcagccc 300
 gaggacttcg ccacctacta ctgccagcag agcaacagct ggcccaccta caccttcggc 360
 ggcggaacca aggtggagat taagcgtacg gtggctgccc cctccgtgtt catcttcccc 420
 cccagcgatg agcagctgaa gagcggcaca gccagcgtgg tgtgcctgct gaacaacttc 480
 taccacaggg aggccaaggt gcagtggaag gtggacaacg ccctgcagag cggcaacagc 540
 caggagtccg tgaccgagca ggacagcaag gacagcacct acagcctgag cagcacactg 600
 accctgagca aggccgacta cgagaagcac aaggtgtacg cctgcgaggt gacccatcag 660
 ggcctgagca gcccctgac caagagcttc aacaggggcg agtgctga 708

<210> 371
 <211> 215
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 371
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Gly Thr Ser
 20 25 30

Ile His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
 35 40 45

Tyr Tyr Ala Ser Glu Ser Ile Ser Gly Val Pro Ser Arg Phe Ser Gly
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50

55

60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Asn Ser Trp Pro Thr
85 90 95

Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
100 105 110

Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
115 120 125

Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu
130 135 140

Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser
145 150 155 160

Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
165 170 175

Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
180 185 190

Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys
195 200 205

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 372

<211> 702

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 372

atgtccgtgc ccaccaggt gctgggactg ctgctgctgt ggctgaccga cgccaggtgc 60

gacatccaga tgaccagag ccctagcagc gtcagcgtgg gcgacagggt gaccatcacc 120

tgtagggccca gccagagcat cggcacctcc atccactggt accagcagaa gcccggaag 180

gcccccaagc tgctgatcta ctacgcctcc gagagcatca gcggcgtgcc tagcagattt 240

agcggcagcg gcagcggcac cgactttacc ctgaccatct ccagcctgca gcccgaggac 300

ttcgccacct actactgccca gcagagcaac agctggccca cctacacctt cggcggcgga 360

accaaggtgg agattaagcg tacggtggct gcccctccg tgttcatctt cccccccagc 420

gatgagcagc tgaagagcgg cacagccagc gtggtgtgcc tgctgaacaa cttctacccc 480

23791WOPCTSEQ

agggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 540
 tccgtgaccg agcaggacag caaggacagc acctacagcc tgagcagcac actgaccctg 600
 agcaaggccg actacgagaa gcacaaggtg tacgcctgcg aggtgaccca tcagggcctg 660
 agcagccccg tgaccaagag cttcaacagg ggcgagtgct ga 702

<210> 373

<211> 215

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 373

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Gly Thr Ser
 20 25 30

Ile His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
 35 40 45

Tyr Tyr Ala Ser Glu Ser Ile Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Asn Ser Trp Pro Thr
 85 90 95

Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
 100 105 110

Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
 115 120 125

Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu
 130 135 140

Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser
 145 150 155 160

Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
 165 170 175

Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
 180 185 190

23791WOPCTSEQ

Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys
 195 200 205

Ser Phe Asn Arg Gly Glu Cys
 210 215

<210> 374
 <211> 708
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 374
 atgtccgtgc ccaccaggt gctgggactg ctgctgctgt ggctgaccga cgccaggtgc 60
 gacatccagc tgaccagag ccctagcttt ctgagcgcta gcgtagggcga cagggtgacc 120
 atcacctgta gggccagcca gagcatcggc acctccatcc actggtacca gcagaagccc 180
 ggcaaggccc ccaagctgct gatctactac gcctccgaga gcatcagcgg cgtgcctagc 240
 agatttagcg gcagcggcag cggcaccgaa tttaccctga ccattctccag cctgcagccc 300
 gaggacttcg ccacctacta ctgccagcag agcaacagct ggcccaccta caccttcggc 360
 ggcggaacca aggtggagat taagcgtacg gtggctgccc cctccgtggt catcttcccc 420
 cccagcgatg agcagctgaa gagcggcaca gccagcgtgg tgtgcctgct gaacaacttc 480
 taccacaggg aggccaaggt gcagtggaa gtggacaacg ccctgcagag cggcaacagc 540
 caggagtccg tgaccgagca ggacagcaag gacagcacct acagcctgag cagcacactg 600
 accctgagca aggccgacta cgagaagcac aaggtgtacg cctgcgaggt gacccatcag 660
 ggcctgagca gcccctgac caagagcttc aacaggggag agtgctga 708

<210> 375
 <211> 215
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 375
 Asp Ile Gln Leu Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Gly Thr Ser
 20 25 30

Ile His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
 35 40 45

Tyr Tyr Ala Ser Glu Ser Ile Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

23791WOPCTSEQ

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Asn Ser Trp Pro Thr
85 90 95

Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
100 105 110

Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
115 120 125

Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu
130 135 140

Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser
145 150 155 160

Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
165 170 175

Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
180 185 190

Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys
195 200 205

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 376

<211> 1401

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 376

atggagtggg cctgggtggt tctcttcttc ctgtccgtga ccaccggcgt gcacagccaa 60

gtgcagctgg tccagagcgg cgctgaggtg aagaagcccg gagccagcgt caaggtgagc 120

tgcaaggcca gcggctttaa catcaggac tactacatgc actgggtgag acaggctcct 180

ggccagggcc tggagtggat gggctggatc gaccccgta acggcgacac agaatacgt 240

cagaagtcc agggcagggt gaccatgacc gccgatacca gcaccagcac cgtctacatg 300

gagctgagct ccctcagatc cgaggacacc gccgtgtact actgcaactt ctatgacgga 360

tacctcttg cttttgggg ccaggaacc ctggtcaccg tgagctccgc cagcaccaag 420

ggaccctccg tcttccccct ggctcctagc agcaagagca cctccggcgg aacagctgcc 480

ctgggatgtc tcgtgaagga ttactttccc gagcctgtca ccgtgtcctg gaacagcgga 540

23791WOPCTSEQ

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gccctgacca gcggcgtgca tacattcccc gccgtgctgc agagcagcgg actgtactcc      600
ctgtcctccg tggtgacagt gccttcctcc agcctgggca cccagacctt tatttgcaac      660
gtgaaccaca agcccagcaa caccaaggtg gacaagaagg tggagcccaa gtcctgcgac      720
aaaacacaca cctgccctcc ctgtcctgct cccgaactcc tcggaggccc ttccgtgttc      780
ctgttcccc ccaagcccaa ggacaccctg atgattagca gaacccccga agtgacctgt      840
gtggtggtcg atgtctccca tgaggacccc gaggtcaaat tcaactggta cgtggacggc      900
gtggaggtcc acaatgcaa aaccaagccc agggaggagc agtataacag cacctacagg      960
gtggtgagcg tgctgaccgt gctgcaccag gactggctga acggcaagga gtacaagtgc     1020
aaggtgtcca acaaggccct gcctgcccc attgagaaga ccatctccaa ggccaagggc     1080
cagcctaggg agccccaggt gtacaccctc cctccctcca gggacgagct gaccaagaac     1140
caggtctccc tgacctgcct ggtgaagggc ttttatccca gcgacatcgc cgtggagtgg     1200
gaaagcaacg gccagcccga gaacaattac aagaccaccc ccccgctgct ggacagcgat     1260
ggcagcttct tcctgtacag caagctgaca gtggacaagt ccaggtggca acagggcaat     1320
gtcttctcct gcagcgtgat gcacgaggcc ctgcacaacc actataccca gaaatccctc     1380
agcctgtccc ctggaaagtg a                                           1401

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<210> 377

<211> 447

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 377

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 Phe Asn Ile Glu Asp Tyr
 20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Trp Ile Asp Pro Val Asn Gly Asp Thr Glu Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Asn Phe Tyr Asp Gly Tyr Leu Phe Ala Phe Trp Gly Gln Gly Thr Leu
 100 105 110

23791WOPCTSEQ

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
 115 120 125
 Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
 130 135 140
 Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
 145 150 155 160
 Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
 165 170 175
 Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
 180 185 190
 Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
 195 200 205
 Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His
 210 215 220
 Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
 225 230 235 240
 Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
 245 250 255
 Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
 260 265 270
 Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
 275 280 285
 Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
 290 295 300
 Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
 305 310 315 320
 Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
 325 330 335
 Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
 340 345 350
 Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
 355 360 365
 Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
 370 375 380

23791WOPCTSEQ

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
385 390 395 400

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
405 410 415

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
420 425 430

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
435 440 445

<210> 378

<211> 1392

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 378

atggagtggg	gctgggtggt	cctgttcttc	ctgtccgtga	ccaccggcgt	gcacagccag	60
gtgcagctgg	tgacagagcg	cgctgaggtg	aagaaacccg	gcccagcgt	gaaggtgagc	120
tgcaaggcca	gcggcttcaa	catcgaggac	tactacatgc	actgggtgag	gcaggcccct	180
ggacagggac	tggagtggat	gggctggatc	gaccccgtag	acggcgacac	cgagtacgcc	240
cagaagtcc	agggcaggg	gaccatgacc	gccgacacca	gcaccagcac	cgtgtacatg	300
gagctgagca	gcctgaggag	cgaggacacc	gccgtgtact	actgcaactt	ctacgacggc	360
tacctgttcg	ccttctgggg	ccagggcacc	ctgggtgacag	tgagcagcgc	tagcaccaaa	420
ggcccctccg	tgcttctctt	ggccccctgc	agcagaagca	ccagcgagag	cacagccgct	480
ctgggctgcc	tgggtcaagga	ctacttcccc	gagcccgtga	cagtgtgagctg	gaatagcggc	540
gccctgacat	ccggcgtgca	taccttcctt	gccgtgctgc	aaagctccgg	cctgtattcc	600
ctgtcctccg	tgggtgacagt	gcccagcagc	tccctgggaa	ccaagacctt	cacctgcaac	660
gtggaccaca	aaccagcaa	caccaaggtg	gacaagaggg	tggaaagcaa	gtacggccct	720
ccttgccctc	ctgtcctgc	tcccagattc	ctgggaggcc	ccagcgtggt	cctgttcccc	780
cctaagccca	aggacaccct	catgatctcc	aggacccccg	aggtgacctg	cgtggtggtg	840
gatgtgagcc	aggaagaccc	ggaggtgcag	ttcaactggt	acgtggacgg	cgtggaggtg	900
cacaacgcca	agaccaagcc	cagggaggag	cagttcaaca	gcacctacag	ggtggtgtcc	960
gtcctgaccg	tgctgcacca	ggactggctg	aacggcaaag	agtacaagtg	caaggtgagc	1020
aacaagggcc	tgcccagctc	catcgagaag	acaatctcca	aggccaaggg	ccagcccagg	1080
gaacctcagg	tgtataccct	gcctcccagc	caggaggaga	tgaccaagaa	tcaggtgagc	1140
ctgacctgcc	tgggtgaaag	attctacccc	agcgatatcg	ccgtggagtg	ggagagcaat	1200

23791WOPCTSEQ

ggccagcccg agaacaacta caagaccaca ccccccgtcc tcgactccga tggctccttt 1260
 ttctgtatt ccaggctcac cgtggacaag tccaggtggc aggaaggcaa cgtgttttagc 1320
 tgcagcgtga tgcacgaggc tctgcacaac cactatacac agaagagcct ctccctgtcc 1380
 ctcggcaagt ga 1392

