

155193_1
SEQUENCE LISTING

<110> Klaubert, Dieter
Meisenheimer, Poncho
Unch, James

<120> NOVEL COELENTERAZINE SUBSTRATES AND METHODS OF USE

<130> 016026-9523-US02

<140> 13/287,992

<141> 2011-11-02

<150> 61/409,422

<151> 2010-11-02

<160> 593

<170> PatentIn version 3.5

<210> 1

<211> 169

<212> PRT

<213> *Oplophorus gracilirostris*

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20 25 30

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

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

Leu Ser Gly Phe Gln Met Gly Leu Ile Glu Met Ile Phe Lys Val Val
65 70 75 80

Tyr Pro Val Asp Asp His His Phe Lys Ile Ile Leu His Tyr Gly Thr
85 90 95

Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg
100 105 110

Pro Tyr Pro Gly Ile Ala Val Phe Asp Gly Lys Gln Ile Thr Val Thr
115 120 125

Gly Thr Leu Trp Asn Gly Asn Lys Ile Tyr Asp Glu Arg Leu Ile Asn
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Trp Arg Leu Cys Glu Asn Ile Leu Ala
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<220>
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 atcatccctt acgagggact cagtggtttt caaatgggtc tgattgaaat gatcttcaa 240
 gttgtttacc cagtggatga tcatcatttc aagattattc tccattatgg tacactcgtt 300
 attgacggtg tgacaccaaa catgattgac tactttggac gcccttacga gggaattgct 360
 gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt 420
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 <213> Artificial Sequence

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

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 Gly Tyr Asn Gln Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
 20 25 30
 Phe Gln Lys Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45
 Ser Gly Glu Asn Gly Leu Lys Phe Asp Ile His Val Ile Ile Pro Tyr
 50 55 60
 Glu Gly Leu Ser Gly Phe Gln Met Gly Leu Ile Glu Met Ile Phe Lys
 65 70 75 80
 Val Val Tyr Pro Val Asp Asp His His Phe Lys Ile Ile Leu His Tyr
 85 90 95
 Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

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Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
 165 170

<210> 4
 <211> 513
 <212> DNA
 <213> Artificial Sequence

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

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 accccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc 180
 atcatccctt acgagggact cagtggtttt caaatgggtc tgattgaaat gatcttcaaa 240
 gttgtttacc cagtggatga tcatcatttc aagattattc accattatgg tacactcgtt 300
 attgacggtg tgacaccaa catgattgac ttctttggac gcccttacga gggaattgct 360
 gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt 420
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 <212> PRT
 <213> Artificial Sequence

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

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 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
 20 25 30

Phe Gln Lys Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45

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Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Gly Phe Gln Met Gly Leu Ile Glu Met Ile Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Ile Ile His His Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Phe Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
165 170

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

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

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acccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc 180
atcatccctt acgagggact cagtggttat caaatgggtc agattgaaaa gatcttcaaa 240
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<210> 7
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<212> PRT
<213> Artificial Sequence

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

polypeptide

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Gly Tyr Asn Leu Asp Gln Leu Leu Glu Gln Gly Gly Leu Ser Ser Leu
 20 25 30

Phe Gln Lys Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Ile Ile Arg His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Phe Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Ile
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
 165 170

<210> 8

<211> 513

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

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acccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc 180

atcatccctt acgagggact cagtggtttt caaatgggtc tgattgaaat gatctacaaa 240

gttgtttacc cagtggatga tcatcatttc aaggttattc tccattatgg tacactcgtt 300

attgacggtg tgacaccaaa catgattgac tactttggac gcccttacga gggaattgct 360

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gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt 420
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 <211> 171
 <212> PRT
 <213> Artificial Sequence

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

<400> 9
 Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Gln Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
 20 25 30

Phe Gln Lys Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Phe Gln Met Gly Leu Ile Glu Met Ile Tyr Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
 165 170

<210> 10
 <211> 513
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

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 accccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc 180
 atcatccctt acgagggact cagtggtttt caaatgggtc tgattgaaat gatctacaaa 240
 gttgtttacc cagtggatga tcatcatttc aaggttattc tccattatgg tacactcgtt 300
 attgacggtg tgacaccaaa catgattgac tactttggac gcccttacga gggaattgct 360
 gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcga caagatcatt 420
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<210> 11

<211> 171

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

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Gly Tyr Asn Gln Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
 20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Phe Gln Met Gly Leu Ile Glu Met Ile Tyr Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asp Lys Ile Ile Asp Glu Arg Leu
 130 135 140

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Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Thr Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
 165 170

<210> 12
 <211> 513
 <212> DNA
 <213> Artificial Sequence

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

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 accccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc 180
 atcatccctt acgagggact cagtggtttt caaatgggtc tgattgaaat gatctacaaa 240
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 gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt 420
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<210> 13
 <211> 171
 <212> PRT
 <213> Artificial Sequence

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

<400> 13
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 1 5 10 15

Gly Tyr Asn Gln Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

Phe Gln Lys Leu Gly Val Ser Ile Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Phe Gln Met Gly Leu Ile Glu Met Ile Tyr Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95
 Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110
 Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125
 Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140
 Ile Asn Pro Asp Gly Ser Ile Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160
 Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
 165 170

<210> 14
 <211> 513
 <212> DNA
 <213> Artificial Sequence

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

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 accccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc 180
 atcatccctt acgagggact cagtggtttt caaatgggtc tgattgaaat gatcttcaaa 240
 gttgtttacc cagtggatga tcatcatttc aaggttattc tccattatgg tacactcgtt 300
 attgacggtg tgacaccaaa catgattgac tactttggac gcccttacga gggaattgct 360
 gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt 420
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 accgatggc gcctttgcga gcgtattctt gcc 513

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 <213> Artificial Sequence

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

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 1 5 10 15

Gly Tyr Asn Gln Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
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20	25	30
Phe Gln Lys Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu		
35	40	45
Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr		
50	55	60
Glu Gly Leu Ser Gly Phe Gln Met Gly Leu Ile Glu Met Ile Phe Lys		
65	70	75
Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr		
85	90	95
Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe		
100	105	110
Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr		
115	120	125
Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu		
130	135	140
Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val		
145	150	155
Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala		
165	170	

<210> 16
 <211> 513
 <212> DNA
 <213> Artificial Sequence

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

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atcatccctt acgagggact cagtgggttat caaatgggtc agattgaaaa gatcttcaaa	240
gttgtttacc cagtggatga tcatcatttc aaggttattc tccattatgg tacactcgtt	300
attgacggtg tgacaccaaa catgattgac tactttggac gcccttacga gggaattgct	360
gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt	420
gatgagcgcc tgatcaaccc agatggttca ctctcttcc gcgttactat caatggagtc	480
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<210> 17
<211> 171
<212> PRT
<213> Artificial Sequence

<220>
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20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
165 170

<210> 18
<211> 513
<212> DNA
<213> Artificial Sequence

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

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accccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc	180
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gttgtttacc cagtggatga tcatcatttc aaggttattc tccattatgg tacactcgtt	300
attgacggtg tgacaccaaa catgattgac tactttggac gcccttacga gggaattgct	360
gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt	420
gatgagcgcc tgatcaaccc agatgggttca ctctcttcc gcgttactat caatggagtc	480
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<210> 19
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 <212> PRT
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<220>
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 20 25 30

Phe Gln Lys Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
 165 170

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<210> 20
 <211> 513
 <212> DNA
 <213> Artificial Sequence

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

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acccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc      180
atcatccctt acgagggact cagtggttat caaatgggtc agattgaaaa gatcttcaaa      240
gttgtttacc cagtggatga tcatcatttc aaggttattc tccattatgg tacactcgtt      300
attgacggtg tgacaccaaa catgattgac tactttggac gcccttacga gggaattgct      360
gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt      420
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<210> 21
 <211> 171
 <212> PRT
 <213> Artificial Sequence

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

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20          25          30

Phe Gln Lys Leu Gly Val Ser Ile Thr Pro Ile Gln Lys Ile Val Leu
35          40          45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50          55          60

Glu Gly Leu Ser Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65          70          75          80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
85          90          95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
100         105         110
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Gly	Arg	Pro	Tyr	Glu	Gly	Ile	Ala	Val	Phe	Asp	Gly	Lys	Lys	Ile	Thr
		115					120					125			
Val	Thr	Gly	Thr	Leu	Trp	Asn	Gly	Asn	Lys	Ile	Ile	Asp	Glu	Arg	Leu
	130					135					140				
Ile	Asn	Pro	Asp	Gly	Ser	Leu	Leu	Phe	Arg	Val	Thr	Ile	Asn	Gly	Val
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				165					170						

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

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

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

<400> 23	
atggtattca cactggagga ttttgtcggg gattggcggc aaaccgctgg gtacaaccag	60
gaccaggttc tcgaacaagg gggcctcagc tccctgtttc aaaaactggg tgtagcgtt	120
acacctattc aaaaaatcgt gctctccggg gaaaacgggc taaaaatcga tattcatgtg	180
attatccctt acgaagggtc ctccgggttt cagatggggc tgatcgaaat gatctttaag	240
gtcgtctatc ccgtagatga tcaccacttc aagggtgatc tccactacgg gaccctcgta	300
attgatggcg tgaccccaa catgatcgac tattttgggc gcccttacga ggggattgct	360
gtcttcgatg gcaaaaaaat tacagtgaca ggcacactct ggaacgggaa taagatcatt	420

155193_1

gatgagcgcc tgattaatcc cgatgggagc ctgctctttc gggtgacaat taacggcgta 480
acaggctggc gcctctgtga acggattctg gcg 513

<210> 24
<211> 513
<212> DNA
<213> Artificial Sequence

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

<400> 24
atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg 60
gaccaagtcc ttgagcaggg cggctctgtcc agtttgtttc agaaactcgg ggtgtccgta 120
acaccgatcc aaaagattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc 180
atcatcccgat atgaaggctt gagcggctat cagatgggcc agatcgaaaa aatttttaag 240
gtggtgtacc ctgtggatga tcatcacttt aagggtgattc tgcactatgg cactctggtg 300
atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgtatga aggcacgcgc 360
gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaattatc 420
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg 480
accggctggc ggctgtgcga gcgattttg gcg 513

<210> 25
<211> 513
<212> DNA
<213> Artificial Sequence

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

<400> 25
atggtattca cactggagga tttgtcggt gattggcggc aaaccgctgg gtacaacctc 60
gaccaggttc tcgaacaagg gggcctcagc tccctgtttc aaaaactggg tgtagcgtt 120
acacctattc aaaaaatcgt gctctccggg gaaaacgggc tcaaaatcga tattcatgtg 180
attatccctt acgaagggtt ctccgggtat cagatggggc agatcgaaaa aatctttaag 240
gtcgtctatc ccgtagatga tcaccacttc aaggatgatc tccactacgg gaccctcgta 300
attgatggcg tgaccccca catgatcgac tattttgggc gcccttacga ggggattgct 360
gtcttcgatg gcaaaaaaat tacagtgaca ggcacactct ggaacgggaa taagatcatt 420
gatgagcgcc tgattaatcc cgatgggagc ctgctctttc gggtgacaat taacggcgta 480
acaggctggc gcctctgtga acggattctg gcg 513

<210> 26
<211> 513
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 26

```

atggtgatta cattggagga tttcgttga gactggcggc agacagctgg atacaacaa      60
gatcaagtgt tagaacaagg aggagtgtct agtctgttcc aaaagctggg agtgtcaatc    120
acccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc    180
atcatccctt acgagggact cagtggtttt caaatgggtc tgattgaaat gatcttcaaa    240
gttgtttacc cagtggatga tcatcatttc aaggttattc tccattatgg tacactcgtt    300
attgacggtg tgacaccaaa catgattgac tactttggac gcccttacga ggaattgct     360
gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt    420
gatgagcgcc tgatcaaccc agatggttca ctctcttcc gcgttactat caatggagtc    480
accgatggc gcctttgcga gcgtattctt gcc                                  513

```

<210> 27

<211> 171

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 27

```

Met Val Ile Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1           5           10           15