<210> 379

<211> 444

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 379

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 Phe Asn Ile Glu Asp Tyr
 20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Trp Ile Asp Pro Val Asn Gly Asp Thr Glu Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Ser Thr Ala Asp Thr Ser Ile Ser Thr Ala Tyr
 65 70 75 80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Val Val Tyr Tyr Cys
 85 90 95

Ala Arg Tyr Asp Gly Tyr Leu Phe Ala Phe Trp Gly Gln Gly Thr Leu
 100 105 110

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
 115 120 125

Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys
 130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
 145 150 155 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
 165 170 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
 180 185 190

Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn
 Page 393

23791WOPCTSEQ

195 200 205
 Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro
 210 215 220
 Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe
 225 230 235 240
 Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 245 250 255
 Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe
 260 265 270
 Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 275 280 285
 Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 290 295 300
 Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 305 310 315
 Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala
 325 330 335
 Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln
 340 345 350
 Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 355 360 365
 Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 370 375 380
 Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 385 390 395 400
 Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu
 405 410 415
 Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 420 425 430
 Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440

<210> 380

<211> 1392

<212> DNA

<213> Artificial Sequence

23791WOPCTSEQ

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 380

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atggagtggt cctgggtggt cctgttcttt ctgagcgtga ccaccggcgt gcactcccag      60
gtgcagctgg tgcagagcgg agctgaggtg aagaagcccg gcgccagcgt gaaggtgagc      120
tgcaaggcca gcggttcaa catcaggagc tactacatgc actgggtgag acaggctcct      180
ggccagggac tggagtggat gggctggatc gaccccgtag acggcgacac cgagtacgcc      240
cagaagtttc agggcaggtg gaccagcacc gccgatacca gcatcagcac cgcctacatg      300
gagctgagca ggctgaggag cgatgacacc gtggtgtact actgcgctcg ttacgacggc      360
tacctgttcg ctttctgggg ccagggcaca ctggtgaccg tgagcagcgc tagcaccaaa      420
ggcccctccg tgtttctctt ggccccctgc agcagaagca ccagcgagag cacagccgct      480
ctgggctgcc tgggtcaagga ctacttcccc gagcccgtga cagttagctg gaatagcggc      540
gccctgacat ccggcgtgca taccttcctt gccgtgctgc aaagctccgg cctgtattcc      600
ctgtcctccg tggtgacagt gcccagcagc tccctgggaa ccaagacctt cacctgcaac      660
gtggaccaca aaccagcaa caccaaggtg gacaagaggg tggaaagcaa gtacggccct      720
ccttgccctc cttgtcctgc tcccagattc ctgggaggcc ccagcgtgtt cctgttcccc      780
cctaagccca aggacaccct catgatctcc aggacccccg aggtgacctg cgtggtggtg      840
gatgtgagcc aggaagacct ggaggtgcag ttcaactggt acgtggacgg cgtggaggtg      900
cacaacgcca agaccaagcc cagggaggag cagttcaaca gcacctacag ggtggtgtcc      960
gtcctgaccg tgctgcacca ggactggctg aacggcaaag agtacaagtg caaggtgagc     1020
aacaagggcc tgcccagctc catcgagaag acaatctcca aggccaaggg ccagcccagg     1080
gaacctcagg tgtataccct gcctcccagc caggaggaga tgaccaagaa tcaggtgagc     1140
ctgacctgcc tggtgaaagg attctacccc agcgatatcg ccgtggagtg ggagagcaat     1200
ggccagcccc agaacaacta caagaccaca cccccgtcc tcgactccga tggctccttt     1260
ttcctgtatt ccaggctcac cgtggacaag tccaggtggc aggaaggcaa cgtgttttagc     1320
tgcagcgtga tgcacgaggc tctgcacaac cactatacac agaagagcct ctccctgtcc     1380
ctcggcaagt ga                                           1392

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<210> 381

<211> 444

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 381

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Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1           5           10          15

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23791WOPCTSEQ

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Phe Asn Ile Glu Asp Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asp Pro Val Asn Gly Asp Thr Glu Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ser Thr Ala Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Val Val Tyr Tyr Cys
85 90 95

Ala Arg Tyr Asp Gly Tyr Leu Phe Ala Phe Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
115 120 125

Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys
130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145 150 155 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
165 170 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
180 185 190

Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn
195 200 205

Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro
210 215 220

Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe
225 230 235 240

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
245 250 255

Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe
260 265 270

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
275 280 285

23791WOPCTSEQ

Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
290 295 300

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
305 310 315 320

Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala
325 330 335

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln
340 345 350

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
355 360 365

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
370 375 380

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
385 390 395 400

Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu
405 410 415

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
420 425 430

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
435 440

<210> 382

<211> 1392

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 382

atggagtggg cctgggtggt cctgttcttt ctgagcgtga ccaccggcgt gcactcccag	60
gtgcagctgg tgcagagcgg agctgaggtg aagaagcccg ggcgcagcgt gaaggtgagc	120
tgcaaggcca gcggcttcaa catcaggac tactacatgc actgggtgag acaggctcct	180
ggccagggac tggagtggat gggctggatc gaccccgtag acggcgacac cgagtacgcc	240
cagaagtttc agggcagggg gaccagcacc gccgatacca gcatcagcac cgcctacatg	300
gagctgagca ggctgaggag cgatgacacc gtggtgtact actgcaactt ctacgacggc	360
tacctgttcg ctttctgggg ccagggcaca ctggtgaccg tgagcagcgc tagcaccaaa	420
ggcccctccg tgtttctctt ggcccctgc agcagaagca ccagcgagag cacagccgct	480
ctgggctgcc tgggtcaagga ctacttcccc gagcccgtga cagttagctg gaatagcggc	540

23791WOPCTSEQ

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gccctgacat ccggcgtgca taccttcct gccgtgctgc aaagctccgg cctgtattcc      600
ctgtcctccg tggtagacgt gcccagcagc tccctgggaa ccaagaccta cacctgcaac      660
gtggaccaca aaccagcaa caccaaggtg gacaagaggg tggaaagcaa gtacggccct      720
ccttgccctc cttgtcctgc tcccagattc ctgggaggcc ccagcgtgtt cctgttcccc      780
cctaagccca aggacaccct catgatctcc aggacccccg aggtgacctg cgtggtggtg      840
gatgtgagcc aggaagaccc ggaggtgcag ttcaactggt acgtggacgg cgtggaggtg      900
cacaacgcca agaccaagcc cagggaggag cagttcaaca gcacctacag ggtggtgtcc      960
gtcctgaccg tgctgcacca ggactggctg aacggcaaag agtacaagtg caaggtgagc     1020
aacaagggcc tgcccagctc catcgagaag acaatctcca aggccaaggg ccagcccagg     1080
gaacctcagg tgtataccct gcctcccagc caggaggaga tgaccaagaa tcaggtgagc     1140
ctgacctgcc tggtgaaagg attctacccc agcgatatcg ccgtggagtg ggagagcaat     1200
ggccagcccc agaacaacta caagaccaca cccccgtcc tcgactccga tggctccttt     1260
ttcctgtatt ccaggctcac cgtggacaag tccaggtggc aggaaggcaa cgtgttttagc     1320
tgcagcgtga tgcacgaggc tctgcacaac cactatacac agaagagcct ctccctgtcc     1380
ctcggcaagt ga                                                             1392

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<210> 383

<211> 444

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 383

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Phe Asn Ile Glu Asp Tyr
 20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Trp Ile Asp Pro Val Asn Gly Asp Thr Glu Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Ser Thr Ala Asp Thr Ser Ile Ser Thr Ala Tyr
 65 70 75 80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Val Val Tyr Tyr Cys
 85 90 95

Asn Phe Tyr Asp Gly Tyr Leu Phe Ala Phe Trp Gly Gln Gly Thr Leu
 100 105 110

23791WOPCTSEQ

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
115 120 125

Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys
130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145 150 155 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
165 170 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
180 185 190

Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn
195 200 205

Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro
210 215 220

Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe
225 230 235 240

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
245 250 255

Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe
260 265 270

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
275 280 285

Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
290 295 300

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
305 310 315 320

Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala
325 330 335

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln
340 345 350

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
355 360 365

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
370 375 380

23791WOPCTSEQ

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
385 390 395 400

Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu
405 410 415

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
420 425 430

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
435 440

<210> 384

<211> 1392

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 384

atggagtgga gctgggtggt cctgttcttc ctgagcgtga ccaccggcgt gcacagccag	60
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tgcaaggtga gcggcttcaa catcaggac tactacatgc actgggtgag gcaggctcct	180
ggcaagggcc tggagtggat gggctggatc gaccccgta acggcgacac cgagtacgcc	240
cagaagttcc agggcagggg gaccatgacc gccgacacca gcaccgacac cgcctacatg	300
gagctgagct ccctgaggag cgaggacacc gccgtgtact actgcgtac ctacgacggc	360
tacctgttcg ctttctgggg ccagggcacc ctggtgacag tgtccagcgc tagcaccaaa	420
ggccccctccg tgtttctctt ggccccctgc agcagaagca ccagcgagag cacagccgct	480
ctgggctgcc tgggtcaagga ctacttcccc gagcccgtga cagtgagctg gaatagcggc	540
gccctgacat ccggcgtgca taccttcctt gccgtgtctg aaagctccgg cctgtattcc	600
ctgtcctccg tggtgacagt gccagcagc tccctgggaa ccaagacctt cacctgcaac	660
gtggaccaca aaccagcaa caccaaggtg gacaagaggg tggaaagcaa gtacggccct	720
ccttgccctc cttgtcctgc tcccagattc ctgggaggcc ccagcgtgtt cctgttcccc	780
cctaagccca aggacacctt catgatctcc aggacccccg aggtgacctg cgtggtggtg	840
gatgtgagcc aggaagacct ggaggtgcag ttcaactggt acgtggacgg cgtggaggtg	900
cacaacgcca agaccaagcc caggaggag cagttcaaca gcacctacag ggtggtgtcc	960
gtcctgaccg tgctgcacca ggactggctg aacggcaaag agtacaagtg caaggtgagc	1020
aacaagggcc tgcccagctc catcgagaag acaatctcca aggccaaggg ccagcccagg	1080
gaacctcagg tgtataccct gcctcccagc caggaggaga tgaccaagaa tcaggtgagc	1140
ctgacctgcc tggtgaaagg attctacccc agcgatatcg ccgtggagtg ggagagcaat	1200
ggccagcccg agaacaacta caagaccaca cccccgtcc tcgactccga tggctccttt	1260

23791WOPCTSEQ

ttcctgtatt ccaggctcac cgtggacaag tccaggtggc aggaaggcaa cgtgttttagc 1320
 tgcagcgtga tgcacgaggc tctgcacaac cactatacac agaagagcct ctccctgtcc 1380
 ctcggcaagt ga 1392

<210> 385
 <211> 444
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 385
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15

Ser Val Lys Val Ser Cys Lys Val Ser Gly Phe Asn Ile Glu Asp Tyr
 20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Met
 35 40 45