```

```

Gly Tyr Asn Gln Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20           25           30

```

```

Phe Gln Lys Leu Gly Val Ser Ile Thr Pro Ile Gln Lys Ile Val Leu
35           40           45

```

```

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50           55           60

```

```

Glu Gly Leu Ser Gly Phe Gln Met Gly Leu Ile Glu Met Ile Phe Lys
65           70           75           80

```

```

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
85           90           95

```

```

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
100          105          110

```

```

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115          120          125

```

```

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu

```


130 135 155193_1 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
 165 170

<210> 28
 <211> 1650
 <212> DNA
 <213> Photinus pyralis

<400> 28
 atggaagatg ccaaaaacat taagaagggc ccagcgccat tctaccact cgaagacggg 60
 accgccggcg agcagctgca caaagccatg aagcgctacg ccctggtgcc cggcaccatc 120
 gcctttaccg acgcacatat cgaggtggac attacctacg ccgagtactt cgagatgagc 180
 gttcggctgg cagaagctat gaagcgctat gggctgaata caaaccatcg gatcgtggtg 240
 tgcagcgaga atagcttgca gttcttcatg cccgtgttgg gtgccctggt catcgggtgtg 300
 gctgtggccc cagctaacga catctacaac gagcgcgagc tgctgaacag catgggcatc 360
 agccagccca ccgtcgtatt cgtgagcaag aaagggctgc aaaagatcct caacgtgcaa 420
 aagaagctac cgatcataca aaagatcatc atcatggata gcaagaccga ctaccagggc 480
 ttccaaagca tgtacacctt cgtgacttcc catttgccac ccggcttcaa cgagtacgac 540
 ttcgtgcccg agagcttcga ccgggacaaa accatcgccc tgatcatgaa cagtagtggc 600
 agtaccggat tgcccaaggg cgtagcccta ccgcaccgca ccgcttgtgt ccgattcagt 660
 catgcccgcg accccatctt cggcaaccag atcatccccg acaccgctat cctcagcgtg 720
 gtgccatttc accacggctt cggcatgttc accacgctgg gctacttgat ctgcggtttt 780
 cgggtcgtgc tcatgtaccg cttcgaggag gagctattct tgcgcagctt gcaagactat 840
 aagattcaat ctgccctgct ggtgcccaca ctatttagct tcttcgctaa gagcactctc 900
 atcgacaagt acgacctaag caacttgac gagatcgcca gcggcggggc gccgctcagc 960
 aaggaggtag gtgaggccgt ggccaaacgc ttccacctac caggcatccg ccagggtac 1020
 ggcctgacag aaacaaccag cgccattctg atcacccccg aaggggacga caagcctggc 1080
 gcagtaggca aggtggtgcc cttcttcgag gctaagggtg tggacttgga caccggtaag 1140
 aactggtg tgaaccagcg cggcgagctg tgcgtccgtg gcccatgat catgagcggc 1200
 tacgttaaca accccgaggc taaaacgct ctcatcgaca aggacggctg gctgcacagc 1260
 ggcgacatcg cctactggga cgaggacgag cacttcttca tcgtggaccg gctgaagagc 1320
 ctgatcaaat acaagggcta ccaggtagcc ccagccgaac tggagagcat cctgctgcaa 1380
 caccccaaca tcttcgacgc cggggtcgcc ggcctgcccg acgacgatgc cggcgagctg 1440
 cccgccgag tcgtcgtgct ggaacacggt aaaaccatga ccgagaagga gatcgtggac 1500
 tatgtggcca gccaggttac aaccgccaag aagctgcgcg gtgggtgtgt gttcgtggac 1560

155193_1

gaggtgccta aaggactgac cggcaagttg gacgcccgcga agatccgcga gattctcatt 1620
aaggccaaga agggcggcaa gatcgccgtt 1650

<210> 29
<211> 550
<212> PRT
<213> Photinus pyralis

<400> 29

Met Glu Asp Ala Lys Asn Ile Lys Lys Gly Pro Ala Pro Phe Tyr Pro
1 5 10 15

Leu Glu Asp Gly Thr Ala Gly Glu Gln Leu His Lys Ala Met Lys Arg
20 25 30

Tyr Ala Leu Val Pro Gly Thr Ile Ala Phe Thr Asp Ala His Ile Glu
35 40 45

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

Glu Ala Met Lys Arg Tyr Gly Leu Asn Thr Asn His Arg Ile Val Val
65 70 75 80

Cys Ser Glu Asn Ser Leu Gln Phe Phe Met Pro Val Leu Gly Ala Leu
85 90 95

Phe Ile Gly Val Ala Val Ala Pro Ala Asn Asp Ile Tyr Asn Glu Arg
100 105 110

Glu Leu Leu Asn Ser Met Gly Ile Ser Gln Pro Thr Val Val Phe Val
115 120 125

Ser Lys Lys Gly Leu Gln Lys Ile Leu Asn Val Gln Lys Lys Leu Pro
130 135 140

Ile Ile Gln Lys Ile Ile Ile Met Asp Ser Lys Thr Asp Tyr Gln Gly
145 150 155 160

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

Asn Glu Tyr Asp Phe Val Pro Glu Ser Phe Asp Arg Asp Lys Thr Ile
180 185 190

Ala Leu Ile Met Asn Ser Ser Gly Ser Thr Gly Leu Pro Lys Gly Val
195 200 205

Ala Leu Pro His Arg Thr Ala Cys Val Arg Phe Ser His Ala Arg Asp
210 215 220

155193_1
 Pro Ile Phe Gly Asn Gln Ile Ile Pro Asp Thr Ala Ile Leu Ser Val
 225 230 235 240
 Val Pro Phe His His Gly Phe Gly Met Phe Thr Thr Leu Gly Tyr Leu
 245 250 255
 Ile Cys Gly Phe Arg Val Val Leu Met Tyr Arg Phe Glu Glu Glu Leu
 260 265 270
 Phe Leu Arg Ser Leu Gln Asp Tyr Lys Ile Gln Ser Ala Leu Leu Val
 275 280 285
 Pro Thr Leu Phe Ser Phe Phe Ala Lys Ser Thr Leu Ile Asp Lys Tyr
 290 295 300
 Asp Leu Ser Asn Leu His Glu Ile Ala Ser Gly Gly Ala Pro Leu Ser
 305 310 315 320
 Lys Glu Val Gly Glu Ala Val Ala Lys Arg Phe His Leu Pro Gly Ile
 325 330 335
 Arg Gln Gly Tyr Gly Leu Thr Glu Thr Thr Ser Ala Ile Leu Ile Thr
 340 345 350
 Pro Glu Gly Asp Asp Lys Pro Gly Ala Val Gly Lys Val Val Pro Phe
 355 360 365
 Phe Glu Ala Lys Val Val Asp Leu Asp Thr Gly Lys Thr Leu Gly Val
 370 375 380
 Asn Gln Arg Gly Glu Leu Cys Val Arg Gly Pro Met Ile Met Ser Gly
 385 390 395 400
 Tyr Val Asn Asn Pro Glu Ala Thr Asn Ala Leu Ile Asp Lys Asp Gly
 405 410 415
 Trp Leu His Ser Gly Asp Ile Ala Tyr Trp Asp Glu Asp Glu His Phe
 420 425 430
 Phe Ile Val Asp Arg Leu Lys Ser Leu Ile Lys Tyr Lys Gly Tyr Gln
 435 440 445
 Val Ala Pro Ala Glu Leu Glu Ser Ile Leu Leu Gln His Pro Asn Ile
 450 455 460
 Phe Asp Ala Gly Val Ala Gly Leu Pro Asp Asp Asp Ala Gly Glu Leu
 465 470 475 480
 Pro Ala Ala Val Val Val Leu Glu His Gly Lys Thr Met Thr Glu Lys
 485 490 495

155193_1

Glu Ile Val Asp Tyr Val Ala Ser Gln Val Thr Thr Ala Lys Lys Leu
 500 505 510

Arg Gly Gly Val Val Phe Val Asp Glu Val Pro Lys Gly Leu Thr Gly
 515 520 525

Lys Leu Asp Ala Arg Lys Ile Arg Glu Ile Leu Ile Lys Ala Lys Lys
 530 535 540

Gly Gly Lys Ile Ala Val
 545 550

<210> 30
 <211> 933
 <212> DNA
 <213> Artificial Sequence

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

<400> 30
 atggcttcca aggtgtacga ccccagcaa cgcaaacgca tgatcactgg gcctcagtgg 60
 tgggctcgct gcaagcaaat gaacgtgctg gactccttca tcaactacta tgattccgag 120
 aagcacgccg agaacgccgt gatttttctg catggtaacg ctgcctccag ctacctgtgg 180
 aggcacgtcg tgcctcacat cgagcccgtg gctagatgca tcatccctga tctgatcgga 240
 atgggtaagt ccggcaagag cgggaatggc tcatatcgcc tcctggatca ctacaagtac 300
 ctcaccgctt ggttcgagct gctgaacctt ccaaagaaaa tcatctttgt gggccacgac 360
 tggggggcct gtctggcctt tctactactcc tacgagcacc aagacaagat caaggccatc 420
 gtccatgctg agagtgtcgt ggacgtgatc gagtcctggg acgagtggcc tgacatcgag 480
 gaggatatcg ccctgatcaa gagcgaagag ggcgagaaaa tggtgcttga gaataacttc 540
 ttcgtcgaga ccatgctccc aagcaagatc atgcggaaac tggagcctga ggagttcgct 600
 gcctacctgg agccattcaa ggagaagggc gaggttagac ggctaccct ctctggcct 660
 cgcgagatcc ctctcgtaa gggaggcaag cccgacgtcg tccagattgt ccgcaactac 720
 aacgcctacc ttcgggccag cgacgatctg cctaagatgt tcatcgagtc cgaccctggg 780
 ttcttttcca acgctattgt cgaggagct aagaagttcc ctaacaccga gttcgtgaag 840
 gtgaagggcc tccacttcag ccaggaggac gctccagatg aaatgggtaa gtacatcaag 900
 agcttcgtgg agcgcgtgct gaagaacgag cag 933

<210> 31
 <211> 311
 <212> PRT
 <213> Artificial Sequence

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

155193_1

<400> 31

Met Ala Ser Lys Val Tyr Asp Pro Glu Gln Arg Lys Arg Met Ile Thr
1 5 10 15

Gly Pro Gln Trp Trp Ala Arg Cys Lys Gln Met Asn Val Leu Asp Ser
20 25 30

Phe Ile Asn Tyr Tyr Asp Ser Glu Lys His Ala Glu Asn Ala Val Ile
35 40 45

Phe Leu His Gly Asn Ala Ala Ser Ser Tyr Leu Trp Arg His Val Val
50 55 60

Pro His Ile Glu Pro Val Ala Arg Cys Ile Ile Pro Asp Leu Ile Gly
65 70 75 80

Met Gly Lys Ser Gly Lys Ser Gly Asn Gly Ser Tyr Arg Leu Leu Asp
85 90 95

His Tyr Lys Tyr Leu Thr Ala Trp Phe Glu Leu Leu Asn Leu Pro Lys
100 105 110

Lys Ile Ile Phe Val Gly His Asp Trp Gly Ala Cys Leu Ala Phe His
115 120 125

Tyr Ser Tyr Glu His Gln Asp Lys Ile Lys Ala Ile Val His Ala Glu
130 135 140

Ser Val Val Asp Val Ile Glu Ser Trp Asp Glu Trp Pro Asp Ile Glu
145 150 155 160

Glu Asp Ile Ala Leu Ile Lys Ser Glu Glu Gly Glu Lys Met Val Leu
165 170 175

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

Lys Leu Glu Pro Glu Glu Phe Ala Ala Tyr Leu Glu Pro Phe Lys Glu
195 200 205

Lys Gly Glu Val Arg Arg Pro Thr Leu Ser Trp Pro Arg Glu Ile Pro
210 215 220

Leu Val Lys Gly Gly Lys Pro Asp Val Val Gln Ile Val Arg Asn Tyr
225 230 235 240

Asn Ala Tyr Leu Arg Ala Ser Asp Asp Leu Pro Lys Met Phe Ile Glu
245 250 255

Ser Asp Pro Gly Phe Phe Ser Asn Ala Ile Val Glu Gly Ala Lys Lys
260 265 270

155193_1

Phe Pro Asn Thr Glu Phe Val Lys Val Lys Gly Leu His Phe Ser Gln
275 280 285

Glu Asp Ala Pro Asp Glu Met Gly Lys Tyr Ile Lys Ser Phe Val Glu
290 295 300

Arg Val Leu Lys Asn Glu Gln
305 310

<210> 32
<211> 2295
<212> DNA
<213> Artificial Sequence

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

<400> 32
atgcttggtc tgtcggagca aagcgtgtcc atctcgcgct gcgctgggac gcgcctgccc 60
gccttgctgg acgagcagca ggtgaacgtc ctgctctacg acatgaacgg ctgctactca 120
cgctcaagg agctggtgcc caccctgccc cagaaccgca aagtgaagca ggtggagatc 180
ctgcagcatg taatcgacta catcaggac ctgcagctgg agctgaactc ggagtctgaa 240
gtcgggacca ccggaggccg gggactgcct gtccgcgccc cgctcagcac cctgaacggc 300
gagatcagtg ccttggcggc cgaggcggca tgtgttccag ccgacgatcg catcttgtgt 360
cgcgtttctc ttgagaatct ttattttcag gcgtctggag gtggtggcgg agcgatcgcc 420
atggcttcca aggtgtacga ccccagcaa cgaaacgca tgatcactgg gcctcagtgg 480
tggtctcgct gcaagcaaat gaacgtgctg gactccttca tcaactacta tgattccgag 540
aagcacgccg agaacgccgt gatttttctg catggtaacg ctgcctccag ctacctgtgg 600
aggcacgtcg tgcctcacat cgagcccgtg gctagatgca tcatccctga tctgatcgga 660
atgggtaagt ccggcaagag cggaatggc tcatatcgcc tcctggatca ctacaagtac 720
ctcaccgctt ggttcgagct gctgaacctt ccaaagaaaa tcatctttgt gggccacgac 780
tggggggctt gtctggcctt tcactactcc tacgagcacc aagacaagat caaggccatc 840
gtccatgctg agagtgtcgt ggacgtgatc gagtcctggg acgagtggcc tgacatcgag 900
gaggatatcg ccctgatcaa gagcgaagag ggcgagaaaa tggtgcttga gaataacttc 960
ttcgtcgaga ccatgctccc aagcaagatc atgcggaaac tggagcctga ggagttcgct 1020
gcctacctgg agccattcaa ggagaagggc gaggttagac ggctaccct ctctggcct 1080
cgcgagatcc ctctcgtaa gggaggcaag cccgacgtcg tccagattgt ccgcaactac 1140
aacgcctacc ttcgggccag cgacgatctg cctaagatgt tcatcgagtc cgacctggg 1200
ttcttttcca acgctattgt cgaggagct aagaagttcc ctaacaccga gttcgtgaag 1260
gtgaagggcc tccacttcag ccaggaggac gctccagatg aaatgggtaa gtacatcaag 1320
agcttcgtgg agcgcgtgct gaagaacgag caggtttctc tcgagccaac cactgaggat 1380

155193_1

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ctgtactttc agagcgataa cgatggatcc gaaatcggta ctggctttcc attcgacccc 1440
cattatgtgg aagtcctggg cgagcgcgcatg cactacgtcg atgttggtcc gcgcgatggc 1500
accctctgtgc tgttcctgca cggtaacccg acctctctcct acgtgtggcg caacatcatc 1560
ccgcatgttg caccgaccca tcgctgcatt gctccagacc tgatcgggtat gggcaaattcc 1620
gacaaaccag acctgggtta tttcttcgac gaccacgtcc gttcatgga tgccttcac 1680
gaagccctgg gtctggaaga ggtcgtcctg gtcattcacg actggggctc cgctctgggt 1740
ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcatc 1800
cgccctatcc cgacctggga cgaatggcca gaatttgccc gcgagacctt ccaggccttc 1860
cgcaccaccg acgtcggccg caagctgatc atcgatcaga acgtttttat cgagggtacg 1920
ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgcgagccg 1980
ttcctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc 2040
ggtagaccag cgaacatcgt cgcgctggtc gaagaataca tggactggct gcaccagtcc 2100
cctgtcccga agctgctggt ctggggcacc ccaggcgctt tgatcccacc ggccgaagcc 2160
gctgcctgg ccaaaagcct gcctaactgc aaggctgtgg acatcgcccc gggctctgaat 2220
ctgctgcaag aagacaaccc ggacctgatc ggcagcgaga tcgcgcgctg gctgtctact 2280
ctggagattt ccggt 2295

```

<210> 33

<211> 765

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 33

```

Met Leu Gly Leu Ser Glu Gln Ser Val Ser Ile Ser Arg Cys Ala Gly
1           5           10          15

```

```

Thr Arg Leu Pro Ala Leu Leu Asp Glu Gln Gln Val Asn Val Leu Leu
          20          25          30

```

```

Tyr Asp Met Asn Gly Cys Tyr Ser Arg Leu Lys Glu Leu Val Pro Thr
          35          40          45

```

```

Leu Pro Gln Asn Arg Lys Val Ser Lys Val Glu Ile Leu Gln His Val
          50          55          60

```