Gly Trp Ile Asp Pro Val Asn Gly Asp Thr Glu Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Asp Thr Ala Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Thr Tyr Asp Gly Tyr Leu Phe Ala Phe Trp Gly Gln Gly Thr Leu
 100 105 110

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
 115 120 125

Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys
 130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
 145 150 155 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
 165 170 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
 180 185 190

Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn
 195 200 205

23791WOPCTSEQ

Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro
 210 215 220

Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe
 225 230 235 240

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 245 250 255

Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe
 260 265 270

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 275 280 285

Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 290 295 300

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 305 310 315 320

Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala
 325 330 335

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln
 340 345 350

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 355 360 365

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 370 375 380

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 385 390 395 400

Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu
 405 410 415

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 420 425 430

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440

<210> 386

<211> 1392

<212> DNA

<213> Artificial Sequence

<220>

23791WOPCTSEQ

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 386

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gtgcagctgg tgcagagcgg agccgaggtg aagaagcctg gcgccagcgt gaaggtgagc      120
tgcaaggtga gcggttcaa catcgaggac tactacatgc actgggtgag gcaggctcct      180
ggcaagggcc tggagtggat gggctggatc gaccccgatga acggcgacac cgagtacgcc      240
cagaagttcc agggcagggg gaccatgacc gccgacacca gcaccgacac cgcctacatg      300
gagctgagct ccctgaggag cgaggacacc gccgtgtact actgcaactt ctacgacggc      360
tacctgttcg ctttctgggg ccagggcacc ctggtgacag tgtccagcgc tagcaccaaa      420
ggccccctcc tgtttctctt ggccccctgc agcagaagca ccagcgagag cacagccgct      480
ctgggctgcc tgggtcaagga ctacttcccc gagcccgtga cagtgtgagtg gaatagcggc      540
gccctgacat ccggcgtgca taccttcctt gccgtgtctg aaagctccgg cctgtattcc      600
ctgtcctccg tgggtgacagt gccagcagc tccctgggaa ccaagaccta cacctgcaac      660
gtggaccaca aaccagcaa caccaaggtg gacaagaggg tggaaagcaa gtacggccct      720
ccttgccctc cttgtcctgc tcccagattc ctgggaggcc ccagcgtgtt cctgttcccc      780
cctaagccca aggacaccct catgatctcc aggacccccg aggtgacctg cgtggtggtg      840
gatgtgagcc aggaagacct ggaggtgcag ttcaactggt acgtggacgg cgtggaggtg      900
cacaacgcca agaccaagcc caggaggagc cagttcaaca gcacctacag ggtggtgtcc      960
gtcctgaccg tgctgcacca ggactggctg aacggcaaag agtacaagtg caaggtgagc     1020
aacaagggcc tgcccagctc catcgagaag acaatctcca aggccaaagg ccagcccagg     1080
gaacctcagg tgtataccct gcctcccagc caggaggaga tgaccaagaa tcaggtgagc     1140
ctgacctgcc tggtgaaagg attctacccc agcgatatcg ccgtggagtg ggagagcaat     1200
ggccagcccc agaacaacta caagaccaca cccccgtcc tcgactccga tggctccttt     1260
ttcctgtatt ccaggctcac cgtggacaag tccaggtggc aggaaggcaa cgtgttttagc     1320
tgacgcgtga tgcacaggc tctgcacaac cactatacac agaagagcct ctccctgtcc     1380
ctcggcaagt ga                                     1392

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<210> 387

<211> 444

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 387

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Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1           5           10          15

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Ser Val Lys Val Ser Cys Lys Val Ser Gly Phe Asn Ile Glu Asp Tyr

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23791WOPCTSEQ
25

20

30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asp Pro Val Asn Gly Asp Thr Glu Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Asp 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

Asn Phe Tyr Asp Gly Tyr Leu Phe Ala Phe Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
115 120 125

Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys
130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145 150 155 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
165 170 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
180 185 190

Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn
195 200 205

Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro
210 215 220

Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe
225 230 235 240

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
245 250 255

Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe
260 265 270

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
275 280 285

Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr

23791WOPCTSEQ

290

295

300

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 305 310 315 320

Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala
 325 330 335

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln
 340 345 350

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 355 360 365

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 370 375 380

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 385 390 395 400

Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu
 405 410 415

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 420 425 430

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440

<210> 388

<211> 1386

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 388

atggagtgga gctgggtggt cctgttcttc ctgagcgtga ccaccggcgt gcacagccag 60

gtgcagctgg tgacagacgg cgctgaggtg aagaaacccg gcgccagcgt gaaggtgagc 120

tgcaaggcca gcggcttcaa catcgaggac tactacatgc actgggtcag acaggcccct 180

ggccagagac tggagtggat gggctggatc gaccctgtga atggcgacac cgagtacagc 240

cagaagttcc agggcagggt gaccatcaca gccgacacca gcgccagcac cgcctacatg 300

gagctgagca gcctgaggag cgaggacacc gccgtgtact actgtgctcg ttacgacggc 360

tacctgttcg ctttctgggg ccagggcacc ctggtgacag tgagcagcac caaaggcccc 420

tccgtgtttc ctctggcccc ctgcagcaga agcaccagcg agagcacagc cgctctgggc 480

tgcttggtca aggactactt ccccagccc gtgacagtga gctggaatag cggcgccctg 540

acatccggcg tgcatacctt ccctgccgtg ctgcaaagct cgggcctgta ttccctgtcc 600

23791WOPCTSEQ

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tccgtggtga cagtgtccag cagctccctg ggaaccaaga cctacacctg caacgtggac      660
caciaaaccca gcaacaccaa ggtggacaag aggggtggaaa gcaagtacgg ccctccttgc      720
ccctccttgtc ctgtctccga gttcctggga ggccccagcg tggttcctggt cccccctaag      780
cccaaggaca ccctcatgat ctccaggacc cccgaggtga cctgcgtggt ggtggatgtg      840
agccaggaag acccgagggt gcagttcaac tggtagctgg acggcggtga ggtgcacaac      900
gccaagacca agcccagga ggagcagttc aacagcacct acagggtggt gtccgtcctg      960
accgtgctgc accaggactg gctgaacggc aaagagtaca agtgcaaggt gagcaacaag     1020
ggcctgcca gctccatcga gaagacaatc tccaaggcca agggccagcc cagggaaacct     1080
caggtgtata ccctgcctcc cagccaggag gagatgacca agaatacagg gagcctgacc     1140
tgcttggtga aaggattcta cccagcgat atcgccgtgg agtgggagag caatggccag     1200
cccgagaaca actacaagac cacaccccc gtcctcgact ccgatggctc ctttttcctg     1260
tattccaggc tcaccgtgga caagtccagg tggcaggaag gcaacgtgtt tagctgcagc     1320
gtgatgcacg aggctctgca caaccactat acacagaaga gcctctcct gtccctcggc     1380
aagtga                                           1386

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<210> 389

<211> 444

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 389

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 Phe Asn Ile Glu Asp Tyr
 20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Arg Leu Glu Trp Met
 35 40 45

Gly Trp Ile Asp Pro Val Asn Gly Asp Thr Glu Tyr Ser Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Thr Ser Ala Ser Thr Ala Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Tyr Asp Gly Tyr Leu Phe Ala Phe Trp Gly Gln Gly Thr Leu
 100 105 110

23791WOPCTSEQ

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
115 120 125

Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys
130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145 150 155 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
165 170 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
180 185 190

Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn
195 200 205

Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro
210 215 220

Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe
225 230 235 240

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
245 250 255

Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe
260 265 270

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
275 280 285

Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
290 295 300

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
305 310 315 320

Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala
325 330 335

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln
340 345 350

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
355 360 365

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
370 375 380

23791WOPCTSEQ

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
385 390 395 400

Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu
405 410 415

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
420 425 430

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
435 440

<210> 390

<211> 1392

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 390

atggagtgga gctgggtggt cctgttcttc ctgagcgtga ccaccggcgt gcacagccag	60
gtgcagctgg tgcagagcgg cgctgaggtg aagaaacccg gcgccagcgt gaaggtgagc	120
tgcaaggcca gcggcttcaa catcgaggac tactacatgc actgggtcag acaggcccct	180
ggccagagac tggagtggat gggctggatc gaccctgtga atggcgacac cgagtacagc	240
cagaagtcc agggcagggt gaccatcaca gccgacacca gcgccagcac cgcctacatg	300
gagctgagca gcctgaggag cgaggacacc gccgtgtact actgtaactt ctacgacggc	360
tacctgttcg ctttctgggg ccagggcacc ctggtgacag tgagcagcgc tagcaccaaa	420
ggccccctcc tgtttctctt ggccccctgc agcagaagca ccagcgagag cacagccgct	480
ctgggctgcc tgggtcaagga ctacttcccc gagcccgtga cagtgagctg gaatagcggc	540
gccctgacat ccggcgtgca taccttccct gccgtgctgc aaagctccgg cctgtattcc	600
ctgtcctccg tggtgacagt gcccagcagc tccctgggaa ccaagacctt cacctgcaac	660
gtggaccaca aaccagcaa caccaagggt gacaagaggg tggaaagcaa gtacggccct	720
ccttgccctc cttgtcctgc tcccagattc ctgggaggcc ccagcgtgtt cctgttcccc	780
cctaagccca aggacaccct catgatctcc aggacccccg aggtgacctg cgtggtggtg	840
gatgtgagcc aggaagacct ggaggtgcag ttcaactggt acgtggacgg cgtggaggtg	900
cacaacgcca agaccaagcc caggaggag cagttcaaca gcacctacag ggtggtgtcc	960
gtcctgaccg tgctgcacca ggactggctg aacggcaaag agtacaagtg caaggtgagc	1020
aacaagggcc tgcccagctc catcgagaag acaatctcca aggccaaggg ccagcccagg	1080
gaacctcagg tgtataccct gcctcccagc caggaggaga tgaccaagaa tcaggtgagc	1140
ctgacctgcc tggtgaaagg attctacccc agcgatatcg ccgtggagtg ggagagcaat	1200
ggccagcccc agaacaacta caagaccaca cccccgtcc tcgactccga tggctccttt	1260

23791WOPCTSEQ

ttcctgtatt ccaggctcac cgtggacaag tccaggtggc aggaaggcaa cgtgttttagc 1320
 tgcagcgtga tgcacgaggc tctgcacaac cactatacac agaagagcct ctccctgtcc 1380
 ctcggcaagt ga 1392

<210> 391
 <211> 444
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 391
 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 Phe Asn Ile Glu Asp Tyr
 20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Arg Leu Glu Trp Met
 35 40 45

Gly Trp Ile Asp Pro Val Asn Gly Asp Thr Glu Tyr Ser Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Thr Ser Ala Ser Thr Ala Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Asn Phe Tyr Asp Gly Tyr Leu Phe Ala Phe Trp Gly Gln Gly Thr Leu
 100 105 110

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
 115 120 125

Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys
 130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
 145 150 155 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
 165 170 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
 180 185 190

Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn
 195 200 205

23791WOPCTSEQ

Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro
 210 215 220

Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe
 225 230 235 240

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 245 250 255

Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe
 260 265 270

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 275 280 285

Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 290 295 300

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 305 310 315 320

Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala
 325 330 335

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln
 340 345 350

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 355 360 365

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 370 375 380

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 385 390 395 400

Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu
 405 410 415

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 420 425 430

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440

<210> 392

<211> 1392

<212> DNA

<213> Artificial sequence

<220>

<223> Description of Artificial sequence: Synthetic

23791WOPCTSEQ

polynucleotide

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<400> 392
atggagtgga gctgggtgtt cctgttcttc ctgagcgtga ccaccggcgt gcacagcgag      60
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tgtgccgca gcggttcaa catcgaggac tactacatgc actgggtgag acaggccccc      180
ggcaaaggac tggagtgggt gagctggatc gaccccgta atggcgacac agagtacgcc      240
gacagcgtga agggcagggt caccatcagc gccgacaaca gcaagaacag cctgtacctg      300
cagatgaaca gcctgaggac cgaggatacc gccctgtact actgcgctaa gtacgacggc      360
tacctgttcg ctttctgggg acagggcacc ctggtgaccg tgagcagcgc tagcaccaaa      420
ggccccctcc tgtttctctt ggccccctgc agcagaagca ccagcgagag cacagccgct      480
ctgggctgcc tggtaagga ctacttcccc gagcccgtga cagtgagctg gaatagcggc      540
gccctgacat ccggcgtgca taccttcctt gccgtgctgc aaagctccgg cctgtattcc      600
ctgtcctccg tggtgacagt gccagcagc tccctgggaa ccaagacctt cacctgcaac      660
gtggaccaca aaccagcaa caccaagggtg gacaagaggg tggaaagcaa gtacggccct      720
ccttgccctc cttgtcctgc tcccagattc ctgggaggcc ccagcgtgtt cctgttcccc      780
cctaagccca aggacacctt catgatctcc aggacccccg aggtgacctg cgtggtgggtg      840
gatgtgagcc aggaagacct ggaggtgcag ttcaactggt acgtggacgg cgtggaggtg      900
cacaacgcca agaccaagcc caggaggagc cagttcaaca gcacctacag ggtggtgtcc      960
gtcctgaccg tgctgcacca ggactggctg aacggcaaag agtacaagtg caaggtgagc     1020
aacaagggcc tgcccagctc catcgagaag acaatctcca aggccaaagg ccagcccagg     1080
gaacctcagg tgtataccct gcctcccagc caggaggaga tgaccaagaa tcaggtgagc     1140
ctgacctgcc tggtgaaagg attctacccc agcgatatcg ccgtggagtg ggagagcaat     1200
ggccagcccg agaacaacta caagaccaca cccccgtcc tcgactccga tggctccttt     1260
ttcctgtatt ccaggctcac cgtggacaag tccaggtggc aggaaggcaa cgtgttttagc     1320
tgacgctga tgcacgaggc tctgcacaac cactatacac agaagagcct ctccctgtcc     1380
ctcggcaagt ga                                                                1392

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<210> 393

<211> 444

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 393

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Glu Val Gln Leu Val Glu Ser Gly Gly Val Val Val Gln Pro Gly Gly
1           5           10           15

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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asn Ile Glu Asp Tyr
          20          25          30

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23791WOPCTSEQ

Tyr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Trp Ile Asp Pro Val Asn Gly Asp Thr Glu Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Ala Asp Asn Ser Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Thr Glu Asp Thr Ala Leu Tyr Tyr Cys
 85 90 95
 Ala Lys Tyr Asp Gly Tyr Leu Phe Ala Phe Trp Gly Gln Gly Thr Leu
 100 105 110
 Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
 115 120 125
 Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys
 130 135 140
 Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
 145 150 155 160
 Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
 165 170 175
 Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
 180 185 190
 Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn
 195 200 205
 Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro
 210 215 220
 Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe
 225 230 235 240
 Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 245 250 255
 Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe
 260 265 270
 Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 275 280 285
 Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 290 295 300

23791WOPCTSEQ

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
305 310 315 320

Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala
325 330 335

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln
340 345 350

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
355 360 365

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
370 375 380

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
385 390 395 400

Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu
405 410 415

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
420 425 430

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
435 440

<210> 394
<211> 1392
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 394
atggagtgga gctgggtggt cctgttcttc ctgagcgtga ccaccggcgt gcacagcgag 60
gtgcagctgg tggagagcgg aggagtgggtg gtgcagcctg gcggaagcct gaggctgagc 120
tgtgccgcga gcggcttcaa catcgaggac tactacatgc actgggtgag acaggccccc 180
ggcaaaggac tggagtgggt gagctggatc gaccccgta atggcgacac agagtacgcc 240
gacagcgtga agggcaggtt caccatcagc gccgacaaca gcaagaacag cctgtacctg 300
cagatgaaca gcctgaggac cgaggatacc gccctgtact actgcaactt ctacgacggc 360
tacctgttcg ctttctgggg acagggcacc ctggtgaccg tgagcagcgc tagcaccaaa 420
ggcccctccg tgtttctctt gggcccctgc agcagaagca ccagcgagag cacagccgct 480
ctgggctgcc tgggtcaagga ctacttcccc gagcccgtga cagtgaactg gaatagcggc 540
gccctgacat ccggcgtgca taccttcctt gccgtgctgc aaagctccgg cctgtattcc 600

23791WOPCTSEQ

ctgtcctccg tgggtgacagt gcccagcagc tccctgggaa ccaagaccta cacctgcaac 660
 gtggaccaca aaccagcaa caccaaggtg gacaagaggg tggaaagcaa gtacggccct 720
 ccttgccctc cttgtcctgc tcccagattc ctgggaggcc ccagcgtgtt cctgttcccc 780
 cctaagccca aggacaccct catgatctcc aggacccccg aggtgacctg cgtggtggtg 840
 gatgtgagcc aggaagaccc ggaggtgcag ttcaactggt acgtggacgg cgtggaggtg 900
 cacaacgcca agaccaagcc caggaggag cagttcaaca gcacctacag ggtggtgtcc 960
 gtcctgaccg tgctgcacca ggactggctg aacggcaaag agtacaagtg caaggtgagc 1020
 aacaagggcc tgcccagctc catcgagaag acaatctcca aggccaaggg ccagcccagg 1080
 gaacctcagg tgtataccct gcctcccagc caggaggaga tgaccaagaa tcaggtgagc 1140
 ctgacctgcc tggtgaaagg attctacccc agcgatatcg ccgtggagtg ggagagcaat 1200
 ggccagcccg agaacaacta caagaccaca cccccgtcc tcgactccga tggctccttt 1260
 ttcctgtatt ccaggctcac cgtggacaag tccaggtggc aggaaggcaa cgtgttttagc 1320
 tgcagcgtga tgcacgaggc tctgcacaac cactatacac agaagagcct ctccctgtcc 1380
 ctcggcaagt ga 1392

<210> 395

<211> 444

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 395

Glu Val Gln Leu Val Glu Ser Gly Gly Val Val Val Gln Pro Gly Gly
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asn Ile Glu Asp Tyr
 20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45

Ser Trp Ile Asp Pro Val Asn Gly Asp Thr Glu Tyr Ala Asp Ser Val
 50 55 60

Lys Gly Arg Phe Thr Ile Ser Ala Asp Asn Ser Lys Asn Ser Leu Tyr
 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Thr Glu Asp Thr Ala Leu Tyr Tyr Cys
 85 90 95

Asn Phe Tyr Asp Gly Tyr Leu Phe Ala Phe Trp Gly Gln Gly Thr Leu
 100 105 110

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
 Page 414

23791WOPCTSEQ

115

120

125

Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys
 130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
 145 150 155 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
 165 170 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
 180 185 190

Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn
 195 200 205

Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro
 210 215 220

Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe
 225 230 235 240

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 245 250 255

Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe
 260 265 270

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 275 280 285

Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 290 295 300

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 305 310 315 320

Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala
 325 330 335

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln
 340 345 350

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 355 360 365

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 370 375 380

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 Page 415

23791WOPCTSEQ

385 390 395 400

Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu
405 410 415

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
420 425 430

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
435 440

<210> 396

<211> 1392

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 396

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tgcaaggcga gcggcttcaa catcgaggac tactacatgc actgggtgag acaggccacc      180
ggccaaggcc tggagtggat gggctggatc gaccccgtag acggcgacac cgagtacgcc      240
cagaagttcc agggcagggg gaccatgacc gccaacacca gcatcagcac cgcctacatg      300
gagctgagca gcctgaggag cgaggacacc gccgtgtact actgcgctcg ttacgacggc      360
tacctgtttg ctttctgggg ccagggcacc ctggtgacag tgagctccgc tagcaccaaa      420
ggcccctccg tgtttctctt ggccccctgc agcagaagca ccagcgagag cacagccgct      480
ctgggctgcc tgggtcaagga ctacttcccc gagcccgtga cagtgaactg gaatagcggc      540
gccctgacat ccggcgtgca taccttccct gccgtgctgc aaagctccgg cctgtatttc      600
ctgtcctccg tgggtgacagt gcccagcagc tccctgggaa ccaagacctc cacctgcaac      660
gtggaccaca aaccagcaa caccaaggtg gacaagaggg tggaaagcaa gtacggccct      720
ccttgccctc cttgtcctgc tcccagattc ctgggaggcc ccagcgtgtt cctgttcccc      780
cctaagccca aggacacct catgatctcc aggacccccg aggtgacctg cgtggtggtg      840
gatgtgagcc aggaagacct ggaggtgcag ttcaactggt acgtggacgg cgtggaggtg      900
cacaacgcca agaccaagcc caggaggagg cagttcaaca gcacctacag ggtggtgtcc      960
gtcctgaccg tgctgcacca ggactggctg aacggcaaag agtacaagtg caaggtgagc     1020
aacaagggcc tgcccagctc catcgagaag acaatctcca aggccaaagg ccagcccagg     1080
gaacctcagg tgtataacct gcctcccagc caggaggaga tgaccaagaa tcaggtgagc     1140
ctgacctgcc tggtgaaagg attctacccc agcgatatcg ccgtggagtg ggagagcaat     1200
ggccagcccc agaacaacta caagaccaca cccccgtcc tcgactccga tggctccttt     1260
ttcctgtatt ccaggctcac cgtggacaag tccaggtggc aggaaggcaa cgtgttttagc     1320
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23791WOPCTSEQ

tgcagcgtga tgcacgaggc tctgcacaac cactatacac agaagagcct ctccctgtcc 1380
 ctcggaagt ga 1392

<210> 397
 <211> 444
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 397
 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 Phe Asn Ile Glu Asp Tyr
 20 25 30

Tyr Met His Trp Val Arg Gln Ala Thr Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Trp Ile Asp Pro Val Asn Gly Asp Thr Glu Tyr Ala Gln Lys Phe
 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asn Thr Ser Ile Ser Thr Ala Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Tyr Asp Gly Tyr Leu Phe Ala Phe Trp Gly Gln Gly Thr Leu
 100 105 110

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
 115 120 125

Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys
 130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
 145 150 155 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
 165 170 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
 180 185 190

Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn
 195 200 205

23791WOPCTSEQ

Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro
210 215 220

Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe
225 230 235 240

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
245 250 255

Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe
260 265 270

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
275 280 285

Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
290 295 300

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
305 310 315 320

Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala
325 330 335

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln
340 345 350

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
355 360 365

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
370 375 380

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
385 390 395 400

Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu
405 410 415

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
420 425 430

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
435 440

<210> 398

<211> 1392

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

23791WOPCTSEQ

<400> 398
 atggagtgga gctgggtgtt cctgttcttc ctgagcgtga ccaccggcgt gactcccag 60
 gtgcagctgg tgcaaagcgg cgccgaggtg aagaaacccg gagccagcgt gaaggtgagc 120
 tgcaaggcga gcggcttcaa catcgaggac tactacatgc actgggtgag acaggccacc 180
 ggccaaggcc tggagtggat gggctggatc gaccccgtga acggcgacac cgagtacgcc 240
 cagaagtcc agggcagggt gaccatgacc gccaacacca gcatcagcac cgcctacatg 300
 gagctgagca gcctgaggag cgaggacacc gccgtgtact actgcaactt ctacgacggc 360
 tacctgtttg ctttctgggg ccagggcacc ctggtgacag tgagctccgc tagcaccaaa 420
 ggcccctccg tgtttctctt ggccccctgc agcagaagca ccagcgagag cacagccgct 480
 ctgggctgcc tgggtcaagga ctacttcccc gagcccgtga cagtgagctg gaatagcggc 540
 gccctgacat ccggcgtgca taccttcctt gccgtgtgc aaagctccgg cctgtattcc 600
 ctgtcctccg tggtgacagt gcccagcagc tccctgggaa ccaagacctt cacctgcaac 660
 gtggaccaca aaccagcaa caccaaggtg gacaagaggg tggaaagcaa gtacggccct 720
 ccttgccctc cttgtcctgc tcccagattc ctgggaggcc ccagcgtgtt cctgttcccc 780
 cctaagccca aggacacctt catgatctcc aggacccccg aggtgacctg cgtggtggtg 840
 gatgtgagcc aggaagacct ggaggtgcag ttcaactggt acgtggacgg cgtggaggtg 900
 cacaacgcca agaccaagcc caggaggag cagttcaaca gcacctacag ggtggtgtcc 960
 gtcctgaccg tgctgacca ggactggctg aacggcaaag agtacaagtg caaggtgagc 1020
 aacaagggcc tgcccagctc catcgagaag acaatctcca aggccaaagg ccagcccagg 1080
 gaacctcagg tgtataacct gcctcccagc caggaggaga tgaccaagaa tcaggtgagc 1140
 ctgacctgcc tggtgaaagg attctacccc agcgatatcg ccgtggagtg ggagagcaat 1200
 ggccagcccg agaacaacta caagaccaca cccccgtcc tcgactccga tggctccttt 1260
 ttctgtatt ccaggctcac cgtggacaag tccaggtggc aggaaggcaa cgtgttttagc 1320
 tgcagcgtga tgcacgaggc tctgcacaac cactatacac agaagagcct ctccctgtcc 1380
 ctcggcaagt ga 1392

<210> 399
 <211> 444
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 399
 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 Phe Asn Ile Glu Asp Tyr
 20 25 30

23791WOPCTSEQ

Tyr Met His Trp Val Arg Gln Ala Thr Gly Gln Gly Leu Glu Trp Met
 35 40 45
 Gly Trp Ile Asp Pro Val Asn Gly Asp Thr Glu Tyr Ala Gln Lys Phe
 50 55 60
 Gln Gly Arg Val Thr Met Thr Ala Asn Thr Ser Ile Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Asn Phe Tyr Asp Gly Tyr Leu Phe Ala Phe Trp Gly Gln Gly Thr Leu
 100 105 110
 Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
 115 120 125
 Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys
 130 135 140
 Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
 145 150 155 160
 Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
 165 170 175
 Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
 180 185 190
 Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn
 195 200 205
 Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro
 210 215 220
 Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe
 225 230 235 240
 Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 245 250 255
 Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe
 260 265 270
 Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 275 280 285
 Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 290 295 300

23791WOPCTSEQ

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
305 310 315 320

Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala
325 330 335

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln
340 345 350

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
355 360

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
370 375 380

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
385 390 395 400

Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu
405 410 415

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
420 425 430

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
435 440

<210> 400

<211> 720

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 400

atgagcgtgc ccaccaggt gctgggactg ctgctgctgt ggctgaccga cgccaggtgc 60

gacatcgtga tgaccagac acccctgagc ctgagcgtga cacctggcca gcctgccagc 120

atcagctgca ggagcagca gagcctgctg cacagcgacg gcaacaccta cctgtactgg 180

tacctgcaga agcccgcca gcctcctcag ctgctgatct acaggatgag caacctggcc 240

tccggcgtgc ctgacaggtt cagcggaagc ggcagcggca ccgacttcac cctgaagatc 300

agcagagtgg aggccgagga cgtcggcgtg tactactgca tgcagcacct ggagtacccc 360

ttcaccttcg gcggcggcac caaggtggag atcaagcgta cgggtggctgc cccctccgtg 420

ttcatcttcc cccccagcga tgagcagctg aagagcggca cagccagcgt ggtgtgcctg 480

ctgaacaact tctaccccag ggaggccaag gtgcagtgga aggtggacaa cgccctgcag 540

agcggcaaca gccaggagtc cgtgaccgag caggacagca aggacagcac ctacagcctg 600

agcagcacac tgaccctgag caaggccgac tacgagaagc acaaggtgta cgctgcgag 660

23791WOPCTSEQ

gtgacccatc agggcctgag cagccccgtg accaagagct tcaacagggg cgagtgtga 720

<210> 401
 <211> 219
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 401
 Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Ser Val Thr Pro Gly
 1 5 10 15
 Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
 20 25 30
 Asp Gly Asn Thr Tyr Leu Tyr Trp Tyr Leu Gln Lys Pro Gly Gln Pro
 35 40 45
 Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
 50 55 60
 Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80
 Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
 85 90 95
 Leu Glu Tyr Pro Phe Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105 110
 Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
 115 120 125
 Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
 130 135 140
 Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
 145 150 155 160
 Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
 165 170 175
 Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
 180 185 190
 Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
 195 200 205
 Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 210 215

23791WOPCTSEQ

<210> 402
 <211> 720
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 402
 atgagcgtgc ctaccaggt gctgggcctg ctgctgctgt ggctgaccga cgccaggtgc 60
 gacatcgtga tgaccagac cccctgagc tcccctgtga cactgggcca gcccgctagc 120
 atctcctgca ggagcagca gagcctgctg cacagcgacg gcaacaccta cctgtactgg 180
 ctgcagcaga gacctggcca gcctcccagg ctgctgatct acaggatgag caacctggcc 240
 agcggcgtgc ccgatagatt cagcggcagc ggagccggca ccgacttcac cctgaagatc 300
 agcagagtgg aggccgagga cgtgggcgtg tactactgca tgcagcacct ggagtacccc 360
 ttcaccttcg gcggcggcac caaggtggag atcaagcgta cgggtggctgc cccctccgtg 420
 ttcatcttcc cccccagcga tgagcagctg aagagcggca cagccagcgt ggtgtgcctg 480
 ctgaacaact tctaccccag ggaggccaag gtgcagtgga aggtggacaa cgccctgcag 540
 agcggcaaca gccaggagtc cgtgaccgag caggacagca aggacagcac ctacagcctg 600
 agcagcacac tgaccctgag caaggccgac tacgagaagc acaaggtgta cgcttgcgag 660
 gtgacccatc agggcctgag cagccccgtg accaagagct tcaacagggg cgagtgtgta 720

<210> 403
 <211> 219
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 403
 Asp Ile Val Met Thr Gln Thr Pro Leu Ser Ser Pro Val Thr Leu Gly
 1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
 20 25 30

Asp Gly Asn Thr Tyr Leu Tyr Trp Leu Gln Gln Arg Pro Gly Gln Pro
 35 40 45

Pro Arg Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ala Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
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85

90

95

Leu Glu Tyr Pro Phe Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
 115 120 125

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
 130 135 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
 145 150 155 160

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
 165 170 175

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
 180 185 190

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
 195 200 205

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 210 215

<210> 404

<211> 720

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 404

atgtccgtgc ctaccaggt gctgggcctg ctgctgctgt ggctgaccga cgctaggtgc 60

gagatcgtga tgaccagac cccctgagc ctgagcatca cccctggcga acaggccagc 120

atcagctgca ggagcagcaa ggcctgctg cacagcgacg gcaacaccta cctgtactgg 180

ttcctgcaga aggccaggcc cgtgtccacc ctgctgatct acaggatgtc caacctggcc 240

agcggcgtgc ccgatagatt cagcggctcc ggcagcggca cagacttcac cctgaagatc 300

agcaggggtg aggccgagga cttcggcgtg tactactgca tgcagcacct ggagtaccct 360

ttcaccttcg gcggcggcac caaggtggag atcaagcgta cgggtggctgc cccctccgtg 420

ttcatcttcc cccccagcga tgagcagctg aagagcggca cagccagcgt ggtgtgcctg 480

ctgaacaact tctacccag ggaggccaag gtgcagtgga aggtggacaa cgccctgcag 540

agcggcaaca gccaggagtc cgtgaccgag caggacagca aggacagcac ctacagcctg 600

agcagcacac tgacctgag caaggccgac tacgagaagc acaaggtgta cgcttgcgag 660

gtgacccatc agggcctgag cagccccgtg accaagagct tcaacagggg cgagtgtgta 720

23791WOPCTSEQ

<210> 405
 <211> 219
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 405
 Glu Ile Val Met Thr Gln Thr Pro Leu Ser Leu Ser Ile Thr Pro Gly
 1 5 10 15

Glu Gln Ala Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
 20 25 30

Asp Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Lys Ala Arg Pro Val
 35 40 45

Ser Thr Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Phe Gly Val Tyr Tyr Cys Met Gln His
 85 90 95

Leu Glu Tyr Pro Phe Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
 115 120 125

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
 130 135 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
 145 150 155 160

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
 165 170 175

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
 180 185 190

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
 195 200 205

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 210 215

23791WOPCTSEQ

<210> 406

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 406

Glu 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 Asp Tyr
20 25 30

Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser
115

<210> 407

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 407

Glu 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 Asp Tyr
20 25 30

Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

23791WOPCTSEQ

Lys Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Phe Cys
85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser
115

<210> 408

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 408

Glu 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 Asp Tyr
20 25 30

Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Phe Cys
85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser
115

<210> 409

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 409

23791WOPCTSEQ

Glu 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 Asp Tyr
20 25 30

Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Arg Val Thr Met 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 Phe Cys
85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser
115

<210> 410

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 410

Glu 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 Asp Tyr
20 25 30

Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Arg Val Thr Leu Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Phe Cys
85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

23791WOPCTSEQ

Thr Thr Val Thr Val Ser Ser
115

<210> 411
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 411
Glu 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 Asp Tyr
20 25 30

Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Phe Cys
85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser
115

<210> 412
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 412
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