```

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

```

```

Val Gly Thr Thr Gly Gly Arg Gly Leu Pro Val Arg Ala Pro Leu Ser
          85          90          95

```

Thr Leu Asn Gly Glu Ile Ser Ala Leu Ala Ala Glu Ala Ala Cys Val
 100 105 110

Pro Ala Asp Asp Arg Ile Leu Cys Arg Val Ser Leu Glu Asn Leu Tyr
 115 120 125

Phe Gln Ala Ser Gly Gly Gly Gly Ala Ile Ala Met Ala Ser Lys
 130 135 140

Val Tyr Asp Pro Glu Gln Arg Lys Arg Met Ile Thr Gly Pro Gln Trp
 145 150 155 160

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

Tyr Asp Ser Glu Lys His Ala Glu Asn Ala Val Ile Phe Leu His Gly
 180 185 190

Asn Ala Ala Ser Ser Tyr Leu Trp Arg His Val Val Pro His Ile Glu
 195 200 205

Pro Val Ala Arg Cys Ile Ile Pro Asp Leu Ile Gly Met Gly Lys Ser
 210 215 220

Gly Lys Ser Gly Asn Gly Ser Tyr Arg Leu Leu Asp His Tyr Lys Tyr
 225 230 235 240

Leu Thr Ala Trp Phe Glu Leu Leu Asn Leu Pro Lys Lys Ile Ile Phe
 245 250 255

Val Gly His Asp Trp Gly Ala Cys Leu Ala Phe His Tyr Ser Tyr Glu
 260 265 270

His Gln Asp Lys Ile Lys Ala Ile Val His Ala Glu Ser Val Val Asp
 275 280 285

Val Ile Glu Ser Trp Asp Glu Trp Pro Asp Ile Glu Glu Asp Ile Ala
 290 295 300

Leu Ile Lys Ser Glu Glu Gly Glu Lys Met Val Leu Glu Asn Asn Phe
 305 310 315 320

Phe Val Glu Thr Met Leu Pro Ser Lys Ile Met Arg Lys Leu Glu Pro
 325 330 335

Glu Glu Phe Ala Ala Tyr Leu Glu Pro Phe Lys Glu Lys Gly Glu Val
 340 345 350

Arg Arg Pro Thr Leu Ser Trp Pro Arg Glu Ile Pro Leu Val Lys Gly
 355 360 365

Gly Lys Pro Asp Val Val Gln Ile Val Arg Asn Tyr Asn Ala Tyr Leu
 370 375 380 155193_1

Arg Ala Ser Asp Asp Leu Pro Lys Met Phe Ile Glu Ser Asp Pro Gly
 385 390 395 400

Phe Phe Ser Asn Ala Ile Val Glu Gly Ala Lys Lys Phe Pro Asn Thr
 405 410 415

Glu Phe Val Lys Val Lys Gly Leu His Phe Ser Gln Glu Asp Ala Pro
 420 425 430

Asp Glu Met Gly Lys Tyr Ile Lys Ser Phe Val Glu Arg Val Leu Lys
 435 440 445

Asn Glu Gln Val Ser Leu Glu Pro Thr Thr Glu Asp Leu Tyr Phe Gln
 450 455 460

Ser Asp Asn Asp Gly Ser Glu Ile Gly Thr Gly Phe Pro Phe Asp Pro
 465 470 475 480

His Tyr Val Glu Val Leu Gly Glu Arg Met His Tyr Val Asp Val Gly
 485 490 495

Pro Arg Asp Gly Thr Pro Val Leu Phe Leu His Gly Asn Pro Thr Ser
 500 505 510

Ser Tyr Val Trp Arg Asn Ile Ile Pro His Val Ala Pro Thr His Arg
 515 520 525

Cys Ile Ala Pro Asp Leu Ile Gly Met Gly Lys Ser Asp Lys Pro Asp
 530 535 540

Leu Gly Tyr Phe Phe Asp Asp His Val Arg Phe Met Asp Ala Phe Ile
 545 550 555 560

Glu Ala Leu Gly Leu Glu Glu Val Val Leu Val Ile His Asp Trp Gly
 565 570 575

Ser Ala Leu Gly Phe His Trp Ala Lys Arg Asn Pro Glu Arg Val Lys
 580 585 590

Gly Ile Ala Phe Met Glu Phe Ile Arg Pro Ile Pro Thr Trp Asp Glu
 595 600 605

Trp Pro Glu Phe Ala Arg Glu Thr Phe Gln Ala Phe Arg Thr Thr Asp
 610 615 620

Val Gly Arg Lys Leu Ile Ile Asp Gln Asn Val Phe Ile Glu Gly Thr
 625 630 635 640

155193_1

Leu Pro Met Gly Val Val Arg Pro Leu Thr Glu Val Glu Met Asp His
645 650 655

Tyr Arg Glu Pro Phe Leu Asn Pro Val Asp Arg Glu Pro Leu Trp Arg
660 665 670

Phe Pro Asn Glu Leu Pro Ile Ala Gly Glu Pro Ala Asn Ile Val Ala
675 680 685

Leu Val Glu Glu Tyr Met Asp Trp Leu His Gln Ser Pro Val Pro Lys
690 695 700

Leu Leu Phe Trp Gly Thr Pro Gly Val Leu Ile Pro Pro Ala Glu Ala
705 710 715 720

Ala Arg Leu Ala Lys Ser Leu Pro Asn Cys Lys Ala Val Asp Ile Gly
725 730 735

Pro Gly Leu Asn Leu Leu Gln Glu Asp Asn Pro Asp Leu Ile Gly Ser
740 745 750

Glu Ile Ala Arg Trp Leu Ser Thr Leu Glu Ile Ser Gly
755 760 765

<210> 34
<211> 1455
<212> DNA
<213> Artificial Sequence

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

<400> 34
atggtgatta cattggagga tttcgttga gactggcggc agacagctgg atacaaccaa 60
gatcaagtgt tagaacaagg aggagtgtct agtctgttcc aaaagctggg agtgtcaatc 120
acccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc 180
atcatccctt acgagggact cagtggtttt caaatgggtc tgattgaaat gatcttcaaa 240
gttgtttacc cagtggatga tcatcatttc aaggttattc tccattatgg tacactcgtt 300
attgacggtg tgacaccaa catgattgac tactttggac gcccttacga gggaattgct 360
gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt 420
gatgagcgc tgatcaaccc agatggttca ctctcttcc gcgttactat caatggagtc 480
accggatggc gcctttgcga gcgtattctt gccggatatc tcgagccaac cactgaggat 540
ctgtactttc agagcgataa cgatggatcc gaaatcggtc ctggctttcc attcgacccc 600
cattatgtgg aagtcctggg cgagcgcgtg cactacgtcg atgttggtcc gcgcgatggc 660
accctgtgc tgttcctgca cggtaacccg acctctcct acgtgtggcg caacatcatc 720
ccgcatgttg caccgaccca tcgctgcatt gctccagacc tgatcgggtat gggcaaatcc 780

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gacaaaccag acctggggtta tttcttcgac gaccacgtcc gcttcatgga tgccttcac	840
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ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcac	960
cgccttatcc cgacctggga cgaatggcca gaatttgccc gcgagacctt ccaggccttc	1020
cgcaccaccg acgtcggccg caagctgac atcgatcaga acgtttttat cgagggtacg	1080
ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgcgagccg	1140
ttcctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc	1200
ggtagaccag cgaacatcgt cgcgctggc gaagaataca tggactggct gcaccagtcc	1260
cctgtcccga agctgctgtt ctggggcacc ccaggcgctt tgatcccacc ggccgaagcc	1320
gctcgcctgg caaaaagcct gcctaactgc aaggctgtgg acatcgcccc gggctctgaat	1380
ctgctgcaag aagacaaccc ggacctgatc ggcagcgaga tcgcgcgctg gctgtctact	1440
ctggagattt ccggt	1455

<210> 35
 <211> 485
 <212> PRT
 <213> Artificial Sequence

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

<400> 35
 Met Val Ile Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Gln Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

Phe Gln Lys Leu Gly Val Ser Ile Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Phe Gln Met Gly Leu Ile Glu Met Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
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130 135 155193_1 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Tyr Leu Glu Pro
165 170 175

Thr Thr Glu Asp Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile
180 185 190

Gly Thr Gly Phe Pro Phe Asp Pro His Tyr Val Glu Val Leu Gly Glu
195 200 205

Arg Met His Tyr Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu
210 215 220

Phe Leu His Gly Asn Pro Thr Ser Ser Tyr Val Trp Arg Asn Ile Ile
225 230 235 240

Pro His Val Ala Pro Thr His Arg Cys Ile Ala Pro Asp Leu Ile Gly
245 250 255

Met Gly Lys Ser Asp Lys Pro Asp Leu Gly Tyr Phe Phe Asp Asp His
260 265 270

Val Arg Phe Met Asp Ala Phe Ile Glu Ala Leu Gly Leu Glu Glu Val
275 280 285

Val Leu Val Ile His Asp Trp Gly Ser Ala Leu Gly Phe His Trp Ala
290 295 300

Lys Arg Asn Pro Glu Arg Val Lys Gly Ile Ala Phe Met Glu Phe Ile
305 310 315 320

Arg Pro Ile Pro Thr Trp Asp Glu Trp Pro Glu Phe Ala Arg Glu Thr
325 330 335

Phe Gln Ala Phe Arg Thr Thr Asp Val Gly Arg Lys Leu Ile Ile Asp
340 345 350

Gln Asn Val Phe Ile Glu Gly Thr Leu Pro Met Gly Val Val Arg Pro
355 360 365

Leu Thr Glu Val Glu Met Asp His Tyr Arg Glu Pro Phe Leu Asn Pro
370 375 380

Val Asp Arg Glu Pro Leu Trp Arg Phe Pro Asn Glu Leu Pro Ile Ala
385 390 395 400

Gly Glu Pro Ala Asn Ile Val Ala Leu Val Glu Glu Tyr Met Asp Trp

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<210> 36
<211> 1455
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      polynucleotide
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155193_1

ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgcgagccg 1140
 ttctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc 1200
 ggtgagccag cgaacatcgt cgcgctgggtc gaagaataca tggactggct gcaccagtcc 1260
 cctgtcccga agctgctgtt ctggggcacc ccaggcggtt tgatcccacc ggccgaagcc 1320
 gctcgcctgg ccaaaagcct gcctaactgc aaggctgtgg acatcgggcc gggctctgaat 1380
 ctgctgcaag aagacaaccc ggacctgatc ggcagcgaga tcgcgcgctg gctgtctact 1440
 ctggagattt ccggt 1455

<210> 37
 <211> 485
 <212> PRT
 <213> Artificial Sequence

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

<400> 37
 Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
 20 25 30

Phe Gln Lys Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Tyr Leu Glu Pro
 165 170 175

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Thr Thr Glu Asp₁₈₀ Leu Tyr Phe Gln Ser₁₈₅ Asp Asn Asp Gly Ser₁₉₀ Glu Ile
 Gly Thr Gly₁₉₅ Phe Pro Phe Asp Pro₂₀₀ His Tyr Val Glu Val₂₀₅ Leu Gly Glu
 Arg Met₂₁₀ His Tyr Val Asp Val₂₁₅ Gly Pro Arg Asp Gly₂₂₀ Thr Pro Val Leu
 Phe₂₂₅ Leu His Gly Asn Pro₂₃₀ Thr Ser Ser Tyr Val₂₃₅ Trp Arg Asn Ile Ile₂₄₀
 Pro His Val Ala₂₄₅ Pro Thr His Arg Cys Ile₂₅₀ Ala Pro Asp Leu Ile₂₅₅ Gly
 Met Gly Lys Ser₂₆₀ Asp Lys Pro Asp Leu₂₆₅ Gly Tyr Phe Phe Asp₂₇₀ Asp His
 Val Arg Phe₂₇₅ Met Asp Ala Phe Ile₂₈₀ Glu Ala Leu Gly Leu₂₈₅ Glu Glu Val
 Val Leu₂₉₀ Val Ile His Asp Trp₂₉₅ Gly Ser Ala Leu Gly₃₀₀ Phe His Trp Ala
 Lys Arg Asn Pro Glu Arg₃₁₀ Val Lys Gly Ile Ala₃₁₅ Phe Met Glu Phe Ile₃₂₀
 Arg Pro Ile Pro Thr₃₂₅ Trp Asp Glu Trp Pro₃₃₀ Glu Phe Ala Arg Glu₃₃₅ Thr
 Phe Gln Ala Phe₃₄₀ Arg Thr Thr Asp Val₃₄₅ Gly Arg Lys Leu Ile₃₅₀ Ile Asp
 Gln Asn Val₃₅₅ Phe Ile Glu Gly Thr₃₆₀ Leu Pro Met Gly Val₃₆₅ Val Arg Pro
 Leu Thr₃₇₀ Glu Val Glu Met Asp₃₇₅ His Tyr Arg Glu Pro₃₈₀ Phe Leu Asn Pro
 Val₃₈₅ Asp Arg Glu Pro Leu₃₉₀ Trp Arg Phe Pro Asn₃₉₅ Glu Leu Pro Ile Ala₄₀₀
 Gly Glu Pro Ala₄₀₅ Asn Ile Val Ala Leu Val₄₁₀ Glu Glu Tyr Met Asp₄₁₅ Trp
 Leu His Gln Ser₄₂₀ Pro Val Pro Lys Leu₄₂₅ Leu Phe Trp Gly Thr₄₃₀ Pro Gly
 Val Leu Ile₄₃₅ Pro Pro Ala Glu Ala₄₄₀ Ala Arg Leu Ala Lys₄₄₅ Ser Leu Pro

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Asn Cys Lys Ala Val Asp Ile Gly Pro Gly Leu Asn Leu Leu Gln Glu
450 455 460

Asp Asn Pro Asp Leu Ile Gly Ser Glu Ile Ala Arg Trp Leu Ser Thr
465 470 475 480

Leu Glu Ile Ser Gly
485

<210> 38
<211> 1455
<212> DNA
<213> Artificial Sequence

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

<400> 38
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gatcaagtgt tagaacaagg aggagtgtct agtctgttcc aaaagctggg agtgtcaatc 120
acccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc 180
atcatccctt acgagggact cagtgggttat caaatgggtc agattgaaaa gatcttcaaa 240
gttgtttacc cagtggatga tcatcatttc aaggttattc tccattatgg tacactcgtt 300
attgacgggtg tgacaccaaa catgattgac tactttggac gcccttacga gggaattgct 360
gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt 420
gatgagcgcc tgatcaaccc agatgggtca ctctcttcc gcgttactat caatggagtc 480
accggatggc gcctttgcga gcgtattctt gccggatatc tcgagccaac cactgaggat 540
ctgtactttc agagcgataa cgatggatcc gaaatcggtc ctggccttcc attcgacccc 600
cattatgtgg aagtcctggg cgagcgcatt cactacgtcg atgttgggcc gcgcgatggc 660
accctgtgc tgttcctgca cggtaacccg acctcctcct acgtgtggcg caacatcatc 720
ccgcatgttg caccgaccca tcgctgcatt gctccagacc tgatcggtat gggcaaattc 780
gacaaaccag acctgggtta tttcttcgac gaccacgtcc gttcatgga tgccttcac 840
gaagccctgg gtctggaaga ggtcgtcctg gtcattcacg actggggctc cgctctgggt 900
ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcatc 960
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ggtagaccag cgaacatcgt cgcgctgggt gaagaataca tggactgggt gcaccagtcc 1260
cctgtcccga agctgctgtt ctggggcacc ccaggcgttc tgatcccacc ggccgaagcc 1320

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gctcgcctgg ccaaaagcct gcctaactgc aaggctgtgg acatcgcccc gggctctgaat	1380
ctgtctgaag aagacaaccc ggacctgatc ggcagcgaga tcgcgcgctg gctgtctact	1440
ctggagattt ccggt	1455

<210> 39
 <211> 485
 <212> PRT
 <213> Artificial Sequence

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

<400> 39
 Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

Phe Gln Lys Leu Gly Val Ser Ile Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Tyr Leu Glu Pro
 165 170 175

Thr Thr Glu Asp Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile
 180 185 190

Gly Thr Gly Phe Pro Phe Asp Pro His Tyr Val Glu Val Leu Gly Glu
 195 200 205

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Arg Met His Tyr Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu
 210 215 220
 Phe Leu His Gly Asn Pro Thr Ser Ser Tyr Val Trp Arg Asn Ile Ile
 225 230 235 240
 Pro His Val Ala Pro Thr His Arg Cys Ile Ala Pro Asp Leu Ile Gly
 245 250 255
 Met Gly Lys Ser Asp Lys Pro Asp Leu Gly Tyr Phe Phe Asp Asp His
 260 265 270
 Val Arg Phe Met Asp Ala Phe Ile Glu Ala Leu Gly Leu Glu Glu Val
 275 280 285
 Val Leu Val Ile His Asp Trp Gly Ser Ala Leu Gly Phe His Trp Ala
 290 295 300
 Lys Arg Asn Pro Glu Arg Val Lys Gly Ile Ala Phe Met Glu Phe Ile
 305 310 315 320
 Arg Pro Ile Pro Thr Trp Asp Glu Trp Pro Glu Phe Ala Arg Glu Thr
 325 330 335
 Phe Gln Ala Phe Arg Thr Thr Asp Val Gly Arg Lys Leu Ile Ile Asp
 340 345 350
 Gln Asn Val Phe Ile Glu Gly Thr Leu Pro Met Gly Val Val Arg Pro
 355 360 365
 Leu Thr Glu Val Glu Met Asp His Tyr Arg Glu Pro Phe Leu Asn Pro
 370 375 380
 Val Asp Arg Glu Pro Leu Trp Arg Phe Pro Asn Glu Leu Pro Ile Ala
 385 390 395 400
 Gly Glu Pro Ala Asn Ile Val Ala Leu Val Glu Glu Tyr Met Asp Trp
 405 410 415
 Leu His Gln Ser Pro Val Pro Lys Leu Leu Phe Trp Gly Thr Pro Gly
 420 425 430
 Val Leu Ile Pro Pro Ala Glu Ala Ala Arg Leu Ala Lys Ser Leu Pro
 435 440 445
 Asn Cys Lys Ala Val Asp Ile Gly Pro Gly Leu Asn Leu Leu Gln Glu
 450 455 460
 Asp Asn Pro Asp Leu Ile Gly Ser Glu Ile Ala Arg Trp Leu Ser Thr
 465 470 475 480

Leu Glu Ile Ser Gly
485

<210> 40
<211> 1876
<212> DNA
<213> Artificial Sequence

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

<400> 40
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gccttgctgg acgagcagca ggtgaacgtc ctgctctacg acatgaacgg ctgctactca 120
cgcctcaagg agctggtgcc caccctgccc cagaaccgca aagtgaagca ggtggagatc 180
ctgcagcatg taatcgacta catcagggac ctgcagctgg agctgaactc ggagtctgaa 240
gtcgggacca ccggaggccg gggactgcct gtccgcgccc cgctcagcac cctgaacggc 300
gagatcagtg ccttggcggc cgaggcggca tgtgttccag ccgacgatcg catcttgtgt 360
cgcgtttctc ttgagaatct ttattttcag gcgtctggag gtggtggcgg agcgatcgcc 420
atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg 480
gaccaagtcc ttgagcaggg cggctctgtcc agtttgtttc agaaactcgg ggtgtccgta 540
acaccgatcc aaaagattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc 600
atcatcccgat gaaggtct gagcggctat cagatgggcc agatcgaaaa aatttttaag 660
gtggtgtacc ctgtggatga tcatcacttt aagggtgattc tgcactatgg cactctggtg 720
atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgtatga aggcacgccc 780
gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc 840
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accggctggc ggctgtgcga gcgtattctt gccggatatc tcgagccaac cactgaggat 960
ctgtactttc agagcgataa cgatggatcc gaaatcggtg ctggctttcc attcgacccc 1020
cattatgtgg aagtcctggg cgagcgcgat cactacgtcg atgttggtcc gcgcgatggc 1080
accctgtgac tgttcctgca cggtaacccg acctcctcct acgtgtggcg caacatcatc 1140
ccgcatgttg caccgaccca tcgctgcatt gctccagacc tgatcggtat gggcaaattc 1200
gacaaaccag acctgggtta tttcttcgac gaccacgtcc gcttcatgga tgccttcac 1260
gaagccctgg gtctggaaga ggtcgtcctg gtcattcacg actggggctc cgctctgggt 1320
ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcatc 1380
cgccctatcc cgacctggga cgaatggcca gaatttgccc gcgagacctt ccaggccttc 1440
cgcaccaccg acgtcggccg caagctgatc atcgatcaga acgtttttat cgagggtacg 1500
ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgcgagccg 1560
ttcctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc 1620

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ggtgagccag cgaacatcgt cgcgctggtc gaagaataca tggactggct gcaccagtcc 1680
 cctgtcccgga agctgctggt ctggggcacc ccaggcggtc tgatcccacc ggccgaagcc 1740
 gctcgcctgg ccaaaagcct gcctaactgc aaggctgtgg acatcgcccc gggctctgaat 1800
 ctgctgcaag aagacaaccc ggacctgac ggcagcgaga tcgcgcgctg gctgtctact 1860
 ctggagattt ccggtt 1876

<210> 41
 <211> 625
 <212> PRT
 <213> Artificial Sequence

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

<400> 41
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 1 5 10 15

Thr Arg Leu Pro Ala Leu Leu Asp Glu Gln Gln Val Asn Val Leu Leu
 20 25 30

Tyr Asp Met Asn Gly Cys Tyr Ser Arg Leu Lys Glu Leu Val Pro Thr
 35 40 45

Leu Pro Gln Asn Arg Lys Val Ser Lys Val Glu Ile Leu Gln His Val
 50 55 60

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

Val Gly Thr Thr Gly Gly Arg Gly Leu Pro Val Arg Ala Pro Leu Ser
 85 90 95

Thr Leu Asn Gly Glu Ile Ser Ala Leu Ala Ala Glu Ala Ala Cys Val
 100 105 110

Pro Ala Asp Asp Arg Ile Leu Cys Arg Val Ser Leu Glu Asn Leu Tyr
 115 120 125

Phe Gln Ala Ser Gly Gly Gly Gly Ala Ile Ala Met Val Phe Thr
 130 135 140

Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu
 145 150 155 160

Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu Phe Gln Lys Leu
 165 170 175

Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu Ser Gly Glu Asn
 180 185 190

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Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
 195 200 205
 Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
 210 215 220
 Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
 225 230 235 240
 Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
 245 250 255
 Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
 260 265 270
 Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
 275 280 285
 Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
 290 295 300
 Leu Cys Glu Arg Ile Leu Ala Gly Tyr Leu Glu Pro Thr Thr Glu Asp
 305 310 315 320
 Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile Gly Thr Gly Phe
 325 330 335
 Pro Phe Asp Pro His Tyr Val Glu Val Leu Gly Glu Arg Met His Tyr
 340 345 350
 Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu Phe Leu His Gly
 355 360 365
 Asn Pro Thr Ser Ser Tyr Val Trp Arg Asn Ile Ile Pro His Val Ala
 370 375 380
 Pro Thr His Arg Cys Ile Ala Pro Asp Leu Ile Gly Met Gly Lys Ser
 385 390 395 400
 Asp Lys Pro Asp Leu Gly Tyr Phe Phe Asp Asp His Val Arg Phe Met
 405 410 415
 Asp Ala Phe Ile Glu Ala Leu Gly Leu Glu Glu Val Val Leu Val Ile
 420 425 430
 His Asp Trp Gly Ser Ala Leu Gly Phe His Trp Ala Lys Arg Asn Pro
 435 440 445
 Glu Arg Val Lys Gly Ile Ala Phe Met Glu Phe Ile Arg Pro Ile Pro
 450 455 460

155193_1

Thr Trp Asp Glu Trp Pro Glu Phe Ala Arg Glu Thr Phe Gln Ala Phe
465 470 475 480

Arg Thr Thr Asp Val Gly Arg Lys Leu Ile Ile Asp Gln Asn Val Phe
485 490 495

Ile Glu Gly Thr Leu Pro Met Gly Val Val Arg Pro Leu Thr Glu Val
500 505 510

Glu Met Asp His Tyr Arg Glu Pro Phe Leu Asn Pro Val Asp Arg Glu
515 520 525

Pro Leu Trp Arg Phe Pro Asn Glu Leu Pro Ile Ala Gly Glu Pro Ala
530 535 540

Asn Ile Val Ala Leu Val Glu Glu Tyr Met Asp Trp Leu His Gln Ser
545 550 555 560

Pro Val Pro Lys Leu Leu Phe Trp Gly Thr Pro Gly Val Leu Ile Pro
565 570 575

Pro Ala Glu Ala Ala Arg Leu Ala Lys Ser Leu Pro Asn Cys Lys Ala
580 585 590

Val Asp Ile Gly Pro Gly Leu Asn Leu Leu Gln Glu Asp Asn Pro Asp
595 600 605

Leu Ile Gly Ser Glu Ile Ala Arg Trp Leu Ser Thr Leu Glu Ile Ser
610 615 620

Gly
625

<210> 42
<211> 513
<212> DNA
<213> Artificial Sequence

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

<400> 42
atggtgttta cactcgaaga tttcgtagg gactggcggc agacagccgg ctacaacctg 60
gaccaagtcc ttgagcaggg cggctgtgcc agtttgtttc agaatctcgg ggtgtccgta 120
acaccgatcc aaaagattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc 180
atcatcccgat atgaaggtct gagcggctat cagatgggcc agatcgaaaa aatttttaag 240
gtggtgtacc ctgtggatga tcactcattt aagggtgattc tgcactatgg cacactggta 300
atcgacgggg ttacgccgaa catgatcgac ttttcggac ggccgatga aggcacgcgc 360

155193_1

gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc	420
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg	480
accggctggc ggctgtgcga gcgcattttg gcg	513

<210> 43
 <211> 171
 <212> PRT
 <213> Artificial Sequence

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

<400> 43
 Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
 20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
 165 170

<210> 44
 <211> 1455
 <212> DNA
 <213> Artificial Sequence

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

155193_1

polynucleotide

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<400> 44
atgggtgttta cattggagga tttcgttga gactggcggc agacagctgg atacaaccta      60
gatcaagtgt tagaacaagg aggattgtct agtctgttcc aaaagctggg agtgtcagtc      120
acccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc      180
atcatccctt acgagggact cagtggtttt caaatgggtc tgattgaaat gatcttcaaa      240
gttgtttacc cagtggatga tcatcatttc aagattattc accattatgg tacactcgtt      300
attgacggtg tgacaccaaa catgattgac ttctttggac gcccttacga ggaattgct      360
gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt      420
gatgagcgcc tgatcaaccc agatggttca ctctcttcc gcgttactat caatggagtc      480
accggatggc gcctttgcga gcgtattctt gccggatatc tcgagccaac cactgaggat      540
ctgtactttc agagcgataa cgatggatcc gaaatcggta ctggctttcc attcgacccc      600
cattatgtgg aagtcctggg cgagcgcatg cactacgtcg atgttgggtc gcgcatggc      660
accctgtgc tgttcctgca cggtaaccgc acctcctcct acgtgtggcg caacatcatc      720
ccgcatgttg caccgaccca tcgctgcatt gctccagacc tgatcgggat gggcaaattc      780
gacaaaccag acctgggtta tttcttcgac gaccacgtcc gttcatgga tgccttcac      840
gaagccctgg gtctggaaga ggtcgtcctg gtcattcacg actggggctc cgctctgggt      900
ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcatc      960
cgccctatcc cgacctggga cgaatggcca gaatttgccc gcgagacctt ccaggccttc     1020
cgcaccaccg acgtcggccg caagctgatc atcgatcaga acgtttttat cgaggggtacg     1080
ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgagagccg     1140
ttcctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc     1200
ggtagagccg cgaacatcgt cgcgctggtc gaagaataca tggactggct gcaccagtcc     1260
cctgtcccga agctgctgtt ctggggcacc ccaggcggtt tgatcccacc ggccgaagcc     1320
gctgccttgg ccaaaagcct gcctaactgc aaggctgtgg acatcgggcc ggtctgaat     1380
ctgctgcaag aagacaaccc ggacctgatc ggcagcgaga tcgcgcgctg gctgtctact     1440
ctggagattt ccggt                                     1455