23791WOPCTSEQ

Gly Trp Ile Ser Ala Tyr Asn Gly Asn Thr Asn Tyr Ala Gln Lys Leu
50 55 60

Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
100 105

<210> 413

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 413

Glu 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 Asp Tyr
20 25 30

Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser
115

<210> 414

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

23791WOPCTSEQ

<400> 414
 Glu 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 Asp Tyr
 20 25 30
 Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45
 Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
 50 55 60
 Lys Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser
 115

<210> 415
 <211> 119
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 415
 Glu 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 Asp Tyr
 20 25 30
 Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45
 Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
 50 55 60
 Lys Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Phe Cys
 85 90 95

23791WOPCTSEQ

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser
115

<210> 416

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 416

Glu 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 Asp Tyr
20 25 30

Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Arg Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser
115

<210> 417

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 417

Glu 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 Asp Tyr
20 25 30

23791WOPCTSEQ

Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Arg Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Phe Cys
85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser
115

<210> 418

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 418

Glu 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 Asp Tyr
20 25 30

Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Arg Val Thr Met Thr Val Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Arg Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Phe Cys
85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser
115

<210> 419

<211> 119

23791WOPCTSEQ

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 419

Glu 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 Asp Tyr
 20 25 30

Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
 50 55 60

Lys Gly Arg Val Thr Met Thr Val Asp Thr Ser Ile Ser Thr Ala Tyr
 65 70 75 80

Met Glu Leu Arg Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Phe Cys
 85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
 100 105 110

Thr Thr Val Thr Val Ser Ser
 115

<210> 420

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 420

Gly Phe Ile Ile Lys Ala Thr Tyr Met His
 1 5 10

<210> 421

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 421

Arg Ile Asp Pro Ala Asn Gly Glu Thr Lys Tyr Asp Pro Lys Phe Gln
 1 5 10 15

Val

<210> 422
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 422
 Tyr Ala Trp Tyr Phe Asp Val
 1 5

<210> 423
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 423
 Arg Ala Ser Glu Asn Ile Tyr Ser Phe Leu Ala
 1 5 10

<210> 424
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 424
 His Ala Lys Thr Leu Ala Glu
 1 5

<210> 425
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 425
 Gln His Tyr Tyr Gly Ser Pro Leu Thr
 1 5

<210> 426
 <211> 103
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

23791WOPCTSEQ

<400> 426

Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Ser Val Thr Pro Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu His Ser
20 25 30

Asp Gly Lys Thr Tyr Leu Tyr Trp Tyr Leu Gln Lys Pro Gly Gln Pro
35 40 45

Pro Gln Leu Leu Ile Tyr Glu Val Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Phe Gly Gly
85 90 95

Gly Thr Lys Val Glu Ile Lys
100

<210> 427

<211> 111

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 427

Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1 5 10 15

Glu Arg Ala Thr Ile Asn Cys Lys Ala Ser Gln Ser Leu Asp Tyr Glu
20 25 30

Gly Asp Ser Asp Met Asn Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
35 40 45

Lys Leu Leu Ile Tyr Gly Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
65 70 75 80

Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Thr
85 90 95

Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

23791WOPCTSEQ

<210> 428

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 428

Gly Tyr Ile Phe Thr Asp Tyr Ala Met His
1 5 10

<210> 429

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 429

Thr Phe Ile Pro Leu Leu Asp Thr Ser Asp Tyr Asn Gln Asn Phe Lys
1 5 10 15

<210> 430

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 430

Met Gly Val Thr His Ser Tyr Val Met Asp Ala
1 5 10

<210> 431

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 431

Arg Ala Ser Gln Pro Ile Ser Ile Ser Val His
1 5 10

<210> 432

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 432

Phe Ala Ser Gln Ser Ile Ser
1 5

23791WOPCTSEQ

<210> 433
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 433
 Gln Gln Thr Phe Ser Leu Pro Tyr Thr
 1 5

<210> 434
 <211> 119
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 434
 Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Thr
 1 5 10 15

Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
 20 25 30

Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu Glu Trp Ile
 35 40 45

Gly Asp Ile Asn Pro Asn Glu Gly Gly Thr Ile Tyr Ser Gln Lys Phe
 50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Phe
 65 70 75 80

Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Phe Cys
 85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
 100 105 110

Thr Ser Val Thr Val Ser Ser
 115

<210> 435
 <211> 119
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 435

23791WOPCTSEQ

Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Thr
1 5 10 15

Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Asp Ile Asn Pro Asn Phe Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Phe
65 70 75 80

Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Phe Cys
85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

Thr Ser Val Thr Val Ser Ser
115

<210> 436

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 436

Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Thr
1 5 10 15

Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Asp Ile Asn Pro Asn Leu Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Phe
65 70 75 80

Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Phe Cys
85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

23791WOPCTSEQ

Thr Ser Val Thr Val Ser Ser
115

<210> 437
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 437
Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Thr
1 5 10 15

Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Asp Ile Asn Pro Asn Thr Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Phe
65 70 75 80

Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Phe Cys
85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

Thr Ser Val Thr Val Ser Ser
115

<210> 438
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 438
Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Thr
1 5 10 15

Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu Glu Trp Ile
35 40 45

23791WOPCTSEQ

Gly Asp Ile Asn Pro Asn Val Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Phe
65 70 75 80

Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Phe Cys
85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

Thr Ser Val Thr Val Ser Ser
115

<210> 439

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 439

Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Thr
1 5 10 15

Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Phe
65 70 75 80

Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Phe Cys
85 90 95

Ala Arg Asn Tyr Arg Phe Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

Thr Ser Val Thr Val Ser Ser
115

<210> 440

<211> 119

<212> PRT

<213> Artificial Sequence

23791WOPCTSEQ

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 440

Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Thr
1 5 10 15

Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Phe
65 70 75 80

Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Phe Cys
85 90 95

Ala Arg Asn Tyr Arg Ile Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

Thr Ser Val Thr Val Ser Ser
115

<210> 441

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 441

Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Thr
1 5 10 15

Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Phe
65 70 75 80

23791WOPCTSEQ

Met Glu Leu Arg Ser₈₅ Leu Thr Ser Glu Asp₉₀ Thr Ala Val Tyr Phe₉₅ Cys

Ala Arg Asn Tyr₁₀₀ Arg Leu Phe Gly Ala₁₀₅ Met Asp His Trp Gly₁₁₀ Gln Gly

Thr Ser Val₁₁₅ Thr Val Ser Ser

<210> 442

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 442

Glu Val Leu Leu₅ Leu Gln Ser Gly Pro Glu₁₀ Leu Val Lys Pro Gly₁₅ Thr

Ser Val Lys Ile₂₀ Pro Cys Lys Ala Ser₂₅ Gly Tyr Thr Phe Thr₃₀ Asp Tyr

Asn Val Asp₃₅ Trp Val Lys Gln Arg₄₀ His Gly Lys Gly Leu₄₅ Glu Trp Ile

Gly Asp₅₀ Ile Asn Pro Asn₅₅ Gly Gly Thr Ile Tyr₆₀ Ser Gln Lys Phe

Lys Gly Lys Ala Thr Leu₇₀ Thr Val Asp Lys Ser₇₅ Ser Ser Thr Ala Phe₈₀

Met Glu Leu Arg Ser₈₅ Leu Thr Ser Glu Asp₉₀ Thr Ala Val Tyr Phe₉₅ Cys

Ala Arg Asn Tyr₁₀₀ Arg Val Phe Gly Ala₁₀₅ Met Asp His Trp Gly₁₁₀ Gln Gly

Thr Ser Val₁₁₅ Thr Val Ser Ser

<210> 443

<211> 525

<212> PRT

<213> Homo sapiens

<400> 443

Met Trp Glu Ala₅ Gln Phe Leu Gly Leu₁₀ Leu Phe Leu Gln Pro Leu₁₅ Trp

Val Ala Pro Val₂₀ Lys Pro Leu Gln Pro₂₅ Gly Ala Glu Val Pro₃₀ Val Val

23791WOPCTSEQ

Trp Ala Gln Glu Gly Ala Pro Ala Gln Leu Pro Cys Ser Pro Thr Ile
35 40 45

Pro Leu Gln Asp Leu Ser Leu Leu Arg Arg Ala Gly Val Thr Trp Gln
50 55 60

His Gln Pro Asp Ser Gly Pro Pro Ala Ala Ala Pro Gly His Pro Leu
65 70 75 80

Ala Pro Gly Pro His Pro Ala Ala Pro Ser Ser Trp Gly Pro Arg Pro
85 90 95

Arg Arg Tyr Thr Val Leu Ser Val Gly Pro Gly Gly Leu Arg Ser Gly
100 105 110

Arg Leu Pro Leu Gln Pro Arg Val Gln Leu Asp Glu Arg Gly Arg Gln
115 120 125

Arg Gly Asp Phe Ser Leu Trp Leu Arg Pro Ala Arg Arg Ala Asp Ala
130 135 140

Gly Glu Tyr Arg Ala Ala Val His Leu Arg Asp Arg Ala Leu Ser Cys
145 150 155 160

Arg Leu Arg Leu Arg Leu Gly Gln Ala Ser Met Thr Ala Ser Pro Pro
165 170 175

Gly Ser Leu Arg Ala Ser Asp Trp Val Ile Leu Asn Cys Ser Phe Ser
180 185 190

Arg Pro Asp Arg Pro Ala Ser Val His Trp Phe Arg Asn Arg Gly Gln
195 200 205

Gly Arg Val Pro Val Arg Glu Ser Pro His His His Leu Ala Glu Ser
210 215 220

Phe Leu Phe Leu Pro Gln Val Ser Pro Met Asp Ser Gly Pro Trp Gly
225 230 235 240

Cys Ile Leu Thr Tyr Arg Asp Gly Phe Asn Val Ser Ile Met Tyr Asn
245 250 255

Leu Thr Val Leu Gly Leu Glu Pro Pro Thr Pro Leu Thr Val Tyr Ala
260 265 270

Gly Ala Gly Ser Arg Val Gly Leu Pro Cys Arg Leu Pro Ala Gly Val
275 280 285

Gly Thr Arg Ser Phe Leu Thr Ala Lys Trp Thr Pro Pro Gly Gly Gly
290 295 300

23791WOPCTSEQ

Pro Asp Leu Leu Val Thr Gly Asp Asn Gly Asp Phe Thr Leu Arg Leu
305 310 315 320

Glu Asp Val Ser Gln Ala Gln Ala Gly Thr Tyr Thr Cys His Ile His
325 330 335

Leu Gln Glu Gln Gln Leu Asn Ala Thr Val Thr Leu Ala Ile Ile Thr
340 345 350

Val Thr Pro Lys Ser Phe Gly Ser Pro Gly Ser Leu Gly Lys Leu Leu
355 360 365

Cys Glu Val Thr Pro Val Ser Gly Gln Glu Arg Phe Val Trp Ser Ser
370 375 380

Leu Asp Thr Pro Ser Gln Arg Ser Phe Ser Gly Pro Trp Leu Glu Ala
385 390 395 400

Gln Glu Ala Gln Leu Leu Ser Gln Pro Trp Gln Cys Gln Leu Tyr Gln
405 410 415

Gly Glu Arg Leu Leu Gly Ala Ala Val Tyr Phe Thr Glu Leu Ser Ser
420 425 430

Pro Gly Ala Gln Arg Ser Gly Arg Ala Pro Gly Ala Leu Pro Ala Gly
435 440 445

His Leu Leu Leu Phe Leu Ile Leu Gly Val Leu Ser Leu Leu Leu Leu
450 455 460

Val Thr Gly Ala Phe Gly Phe His Leu Trp Arg Arg Gln Trp Arg Pro
465 470 475 480

Arg Arg Phe Ser Ala Leu Glu Gln Gly Ile His Pro Pro Gln Ala Gln
485 490 495

Ser Lys Ile Glu Glu Leu Glu Gln Glu Pro Glu Pro Glu Pro Glu Pro
500 505 510

Glu Pro Glu Pro Glu Pro Glu Pro Glu Pro Glu Gln Leu
515 520 525

<210> 444
<211> 521
<212> PRT
<213> Mus musculus

<400> 444
Met Arg Glu Asp Leu Leu Leu Gly Phe Leu Leu Leu Gly Leu Leu Trp
1 5 10 15

Glu Ala Pro Val Val Ser Ser Gly Pro Gly Lys Glu Leu Pro Val Val
20 25 30

23791WOPCTSEQ

Trp Ala Gln Glu Gly Ala Pro Val His Leu Pro Cys Ser Leu Lys Ser
35 40 45

Pro Asn Leu Asp Pro Asn Phe Leu Arg Arg Gly Gly Val Ile Trp Gln
50 55 60

His Gln Pro Asp Ser Gly Gln Pro Thr Pro Ile Pro Ala Leu Asp Leu
65 70 75 80

His Gln Gly Met Pro Ser Pro Arg Gln Pro Ala Pro Gly Arg Tyr Thr
85 90 95

Val Leu Ser Val Ala Pro Gly Gly Leu Arg Ser Gly Arg Gln Pro Leu
100 105 110

His Pro His Val Gln Leu Glu Glu Arg Gly Leu Gln Arg Gly Asp Phe
115 120 125

Ser Leu Trp Leu Arg Pro Ala Leu Arg Thr Asp Ala Gly Glu Tyr His
130 135 140

Ala Thr Val Arg Leu Pro Asn Arg Ala Leu Ser Cys Ser Leu Arg Leu
145 150 155 160

Arg Val Gly Gln Ala Ser Met Ile Ala Ser Pro Ser Gly Val Leu Lys
165 170 175

Leu Ser Asp Trp Val Leu Leu Asn Cys Ser Phe Ser Arg Pro Asp Arg
180 185 190

Pro Val Ser Val His Trp Phe Gln Gly Gln Asn Arg Val Pro Val Tyr
195 200 205

Asn Ser Pro Arg His Phe Leu Ala Glu Thr Phe Leu Leu Leu Pro Gln
210 215 220

Val Ser Pro Leu Asp Ser Gly Thr Trp Gly Cys Val Leu Thr Tyr Arg
225 230 235 240

Asp Gly Phe Asn Val Ser Ile Thr Tyr Asn Leu Lys Val Leu Gly Leu
245 250 255

Glu Pro Val Ala Pro Leu Thr Val Tyr Ala Ala Glu Gly Ser Arg Val
260 265 270

Glu Leu Pro Cys His Leu Pro Pro Gly Val Gly Thr Pro Ser Leu Leu
275 280 285

Ile Ala Lys Trp Thr Pro Pro Gly Gly Gly Pro Glu Leu Pro Val Ala
290 295 300

23791WOPCTSEQ

Gly Lys Ser Gly Asn Phe Thr Leu His Leu Glu Ala Val Gly Leu Ala
305 310 315 320

Gln Ala Gly Thr Tyr Thr Cys Ser Ile His Leu Gln Gly Gln Gln Leu
325 330 335

Asn Ala Thr Val Thr Leu Ala Val Ile Thr Val Thr Pro Lys Ser Phe
340 345 350

Gly Leu Pro Gly Ser Arg Gly Lys Leu Leu Cys Glu Val Thr Pro Ala
355 360 365

Ser Gly Lys Glu Arg Phe Val Trp Arg Pro Leu Asn Asn Leu Ser Arg
370 375 380

Ser Cys Pro Gly Pro Val Leu Glu Ile Gln Glu Ala Arg Leu Leu Ala
385 390 395 400

Glu Arg Trp Gln Cys Gln Leu Tyr Glu Gly Gln Arg Leu Leu Gly Ala
405 410 415

Thr Val Tyr Ala Ala Glu Ser Ser Ser Gly Ala His Ser Ala Arg Arg
420 425 430

Ile Ser Gly Asp Leu Lys Gly Gly His Leu Val Leu Val Leu Ile Leu
435 440 445

Gly Ala Leu Ser Leu Phe Leu Leu Val Ala Gly Ala Phe Gly Phe His
450 455 460

Trp Trp Arg Lys Gln Leu Leu Leu Arg Arg Phe Ser Ala Leu Glu His
465 470 475 480

Gly Ile Gln Pro Phe Pro Ala Gln Arg Lys Ile Glu Glu Leu Glu Arg
485 490 495

Glu Leu Glu Thr Glu Met Gly Gln Glu Pro Glu Pro Glu Pro Glu Pro
500 505 510

Gln Leu Glu Pro Glu Pro Arg Gln Leu
515 520

<210> 445
<211> 533
<212> PRT
<213> Macaca fascicularis

<220>
<221> MOD_RES
<222> (74)..(74)
<223> Any amino acid

23791WOPCTSEQ

<400> 445

Met Trp Glu Ala Gln Phe Leu Gly Leu Leu Phe Leu Gln Pro Leu Trp
 1 5 10 15
 Val Ala Pro Val Lys Pro Pro Gln Pro Gly Ala Glu Ile Ser Val Val
 20 25 30
 Trp Ala Gln Glu Gly Ala Pro Ala Gln Leu Pro Cys Ser Pro Thr Ile
 35 40 45
 Pro Leu Gln Asp Leu Ser Leu Leu Arg Arg Ala Gly Val Thr Trp Gln
 50 55 60
 His Gln Pro Asp Ser Gly Pro Pro Ala Xaa Ala Pro Gly His Pro Pro
 65 70 75 80
 Val Pro Gly His Arg Pro Ala Ala Pro Tyr Ser Trp Gly Pro Arg Pro
 85 90 95
 Arg Arg Tyr Thr Val Leu Ser Val Gly Pro Gly Gly Leu Arg Ser Gly
 100 105 110
 Arg Leu Pro Leu Gln Pro Arg Val Gln Leu Asp Glu Arg Gly Arg Gln
 115 120 125
 Arg Gly Asp Phe Ser Leu Trp Leu Arg Pro Ala Arg Arg Ala Asp Ala
 130 135 140
 Gly Glu Tyr Arg Ala Thr Val His Leu Arg Asp Arg Ala Leu Ser Cys
 145 150 155 160
 Arg Leu Arg Leu Arg Val Gly Gln Ala Ser Met Thr Ala Ser Pro Pro
 165 170 175
 Gly Ser Leu Arg Thr Ser Asp Trp Val Ile Leu Asn Cys Ser Phe Ser
 180 185 190
 Arg Pro Asp Arg Pro Ala Ser Val His Trp Phe Arg Ser Arg Gly Gln
 195 200 205
 Gly Arg Val Pro Val Gln Gly Ser Pro His His His Leu Ala Glu Ser
 210 215 220
 Phe Leu Phe Leu Pro His Val Gly Pro Met Asp Ser Gly Leu Trp Gly
 225 230 235 240
 Cys Ile Leu Thr Tyr Arg Asp Gly Phe Asn Val Ser Ile Met Tyr Asn
 245 250 255
 Leu Thr Val Leu Gly Leu Glu Pro Ala Thr Pro Leu Thr Val Tyr Ala
 260 265 270

23791WOPCTSEQ

Gly Ala Gly Ser Arg Val Glu Leu Pro Cys Arg Leu Pro Pro Ala Val
 275 280 285
 Gly Thr Gln Ser Phe Leu Thr Ala Lys Trp Ala Pro Pro Gly Gly Gly
 290 295 300
 Pro Asp Leu Leu Val Ala Gly Asp Asn Gly Asp Phe Thr Leu Arg Leu
 305 310 315 320
 Glu Asp Val Ser Gln Ala Gln Ala Gly Thr Tyr Ile Cys His Ile Arg
 325 330 335
 Leu Gln Gly Gln Gln Leu Asn Ala Thr Val Thr Leu Ala Ile Ile Thr
 340 345 350
 Val Thr Pro Lys Ser Phe Gly Ser Pro Gly Ser Leu Gly Lys Leu Leu
 355 360 365
 Cys Glu Val Thr Pro Ala Ser Gly Gln Glu His Phe Val Trp Ser Pro
 370 375 380
 Leu Asn Thr Pro Ser Gln Arg Ser Phe Ser Gly Pro Trp Leu Glu Ala
 385 390 395 400
 Gln Glu Ala Gln Leu Leu Ser Gln Pro Trp Gln Cys Gln Leu His Gln
 405 410 415
 Gly Glu Arg Leu Leu Gly Ala Ala Val Tyr Phe Thr Glu Leu Ser Ser
 420 425 430
 Pro Gly Ala Gln Arg Ser Gly Arg Ala Pro Gly Ala Leu Arg Ala Gly
 435 440 445
 His Leu Pro Leu Phe Leu Ile Leu Gly Val Leu Phe Leu Leu Leu Leu
 450 455 460
 Val Thr Gly Ala Phe Gly Phe His Leu Trp Arg Arg Gln Trp Arg Pro
 465 470 475 480
 Arg Arg Phe Ser Ala Leu Glu Gln Gly Ile His Pro Pro Gln Ala Gln
 485 490 495
 Ser Lys Ile Glu Glu Leu Glu Gln Glu Pro Glu Leu Glu Pro Glu Pro
 500 505 510
 Glu Leu Glu Arg Glu Leu Gly Pro Glu Pro Glu Pro Gly Pro Glu Pro
 515 520 525
 Glu Pro Glu Gln Leu
 530

23791WOPCTSEQ

<210> 446
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<220>
 <221> MOD_RES
 <222> (6)..(6)
 <223> Asp, Asn, Ser or Gln

<220>
 <221> MOD_RES
 <222> (12)..(12)
 <223> Ala or Ser

<220>
 <221> MOD_RES
 <222> (16)..(16)
 <223> Gln or Lys

<220>
 <221> MOD_RES
 <222> (17)..(17)
 <223> Glu or Gly

<400> 446
 Asp Ile Asn Pro Asn Xaa Gly Gly Thr Ile Tyr Xaa Gln Lys Phe Xaa
 1 5 10 15

Xaa

<210> 447
 <211> 441
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 447
 Leu Gln Pro Gly Ala Glu Val Pro Val Val Trp Ala Gln Glu Gly Ala
 1 5 10 15