```

```

<210> 45
<211> 485
<212> PRT
<213> Artificial Sequence

```

```

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

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<400> 45
Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1      5      10      15

```


Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
 20 25 155193_1

Phe Gln Lys Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Phe Gln Met Gly Leu Ile Glu Met Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Ile Ile His His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Phe Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Tyr Leu Glu Pro
 165 170 175

Thr Thr Glu Asp Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile
 180 185 190

Gly Thr Gly Phe Pro Phe Asp Pro His Tyr Val Glu Val Leu Gly Glu
 195 200 205

Arg Met His Tyr Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu
 210 215 220

Phe Leu His Gly Asn Pro Thr Ser Ser Tyr Val Trp Arg Asn Ile Ile
 225 230 235 240

Pro His Val Ala Pro Thr His Arg Cys Ile Ala Pro Asp Leu Ile Gly
 245 250 255

Met Gly Lys Ser Asp Lys Pro Asp Leu Gly Tyr Phe Phe Asp Asp His
 260 265 270

Val Arg Phe Met Asp Ala Phe Ile Glu Ala Leu Gly Leu Glu Glu Val
 275 280 285

Val Leu Val Ile His Asp Trp Gly Ser Ala Leu Gly Phe His Trp Ala
 290 295 300
 Lys Arg Asn Pro Glu Arg Val Lys Gly Ile Ala Phe Met Glu Phe Ile
 305 310 315 320
 Arg Pro Ile Pro Thr Trp Asp Glu Trp Pro Glu Phe Ala Arg Glu Thr
 325 330 335
 Phe Gln Ala Phe Arg Thr Thr Asp Val Gly Arg Lys Leu Ile Ile Asp
 340 345 350
 Gln Asn Val Phe Ile Glu Gly Thr Leu Pro Met Gly Val Val Arg Pro
 355 360 365
 Leu Thr Glu Val Glu Met Asp His Tyr Arg Glu Pro Phe Leu Asn Pro
 370 375 380
 Val Asp Arg Glu Pro Leu Trp Arg Phe Pro Asn Glu Leu Pro Ile Ala
 385 390 395 400
 Gly Glu Pro Ala Asn Ile Val Ala Leu Val Glu Glu Tyr Met Asp Trp
 405 410 415
 Leu His Gln Ser Pro Val Pro Lys Leu Leu Phe Trp Gly Thr Pro Gly
 420 425 430
 Val Leu Ile Pro Pro Ala Glu Ala Ala Arg Leu Ala Lys Ser Leu Pro
 435 440 445
 Asn Cys Lys Ala Val Asp Ile Gly Pro Gly Leu Asn Leu Leu Gln Glu
 450 455 460
 Asp Asn Pro Asp Leu Ile Gly Ser Glu Ile Ala Arg Trp Leu Ser Thr
 465 470 475 480
 Leu Glu Ile Ser Gly
 485

<210> 46
 <211> 513
 <212> DNA
 <213> Artificial Sequence

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

<400> 46	
atggtgttta cattggagga tttcgttgga gactggcggc agacagctgg atacaaccaa	60
gatcaagtgt tagaacaagg aggagtgtct agtctgttcc aaaagctggg agtgtcagtc	120
acccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc	180

155193_1

atcatccctt acgagggact cagtggtttt caaatgggtc tgattgaaat gatcttcaaa	240
gttgtttacc cagtggatga tcatcatttc aaggttattc tccattatgg tacactcggt	300
attgacggtg tgacaccaaa catgattgac tactttggac gcccttacga ggaattgct	360
gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt	420
gatgagcgcc tgatcaaccc agatggttca ctctcttcc gcgttactat caatggagtc	480
accgatggc gcctttgcga gcgtattctt gcc	513

<210> 47
 <211> 171
 <212> PRT
 <213> Artificial Sequence

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

<400> 47
 Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Gln Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

Phe Gln Lys Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Phe Gln Met Gly Leu Ile Glu Met Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
 165 170

<210> 48

<211> 1455
 <212> DNA
 <213> Artificial Sequence

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

<400> 48
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 accccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc 180
 atcatccctt acgagggact cagtggtttt caaatgggtc tgattgaaat gatcttcaaa 240
 gttgtttacc cagtggatga tcatcatttc aaggttattc tccattatgg tacactcgtt 300
 attgacggtg tgacaccaa catgattgac tactttggac gcccttacga gggaattgct 360
 gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt 420
 gatgagcgcc tgatcaaccc agatgggtca ctctcttcc gcgttactat caatggagtc 480
 accggatggc gcctttgcga gcgtattctt gccggatatc tcgagccaac cactgaggat 540
 ctgtactttc agagcgataa cgatggatcc gaaatcggtc ctggctttcc attcgacccc 600
 cattatgtgg aagtcctggg cgagcgcatg cactacgtcg atgttgggtc gcgcgatggc 660
 acccctgtgc tgttcctgca cggtaacccg acctcctcct acgtgtggcg caacatcatc 720
 ccgcatgttg caccgaccca tcgctgcatt gctccagacc tgatcgggtat gggcaaattc 780
 gacaaaccag acctgggtta tttcttcgac gaccacgtcc gcttcatgga tgccttcac 840
 gaagccctgg gtctggaaga ggtcgtcctg gtcattcacg actggggctc cgctctgggt 900
 ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcatc 960
 cgccctatcc cgacctggga cgaatggcca gaatttgccc gcgagacctt ccaggccttc 1020
 cgcaccaccg acgtcggccg caagctgac atcgatcaga acgtttttat cgagggtacg 1080
 ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgcgagccg 1140
 ttctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc 1200
 ggtgagccag cgaacatcgt cgcgctggc gaagaataca tggactggct gcaccagtcc 1260
 cctgtcccga agctgctgtt ctggggcacc ccaggcggtc tgatcccacc ggccgaagcc 1320
 gctcgcctgg ccaaaagcct gcctaactgc aaggctgtgg acatcgcccc gggctctgaat 1380
 ctgctgcaag aagacaaccc ggacctgatc ggcagcgaga tcgcgcgctg gctgtctact 1440
 ctggagattt ccggt 1455

<210> 49
 <211> 485
 <212> PRT
 <213> Artificial Sequence

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

155193_1

<400> 49

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Gln Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
 20 25 30

Phe Gln Lys Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Phe Gln Met Gly Leu Ile Glu Met Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Tyr Leu Glu Pro
 165 170 175

Thr Thr Glu Asp Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile
 180 185 190

Gly Thr Gly Phe Pro Phe Asp Pro His Tyr Val Glu Val Leu Gly Glu
 195 200 205

Arg Met His Tyr Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu
 210 215 220

Phe Leu His Gly Asn Pro Thr Ser Ser Tyr Val Trp Arg Asn Ile Ile
 225 230 235 240

Pro His Val Ala Pro Thr His Arg Cys Ile Ala Pro Asp Leu Ile Gly
 245 250 255

Met Gly Lys Ser Asp Lys Pro Asp Leu Gly Tyr Phe Phe Asp Asp His
 260 265 270

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Val Arg Phe Met Asp Ala Phe Ile Glu Ala Leu Gly Leu Glu Glu Val
275 280 285

Val Leu Val Ile His Asp Trp Gly Ser Ala Leu Gly Phe His Trp Ala
290 295 300

Lys Arg Asn Pro Glu Arg Val Lys Gly Ile Ala Phe Met Glu Phe Ile
305 310 315 320

Arg Pro Ile Pro Thr Trp Asp Glu Trp Pro Glu Phe Ala Arg Glu Thr
325 330 335

Phe Gln Ala Phe Arg Thr Thr Asp Val Gly Arg Lys Leu Ile Ile Asp
340 345 350

Gln Asn Val Phe Ile Glu Gly Thr Leu Pro Met Gly Val Val Arg Pro
355 360 365

Leu Thr Glu Val Glu Met Asp His Tyr Arg Glu Pro Phe Leu Asn Pro
370 375 380

Val Asp Arg Glu Pro Leu Trp Arg Phe Pro Asn Glu Leu Pro Ile Ala
385 390 395 400

Gly Glu Pro Ala Asn Ile Val Ala Leu Val Glu Glu Tyr Met Asp Trp
405 410 415

Leu His Gln Ser Pro Val Pro Lys Leu Leu Phe Trp Gly Thr Pro Gly
420 425 430

Val Leu Ile Pro Pro Ala Glu Ala Ala Arg Leu Ala Lys Ser Leu Pro
435 440 445

Asn Cys Lys Ala Val Asp Ile Gly Pro Gly Leu Asn Leu Leu Gln Glu
450 455 460

Asp Asn Pro Asp Leu Ile Gly Ser Glu Ile Ala Arg Trp Leu Ser Thr
465 470 475 480

Leu Glu Ile Ser Gly
485

<210> 50
<211> 1455
<212> DNA
<213> Artificial Sequence

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

<400> 50

155193_1

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gatcaagtgt tagaacaagg aggagtgtct agtctgttcc aaaagctggg agtgtcagtc	120
acccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc	180
atcatccctt acgagggact cagtggtttt caaatgggtc tgattgaaat gatcttcaaa	240
gttgtttacc cagtggatga tcatcatttc aaggttattc tccattatgg tacactcgtt	300
attgacggtg tgacaccaa catgattgac tactttggac gcccttacga gggaattgct	360
gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt	420
gatgagcgcc tgatcaaccc agatggttca ctctcttcc gcgttactat caatggagtc	480
accggatggc gcctttgcga gcgtattctt gccggatatc tcgagccaac cactgaggat	540
ctgtactttc agagcgataa cgatggatcc gaaatcggtc ctggctttcc attcgacccc	600
cattatgtgg aagtcctggg cgagcgcatg cactacgtcg atgttggtcc gcgcgatggc	660
accctgtgc tgttcctgca cggtaacccg acctctcct acgtgtggcg caacatcatc	720
ccgcatgttg caccgaccca tcgctgcatt gctccagacc tgatcgggat gggcaaatcc	780
gacaaaccag acctgggtta tttcttcgac gaccacgtcc gcttcatgga tgccttcac	840
gaagccctgg gtctggaaga ggtcgtcctg gtcattcacg actggggctc cgctctgggt	900
ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcatc	960
cgccctatcc cgacctggga cgaatggcca gaatttgccc gcgagacctt ccaggccttc	1020
cgcaccaccg acgtcggccg caagctgatc atcgatcaga acgtttttat cgagggtacg	1080
ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgcgagccg	1140
ttcctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc	1200
ggtgagccag cgaacatcgt cgcgctggc gaagaataca tggactggct gcaccagtcc	1260
cctgtcccga agctgctgtt ctggggcacc ccaggcgctt tgatcccacc ggccgaagcc	1320
gctcgcctgg ccaaaagcct gcctaactgc aaggctgtgg acatcgcccc gggctctgaat	1380
ctgctgcaag aagacaaccc ggacctgatc ggcagcgaga tcgcgcgctg gctgtctact	1440
ctggagatth ccggt	1455

<210> 51
 <211> 485
 <212> PRT
 <213> Artificial Sequence

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

<400> 51
 Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Gln Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

155193_1

Phe Gln Lys₃₅ Leu Gly Val Ser Val₄₀ Thr Pro Ile Gln Lys₄₅ Ile Val Leu
 Ser Gly₅₀ Glu Asn Gly Leu Lys₅₅ Ile Asp Ile His Val₆₀ Ile Ile Pro Tyr
 Glu₆₅ Gly Leu Ser Gly Phe₇₀ Gln Met Gly Leu Ile₇₅ Glu Met Ile Phe Lys₈₀
 Val Val Tyr Pro Val₈₅ Asp Asp His His Phe₉₀ Lys Val Ile Leu His₉₅ Tyr
 Gly Thr Leu Val₁₀₀ Ile Asp Gly Val Thr₁₀₅ Pro Asn Met Ile Asp₁₁₀ Tyr Phe
 Gly Arg Pro₁₁₅ Tyr Glu Gly Ile Ala₁₂₀ Val Phe Asp Gly Lys₁₂₅ Lys Ile Thr
 Val Thr₁₃₀ Gly Thr Leu Trp Asn₁₃₅ Gly Asn Lys Ile Ile₁₄₀ Asp Glu Arg Leu
 Ile Asn Pro Asp Gly Ser₁₅₀ Leu Leu Phe Arg Val₁₅₅ Thr Ile Asn Gly Val₁₆₀
 Thr Gly Trp Arg Leu₁₆₅ Cys Glu Arg Ile Leu Ala Gly Tyr Leu Glu₁₇₅ Pro
 Thr Thr Glu Asp₁₈₀ Leu Tyr Phe Gln Ser₁₈₅ Asp Asn Asp Gly Ser₁₉₀ Glu Ile
 Gly Thr Gly₁₉₅ Phe Pro Phe Asp Pro₂₀₀ His Tyr Val Glu Val₂₀₅ Leu Gly Glu
 Arg Met₂₁₀ His Tyr Val Asp Val₂₁₅ Gly Pro Arg Asp Gly₂₂₀ Thr Pro Val Leu
 Phe Leu His Gly Asn Pro₂₃₀ Thr Ser Ser Tyr Val₂₃₅ Trp Arg Asn Ile Ile₂₄₀
 Pro His Val Ala₂₄₅ Pro Thr His Arg Cys Ile₂₅₀ Ala Pro Asp Leu Ile₂₅₅ Gly
 Met Gly Lys Ser₂₆₀ Asp Lys Pro Asp Leu₂₆₅ Gly Tyr Phe Phe Asp₂₇₀ Asp His
 Val Arg Phe₂₇₅ Met Asp Ala Phe Ile₂₈₀ Glu Ala Leu Gly Leu₂₈₅ Glu Glu Val
 Val Leu Val Ile His Asp Trp₂₉₅ Gly Ser Ala Leu Gly₃₀₀ Phe His Trp Ala