Pro Ala Gln Leu Pro Cys Ser Pro Thr Ile Pro Leu Gln Asp Leu Ser
 20 25 30

Leu Leu Arg Arg Ala Gly Val Thr Trp Gln His Gln Pro Asp Ser Gly
 35 40 45

Pro Pro Ala Ala Ala Pro Gly His Pro Leu Ala Pro Gly Pro His Pro
 50 55 60

Ala Ala Pro Ser Ser Trp Gly Pro Arg Pro Arg Arg Tyr Thr Val Leu
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23791WOPCTSEQ

65 70 75 80
 Ser Val Gly Pro Gly₈₅ Gly Leu Arg Ser Gly₉₀ Arg Leu Pro Leu Gln₉₅ Pro
 Arg Val Gln₁₀₀ Leu Asp Glu Arg Gly₁₀₅ Arg Gln Arg Gly Asp Phe₁₁₀ Ser Leu
 Trp Leu Arg₁₁₅ Pro Ala Arg Arg Ala₁₂₀ Asp Ala Gly Glu Tyr₁₂₅ Arg Ala Ala
 Val His₁₃₀ Leu Arg Asp Arg Ala₁₃₅ Leu Ser Cys Arg Leu₁₄₀ Arg Leu Arg Leu
 Gly₁₄₅ Gln Ala Ser Met Thr₁₅₀ Ala Ser Pro Pro Gly₁₅₅ Ser Leu Arg Ala Ser₁₆₀
 Asp Trp Val Ile₁₆₅ Leu Asn Cys Ser Phe Ser₁₇₀ Arg Pro Asp Arg Pro₁₇₅ Ala
 Ser Val His₁₈₀ Trp Phe Arg Asn Arg Gly₁₈₅ Gln Gly Arg Val Pro₁₉₀ Val Arg
 Glu Ser Pro₁₉₅ His His His Leu Ala₂₀₀ Glu Ser Phe Leu Phe₂₀₅ Leu Pro Gln
 Val Ser₂₁₀ Pro Met Asp Ser Gly₂₁₅ Pro Trp Gly Cys Ile₂₂₀ Leu Thr Tyr Arg
 Asp₂₂₅ Gly Phe Asn Val Ser₂₃₀ Ile Met Tyr Asn Leu₂₃₅ Thr Val Leu Gly Leu₂₄₀
 Glu Pro Pro Thr₂₄₅ Pro Leu Thr Val Tyr Ala₂₅₀ Gly Ala Gly Ser Arg₂₅₅ Val
 Gly Leu Pro Cys₂₆₀ Arg Leu Pro Ala Gly₂₆₅ Val Gly Thr Arg Ser₂₇₀ Phe Leu
 Thr Ala Lys₂₇₅ Trp Thr Pro Pro Gly₂₈₀ Gly Gly Pro Asp Leu₂₈₅ Leu Val Thr
 Gly Asp₂₉₀ Asn Gly Asp Phe Thr₂₉₅ Leu Arg Leu Glu Asp₃₀₀ Val Ser Gln Ala
 Gln₃₀₅ Ala Gly Thr Tyr Thr₃₁₀ Cys His Ile His Leu₃₁₅ Gln Glu Gln Gln Leu₃₂₀
 Asn Ala Thr Val Thr₃₂₅ Leu Ala Ile Ile Thr₃₃₀ Val Thr Pro Lys Ser₃₃₅ Phe
 Gly Ser Pro Gly Ser Leu Gly Lys Leu Leu Cys Glu Val Thr Pro Val
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340

345

350

Ser Gly Gln Glu Arg Phe Val Trp Ser Ser Leu Asp Thr Pro Ser Gln
355 360 365

Arg Ser Phe Ser Gly Pro Trp Leu Glu Ala Gln Glu Ala Gln Leu Leu
370 375 380

Ser Gln Pro Trp Gln Cys Gln Leu Tyr Gln Gly Glu Arg Leu Leu Gly
385 390 395 400

Ala Ala Val Tyr Phe Thr Glu Leu Ser Ser Pro Gly Ala Gln Arg Ser
405 410 415

Gly Arg Ala Pro Gly Ala Leu Pro Ala Gly His Leu Leu His His His
420 425 430

His His His His His His Gly Gly Gln
435 440

<210> 448

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 448

Glu 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 Asp Tyr
20 25 30

Asn Val Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ser Gln Lys Phe
50 55 60

Lys Gly Arg Val Thr Leu Thr Val Asp Lys Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Arg Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Phe Cys
85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser
115

23791WOPCTSEQ

<210> 449
 <211> 109
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 449
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
 20 25 30
 Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45
 Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
 50 55 60
 Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 100 105

<210> 450
 <211> 111
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 450
 Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Ser Val Thr Pro Gly
 1 5 10 15
 Gln Pro Ala Ser Ile Ser Cys Lys Ala Ser Gln Ser Leu Asp Tyr Glu
 20 25 30
 Gly Asp Ser Asp Met Asn Trp Tyr Leu Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Gln Leu Leu Ile Tyr Gly Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
 65 70 75 80

23791WOPCTSEQ

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Ser Thr
85 90 95

Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 451

<211> 111

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 451

Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Ser Val Thr Pro Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ala Ser Gln Ser Leu Asp Tyr Glu
20 25 30

Gly Asp Ser Asp Met Asn Trp Tyr Leu Gln Lys Pro Gly Gln Pro Pro
35 40 45

Gln Leu Leu Ile Ser Gly Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
65 70 75 80

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Ser Thr
85 90 95

Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 452

<211> 111

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 452

Asp Ile Val Leu Thr Gln Thr Pro Leu Ser Leu Ser Val Thr Pro Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ala Ser Gln Ser Leu Asp Tyr Glu
20 25 30

Gly Asp Ser Asp Met Asn Trp Tyr Leu Gln Lys Pro Gly Gln Pro Pro
35 40 45

23791WOPCTSEQ

Gln Leu Leu Ile Ser Gly Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
65 70 75 80

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Ser Thr
85 90 95

Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 453

<211> 111

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 453

Asp Ile Val Leu Thr Gln Thr Pro Leu Ser Leu Ser Val Thr Pro Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ala Ser Gln Ser Leu Asp Tyr Glu
20 25 30

Gly Asp Ser Asp Met Asn Trp Tyr Leu Gln Lys Pro Gly Gln Pro Pro
35 40 45

Gln Leu Leu Ile Ser Gly Ala Ser Asn Leu Glu Ser Gly Ile Pro Asp
50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser
65 70 75 80

Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Ser Thr
85 90 95

Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 454

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 454

Asp Ile Asn Pro Asn Gly Gly Gly Thr Ile Tyr Ala Gln Lys Phe Gln
1 5 10 15

Glu

<210> 455
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 455
 Asp Ile Asn Pro Asn Gln Gly Gly Thr Ile Tyr Ala Gln Lys Phe Gln
 1 5 10 15

Glu

<210> 456
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 456
 Asp Ile Asn Pro Asn Ser Gly Gly Thr Ile Tyr Ala Gln Lys Phe Gln
 1 5 10 15

Glu

<210> 457
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 457
 Asp Ile Asn Pro Asn Asp Gly Gly Thr Ile Tyr Ala Gln Lys Phe Gln
 1 5 10 15

Glu

<210> 458
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

23791WOPCTSEQ

<400> 458

Asp Ile Asn Pro Asn Asn Gly Gly Thr Ile Tyr Ala Gln Lys Phe Gln
1 5 10 15

Glu

<210> 459

<211> 111

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 459

Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1 5 10 15

Glu Arg Ala Thr Ile Asn Cys Lys Ala Ser Gln Ser Leu Asp Tyr Glu
20 25 30

Gly Asp Ser Asp Met Asn Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
35 40 45

Lys Leu Leu Ile Ser Gly Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
65 70 75 80

Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Thr
85 90 95

Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 460

<211> 111

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 460

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1 5 10 15

Glu Arg Ala Thr Ile Asn Cys Lys Ala Ser Gln Ser Leu Asp Tyr Glu
20 25 30

Gly Asp Ser Asp Met Asn Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
35 40 45

23791WOPCTSEQ

Lys Leu Leu Ile Ser Gly Ala Ser Asn Leu Glu Ser Gly Val Pro Asp
50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
65 70 75 80

Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Thr
85 90 95

Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 461

<211> 111

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 461

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1 5 10 15

Glu Arg Ala Thr Ile Asn Cys Lys Ala Ser Gln Ser Leu Asp Tyr Glu
20 25 30

Gly Asp Ser Asp Met Asn Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
35 40 45

Lys Leu Leu Ile Ser Gly Ala Ser Asn Leu Glu Ser Gly Ile Pro Asp
50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
65 70 75 80

Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln Ser Thr
85 90 95

Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 462

<211> 117

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 462

Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys Pro Gly Thr Ser Val
1 5 10 15

23791WOPCTSEQ

Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr Asn Val
20 25 30
Asp Trp Val Arg Gln Ala Arg Gly Gln Arg Leu Glu Trp Ile Gly Asp
35 40 45
Ile Asn Pro Asn Asp Gly Gly Thr Ile Tyr Ala Gln Lys Phe Gln Glu
50 55 60
Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr Met Glu
65 70 75 80
Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
85 90 95
Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly Thr Thr
100 105 110
Val Thr Val Ser Ser
115

<210> 463

<211> 117

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 463

Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys Pro Gly Thr Ser Val
1 5 10 15

Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr Asn Val
20 25 30

Asp Trp Val Arg Gln Ala Arg Gly Gln Arg Leu Glu Trp Ile Gly Asp
35 40 45

Ile Asn Pro Asn Gly Gly Gly Thr Ile Tyr Ala Gln Lys Phe Gln Glu
50 55 60

Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr Met Glu
65 70 75 80

Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
85 90 95

Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly Thr Thr
100 105 110

Val Thr Val Ser Ser

115

<210> 464
 <211> 119
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic polypeptide

<400> 464
 Glu Val Leu Leu Leu Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Thr
 1 5 10 15

Ser Val Lys Ile Pro Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
 20 25 30

Asn Val Asp Trp Val Lys Gln Arg His Gly Lys Gly Leu Glu Trp Ile
 35 40 45

Gly Asp Ile Asn Pro Asn Gln Gly Gly Thr Ile Tyr Ser Gln Lys Phe
 50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Phe
 65 70 75 80

Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Phe Cys
 85 90 95

Ala Arg Asn Tyr Arg Trp Phe Gly Ala Met Asp His Trp Gly Gln Gly
 100 105 110

Thr Ser Val Thr Val Ser Ser
 115

<210> 465
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 465
 Lys Thr Ser Gln Asn Ile Phe Glu Asn Leu Ala
 1 5 10

<210> 466
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

23791WOPCTSEQ

<400> 466
Asn Ala Ser Pro Leu Gln Ala
1 5

<210> 467
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 467
His Gln Tyr Tyr Ser Gly Tyr Thr
1 5

<210> 468
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 468
Gly Phe Thr Phe Ser Asp Tyr His Met Ala
1 5 10

<210> 469
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 469
Ser Ile Thr Leu Asp Ala Thr Tyr Thr Tyr Tyr Arg Asp Ser Val Arg
1 5 10 15

Gly

<210> 470
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 470
His Arg Gly Phe Ser Val Trp Leu Asp Tyr
1 5 10