155193_1

Lys Arg Asn Pro Glu Arg Val Lys Gly Ile Ala Phe Met Glu Phe Ile
305 310 315 320

Arg Pro Ile Pro Thr Trp Asp Glu Trp Pro Glu Phe Ala Arg Glu Thr
325 330 335

Phe Gln Ala Phe Arg Thr Thr Asp Val Gly Arg Lys Leu Ile Ile Asp
340 345 350

Gln Asn Val Phe Ile Glu Gly Thr Leu Pro Met Gly Val Val Arg Pro
355 360 365

Leu Thr Glu Val Glu Met Asp His Tyr Arg Glu Pro Phe Leu Asn Pro
370 375 380

Val Asp Arg Glu Pro Leu Trp Arg Phe Pro Asn Glu Leu Pro Ile Ala
385 390 395 400

Gly Glu Pro Ala Asn Ile Val Ala Leu Val Glu Glu Tyr Met Asp Trp
405 410 415

Leu His Gln Ser Pro Val Pro Lys Leu Leu Phe Trp Gly Thr Pro Gly
420 425 430

Val Leu Ile Pro Pro Ala Glu Ala Ala Arg Leu Ala Lys Ser Leu Pro
435 440 445

Asn Cys Lys Ala Val Asp Ile Gly Pro Gly Leu Asn Leu Leu Gln Glu
450 455 460

Asp Asn Pro Asp Leu Ile Gly Ser Glu Ile Ala Arg Trp Leu Ser Thr
465 470 475 480

Leu Glu Ile Ser Gly
485

<210> 52
<211> 1455
<212> DNA
<213> Artificial Sequence

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

<400> 52	
atggtgttta cattgaagga tttcgttga gactggcggc agacagctgg atacaaccaa	60
gatcaagtgt tagaacaagg aggattgtct agtctgttcc aaaatctggg agtgtcagtc	120
acccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc	180
atcatccctt acgagggact cagtgggttat caaatgggtc agattgaaaa gatcttcaaa	240
gttgtttacc cagtggatga tcatcatttc aaggttattc tccattatgg tacactcgtt	300

155193_1

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attgacggtg tgacaccaaa catgattgac tacttttgac gcccttacga ggaattgct      360
gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt      420
gatgagcgcc tgatcaaccc agatggttca ctcctcttcc gcgttactat caatggagtc      480
accggatggc gcctttgcca gcgtattctt gccggatatc tcgagccaac cactgaggat      540
ctgtactttc agagcgataa cgatggatcc gaaatcggta ctggctttcc attcgacccc      600
cattatgtgg aagtcctggg cgagcgcatg cactacgtcg atgttgggtcc gcgcgatggc      660
accctgtgc  tgttcctgca cggtaacccg acctcctcct acgtgtggcg caacatcatc      720
ccgcatgttg caccgaccca tcgctgcatt gctccagacc tgatcgggtat gggcaaatcc      780
gacaaaccag acctgggtta tttcttcgac gaccacgtcc gcttcatgga tgccttcac      840
gaagccctgg gtctggaaga ggtcgtcctg gtcattcacg actggggctc cgctctgggt      900
ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcatc      960
cgccctatcc cgacctggga cgaatggcca gaatttgccc gcgagacctt ccaggccttc     1020
cgcaccaccg acgtcggccg caagctgac atcgatcaga acgtttttat cgaggggtacg     1080
ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgcgagccg     1140
ttcctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc     1200
ggtgagccag cgaacatcgt cgcgctggtc gaagaataca tggactggct gcaccagtcc     1260
cctgtcccga agctgctgtt ctggggcacc ccaggcgctt tgatcccacc ggccgaagcc     1320
gctcgcctgg ccaaaagcct gcctaactgc aaggctgtgg acatcgggcc gggctctgaat     1380
ctgctgcaag aagacaaccc ggacctgatc ggcagcgaga tcgcgcgctg gctgtctact     1440
ctggagatth ccggt                                     1455

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<210> 53
 <211> 485
 <212> PRT
 <213> Artificial Sequence

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

<400> 53
 Met Val Phe Thr Leu Lys Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Gln Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
 20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Tyr Leu Glu Pro
 165 170 175

Thr Thr Glu Asp Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile
 180 185 190

Gly Thr Gly Phe Pro Phe Asp Pro His Tyr Val Glu Val Leu Gly Glu
 195 200 205

Arg Met His Tyr Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu
 210 215 220

Phe Leu His Gly Asn Pro Thr Ser Ser Tyr Val Trp Arg Asn Ile Ile
 225 230 235 240

Pro His Val Ala Pro Thr His Arg Cys Ile Ala Pro Asp Leu Ile Gly
 245 250 255

Met Gly Lys Ser Asp Lys Pro Asp Leu Gly Tyr Phe Phe Asp Asp His
 260 265 270

Val Arg Phe Met Asp Ala Phe Ile Glu Ala Leu Gly Leu Glu Glu Val
 275 280 285

Val Leu Val Ile His Asp Trp Gly Ser Ala Leu Gly Phe His Trp Ala
 290 295 300

Lys Arg Asn Pro Glu Arg Val Lys Gly Ile Ala Phe Met Glu Phe Ile
 305 310 315 320

Arg Pro Ile Pro Thr Trp Asp Glu Trp Pro Glu Phe Ala Arg Glu Thr
 325 330 335

155193_1

Phe Gln Ala Phe Arg Thr Thr Asp Val Gly Arg Lys Leu Ile Ile Asp
340 345 350

Gln Asn Val Phe Ile Glu Gly Thr Leu Pro Met Gly Val Val Arg Pro
355 360 365

Leu Thr Glu Val Glu Met Asp His Tyr Arg Glu Pro Phe Leu Asn Pro
370 375 380

Val Asp Arg Glu Pro Leu Trp Arg Phe Pro Asn Glu Leu Pro Ile Ala
385 390 395 400

Gly Glu Pro Ala Asn Ile Val Ala Leu Val Glu Glu Tyr Met Asp Trp
405 410 415

Leu His Gln Ser Pro Val Pro Lys Leu Leu Phe Trp Gly Thr Pro Gly
420 425 430

Val Leu Ile Pro Pro Ala Glu Ala Ala Arg Leu Ala Lys Ser Leu Pro
435 440 445

Asn Cys Lys Ala Val Asp Ile Gly Pro Gly Leu Asn Leu Leu Gln Glu
450 455 460

Asp Asn Pro Asp Leu Ile Gly Ser Glu Ile Ala Arg Trp Leu Ser Thr
465 470 475 480

Leu Glu Ile Ser Gly
485

<210> 54
<211> 81
<212> DNA
<213> *Oplophorus gracilirostris*

<400> 54
atggcttact ccacactgtt catcattgct ctacacagccg tcgtaacaca agcctcctcc 60
acacagaaaa gcaacctgac a 81

<210> 55
<211> 1875
<212> DNA
<213> Artificial Sequence

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

<400> 55
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gccttgctgg acgagcagca ggtgaacgtc ctgctctacg acatgaacgg ctgctactca 120
cgctcaagg agctggtgcc caccctgccc cagaaccgca aagtgagcaa ggtggagatc 180
ctgcagcatg taatcgacta catcagggac ctgcagctgg agctgaactc ggagtctgaa 240

155193_1

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gtcgggacca ccggaggccg gggactgcct gtccgcgccc cgctcagcac cctgaacggc      300
gagatcagtg ccttggcggc cgaggcggca tgtgttccag ccgacgatcg catcttgtgt      360
cgcgtttctc ttgagaatct ttattttcag gcgtctggag gtggtggcgg agcgatcgcc      420
atggtgttta cattggagga tttcgttga gactggcggc agacagctgg atacaaccaa      480
gatcaagtgt tagaacaagg aggattgtct agtctgttcc aaaagctggg agtgtcagtc      540
acccaatcc agaaaattgt gctgtctggg gagaatgggt taaaatttga tattcatgtc      600
atcatccctt acgagggact cagtggtttt caaatgggtc tgattgaaat gatcttcaaa      660
gttgtttacc cagtggatga tcatcatttc aagattattc tccattatgg tacactcgtt      720
attgacggtg tgacaccaaa catgattgac tactttggac gcccttacga gggcaattgct      780
gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt      840
gatgagcgcc tgatcaaccc agatggttca ctctcttcc gcgttactat caatggagtc      900
accggatggc gcctttgcga gcgtattctt gccggatctc tcgagccaac cactgaggat      960
ctgtactttc agagcgataa cgatggatcc gaaatcggta ctggctttcc attcgacccc     1020
cattatgtgg aagtcctggg cgagcgcgat cactacgtcg atgttgggcc gcgcgatggc     1080
accctgtgc tgttcctgca cggtaacccg acctcctcct acgtgtggcg caacatcatc     1140
ccgcatgttg caccgaccca tcgctgcatt gctccagacc tgatcggtat gggcaaatcc     1200
gacaaaccag acctgggtta tttcttcgac gaccacgtcc gcttcatgga tgccttcac     1260
gaagccctgg gtctggaaga ggtcgtcctg gtcattcacg actggggctc cgctctgggt     1320
ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcatc     1380
cgccctatcc cgacctggga cgaatggcca gaatttgccc gcgagacctt ccaggccttc     1440
cgccaccacg acgtcggccg caagctgatc atcgatcaga acgtttttat cgagggtacg     1500
ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgcgagccg     1560
ttcctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc     1620
ggtgagccag cgaacatcgt cgcgctggtc gaagaataca tggactggct gcaccagtcc     1680
cctgtcccga agctgctgtt ctggggcacc ccaggcggtt tgatcccacc ggccgaagcc     1740
gctcgcctgg ccaaaagcct gcctaactgc aaggctgtgg acatcgcccc gggctctgaat     1800
ctgctgcaag aagacaaccc ggacctgatc ggcagcgaga tcgcgcgctg gctgtctact     1860
ctggagattt ccggt                                     1875

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<210> 56

<211> 625

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 56

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 Thr Arg Leu Pro Ala Leu Leu Asp Glu Gln Gln Val Asn Val Leu Leu
 20 25 30
 Tyr Asp Met Asn Gly Cys Tyr Ser Arg Leu Lys Glu Leu Val Pro Thr
 35 40 45
 Leu Pro Gln Asn Arg Lys Val Ser Lys Val Glu Ile Leu Gln His Val
 50 55 60
 Ile Asp Tyr Ile Arg Asp Leu Gln Leu Glu Leu Asn Ser Glu Ser Glu
 65 70 75 80
 Val Gly Thr Thr Gly Gly Arg Gly Leu Pro Val Arg Ala Pro Leu Ser
 85 90 95
 Thr Leu Asn Gly Glu Ile Ser Ala Leu Ala Ala Glu Ala Ala Cys Val
 100 105 110
 Pro Ala Asp Asp Arg Ile Leu Cys Arg Val Ser Leu Glu Asn Leu Tyr
 115 120 125
 Phe Gln Ala Ser Gly Gly Gly Gly Ala Ile Ala Met Val Phe Thr
 130 135 140
 Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Gln
 145 150 155 160
 Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu Phe Gln Lys Leu
 165 170 175
 Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu Ser Gly Glu Asn
 180 185 190
 Gly Leu Lys Phe Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
 195 200 205
 Gly Phe Gln Met Gly Leu Ile Glu Met Ile Phe Lys Val Val Tyr Pro
 210 215 220
 Val Asp Asp His His Phe Lys Ile Ile Leu His Tyr Gly Thr Leu Val
 225 230 235 240
 Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
 245 250 255
 Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
 260 265 270

155193_1
 Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
 275 280 285
 Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
 290 300
 Leu Cys Glu Arg Ile Leu Ala Gly Ser Leu Glu Pro Thr Thr Glu Asp
 305 310 315 320
 Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile Gly Thr Gly Phe
 325 330 335
 Pro Phe Asp Pro His Tyr Val Glu Val Leu Gly Glu Arg Met His Tyr
 340 345 350
 Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu Phe Leu His Gly
 355 360 365
 Asn Pro Thr Ser Ser Tyr Val Trp Arg Asn Ile Ile Pro His Val Ala
 370 375 380
 Pro Thr His Arg Cys Ile Ala Pro Asp Leu Ile Gly Met Gly Lys Ser
 385 390 395 400
 Asp Lys Pro Asp Leu Gly Tyr Phe Phe Asp Asp His Val Arg Phe Met
 405 410 415
 Asp Ala Phe Ile Glu Ala Leu Gly Leu Glu Glu Val Val Leu Val Ile
 420 425 430
 His Asp Trp Gly Ser Ala Leu Gly Phe His Trp Ala Lys Arg Asn Pro
 435 440 445
 Glu Arg Val Lys Gly Ile Ala Phe Met Glu Phe Ile Arg Pro Ile Pro
 450 455 460
 Thr Trp Asp Glu Trp Pro Glu Phe Ala Arg Glu Thr Phe Gln Ala Phe
 465 470 475 480
 Arg Thr Thr Asp Val Gly Arg Lys Leu Ile Ile Asp Gln Asn Val Phe
 485 490 495
 Ile Glu Gly Thr Leu Pro Met Gly Val Val Arg Pro Leu Thr Glu Val
 500 505 510
 Glu Met Asp His Tyr Arg Glu Pro Phe Leu Asn Pro Val Asp Arg Glu
 515 520 525
 Pro Leu Trp Arg Phe Pro Asn Glu Leu Pro Ile Ala Gly Glu Pro Ala
 530 535 540

155193_1
 Asn Ile Val Ala Leu Val Glu Glu Tyr Met Asp Trp Leu His Gln Ser
 545 550 555 560

Pro Val Pro Lys Leu Leu Phe Trp Gly Thr Pro Gly Val Leu Ile Pro
 565 570 575

Pro Ala Glu Ala Ala Arg Leu Ala Lys Ser Leu Pro Asn Cys Lys Ala
 580 585 590

Val Asp Ile Gly Pro Gly Leu Asn Leu Leu Gln Glu Asp Asn Pro Asp
 595 600 605

Leu Ile Gly Ser Glu Ile Ala Arg Trp Leu Ser Thr Leu Glu Ile Ser
 610 615 620

Gly
 625

<210> 57
 <211> 1875
 <212> DNA
 <213> Artificial Sequence

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

<400> 57
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 cgcctcaagg agctgggtgcc caccctgccc cagaaccgca aagtgaagcaa ggtggagatc 180
 ctgcagcatg taatcgacta catcagggac ctgcagctgg agctgaactc ggagtctgaa 240
 gtcgggacca ccggaggccg gggactgcct gtccgcgccc cgctcagcac cctgaacggc 300
 gagatcagtg ccttggcggc cgaggcggca tgtgttccag ccgacgatcg catcttgtgt 360
 cgcgtttctc ttgagaatct ttattttcag gcgtctggag gtggtggcgg agcgatcgcc 420
 atggtgttta cattggagga tttcgttga gactggcggc agacagctgg atacaaccaa 480
 gatcaagtgt tagaacaagg aggattgtct agtctgttcc aaaagctggg agtgtcagtc 540
 accccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc 600
 atcatccctt acgagggact cagtggtttt caaatgggtc tgattgaaat gatcttcaaa 660
 gttgtttacc cagtggatga tcatcatttc aaggttattc tccattatgg tacactcgtt 720
 attgacggtg tgacaccaaa catgattgac tactttggac gcccttacga ggaattgct 780
 gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt 840
 gatgagcgcc tgatcaaccc agatggttca ctctcttcc gcgttactat caatggagtc 900
 accggatggc gcctttgcga gcgtattctt gccgtttctc tcgagccaac cactgaggat 960
 ctgtactttc agagcgataa cgatggatcc gaaatcggta ctggctttcc attcgacccc 1020

155193_1

cattatgtgg aagtcctggg cgagcgcgcatg cactacgtcg atgttgggtcc gcgcgatggc	1080
accctgtgca tgttcctgca cggtaaccgc acctcctcct acgtgtggcg caacatcatc	1140
ccgcgatgttg caccgaccca tcgctgcatt gctccagacc tgatcgggtat gggcaaattcc	1200
gacaaaccag acctgggtta tttcttcgac gaccacgtcc gcttcatgga tgccttcac	1260
gaagccctgg gtctggaaga ggtcgtcctg gtcattcacg actggggctc cgctctgggt	1320
ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcatc	1380
cgccctatcc cgacctggga cgaatggcca gaatttgccc gcgagacctt ccaggccttc	1440
cgcaccaccg acgtcggccg caagctgac atcgatcaga acgtttttat cgagggtacg	1500
ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgcgagccg	1560
ttcctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc	1620
ggtagaccag cgaacatcgt cgcgctggtc gaagaataca tggactggct gcaccagtcc	1680
cctgtcccgga agctgctgtt ctggggcacc ccaggcggtt tgatcccacc ggccgaagcc	1740
gctgcctgg ccaaaagcct gcctaactgc aaggctgtgg acatcgcccc gggctctgaat	1800
ctgctgcaag aagacaaccc ggacctgatc ggcagcgaga tcgcgcgctg gctgtctact	1860
ctggagattt ccggt	1875

<210> 58
 <211> 625
 <212> PRT
 <213> Artificial Sequence

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

<400> 58
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Thr Arg Leu Pro Ala Leu Leu Asp Glu Gln Gln Val Asn Val Leu Leu
 20 25 30

Tyr Asp Met Asn Gly Cys Tyr Ser Arg Leu Lys Glu Leu Val Pro Thr
 35 40 45

Leu Pro Gln Asn Arg Lys Val Ser Lys Val Glu Ile Leu Gln His Val
 50 55 60

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

Val Gly Thr Thr Gly Gly Arg Gly Leu Pro Val Arg Ala Pro Leu Ser
 85 90 95

Thr Leu Asn Gly Glu Ile Ser Ala Leu Ala Ala Glu Ala Ala Cys Val
 100 105 110

155193_1

Pro Ala Asp Asp Arg Ile Leu Cys Arg Val Ser Leu Glu Asn Leu Tyr
 115 120 125
 Phe Gln Ala Ser Gly Gly Gly Gly Gly Ala Ile Ala Met Val Phe Thr
 130 135 140
 Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Gln
 145 150 155 160
 Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu Phe Gln Lys Leu
 165 170 175
 Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu Ser Gly Glu Asn
 180 185 190
 Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
 195 200 205
 Gly Phe Gln Met Gly Leu Ile Glu Met Ile Phe Lys Val Val Tyr Pro
 210 215 220
 Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
 225 230 235 240
 Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
 245 250 255
 Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
 260 265 270
 Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
 275 280 285
 Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
 290 295 300
 Leu Cys Glu Arg Ile Leu Ala Val Ser Leu Glu Pro Thr Thr Glu Asp
 305 310 315 320
 Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile Gly Thr Gly Phe
 325 330 335
 Pro Phe Asp Pro His Tyr Val Glu Val Leu Gly Glu Arg Met His Tyr
 340 345 350
 Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu Phe Leu His Gly
 355 360 365
 Asn Pro Thr Ser Ser Tyr Val Trp Arg Asn Ile Ile Pro His Val Ala
 370 375 380

155193_1

Pro Thr His Arg Cys Ile Ala Pro Asp Leu Ile Gly Met Gly Lys Ser
385 390 395 400

Asp Lys Pro Asp Leu Gly Tyr Phe Phe Asp Asp His Val Arg Phe Met
405 410 415

Asp Ala Phe Ile Glu Ala Leu Gly Leu Glu Glu Val Val Leu Val Ile
420 425 430

His Asp Trp Gly Ser Ala Leu Gly Phe His Trp Ala Lys Arg Asn Pro
435 440 445

Glu Arg Val Lys Gly Ile Ala Phe Met Glu Phe Ile Arg Pro Ile Pro
450 455 460

Thr Trp Asp Glu Trp Pro Glu Phe Ala Arg Glu Thr Phe Gln Ala Phe
465 470 475 480

Arg Thr Thr Asp Val Gly Arg Lys Leu Ile Ile Asp Gln Asn Val Phe
485 490 495

Ile Glu Gly Thr Leu Pro Met Gly Val Val Arg Pro Leu Thr Glu Val
500 505 510

Glu Met Asp His Tyr Arg Glu Pro Phe Leu Asn Pro Val Asp Arg Glu
515 520 525

Pro Leu Trp Arg Phe Pro Asn Glu Leu Pro Ile Ala Gly Glu Pro Ala
530 535 540

Asn Ile Val Ala Leu Val Glu Glu Tyr Met Asp Trp Leu His Gln Ser
545 550 555 560

Pro Val Pro Lys Leu Leu Phe Trp Gly Thr Pro Gly Val Leu Ile Pro
565 570 575

Pro Ala Glu Ala Ala Arg Leu Ala Lys Ser Leu Pro Asn Cys Lys Ala
580 585 590

Val Asp Ile Gly Pro Gly Leu Asn Leu Leu Gln Glu Asp Asn Pro Asp
595 600 605

Leu Ile Gly Ser Glu Ile Ala Arg Trp Leu Ser Thr Leu Glu Ile Ser
610 615 620

Gly
625

<210> 59
<211> 1875
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 59

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cgcctcaagg agctgggtgcc caccctgccc cagaaccgca aagtgaagca ggtggagatc	180
ctgcagcatg taatcgacta catcagggac ctgcagctgg agctgaactc ggagtctgaa	240
gtcgggacca ccggaggccg gggactgcct gtccgcgccc cgctcagcac cctgaacggc	300
gagatcagtg ccttggcggc cgaggcggca tgtgttccag ccgacgatcg catcttgtgt	360
cgcgttttctc ttgagaatct ttattttcag gcgtctggag gtggtggcgg agcgatcgcc	420
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gaccaagtcc ttgagcaggg cggctctgtcc agtttgtttc agaatctcgg ggtgtccgta	540
acaccgatcc aaaagattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc	600
atcatcccgat gaaggtct gagcggctat cagatgggccc agatcgaaaa aatttttaag	660
gtggtgtacc ctgtggatga tcatcacttt aagggtgattc tgcactatgg cacactggta	720
atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgatga aggcacgcgc	780
gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc	840
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ctgtactttc agagcgataa cgatggatcc gaaatcggta ctggctttcc attcgacccc	1020
cattatgtgg aagtcctggg cgagcgcgat cactacgtcg atgttgggtcc gcgcgatggc	1080
accctgtgac tgttcctgca cggtaaccgg acctcctcct acgtgtggcg caacatcatc	1140
ccgcatgttg caccgaccca tcgctgcatt gctccagacc tgatcgggat gggcaaattc	1200
gacaaaccag acctgggtta tttcttcgac gaccacgtcc gcttcatgga tgccttcac	1260
gaagccctgg gtctggaaga ggtcgtcctg gtcattcacg actggggctc cgctctgggt	1320
ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcatc	1380
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ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgcgagccg	1560
ttcctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc	1620
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gctgcctgg ccaaaagcct gcctaactgc aaggctgtgg acatcgcccc gggctctgaat	1800
ctgctgcaag aagacaaccc ggacctgatc ggcagcgaga tcgcgcgctg gctgtctact	1860

ctggagattt ccggt

1875

<210> 60

<211> 625

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 60

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

155193_1

Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
 225 230 235 240
 Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
 245 250 255
 Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
 260 265 270
 Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
 275 280 285
 Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
 290 295 300
 Leu Cys Glu Arg Ile Leu Ala Gly Tyr Leu Glu Pro Thr Thr Glu Asp
 305 310 315 320
 Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile Gly Thr Gly Phe
 325 330 335
 Pro Phe Asp Pro His Tyr Val Glu Val Leu Gly Glu Arg Met His Tyr
 340 345 350
 Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu Phe Leu His Gly
 355 360 365
 Asn Pro Thr Ser Ser Tyr Val Trp Arg Asn Ile Ile Pro His Val Ala
 370 375 380
 Pro Thr His Arg Cys Ile Ala Pro Asp Leu Ile Gly Met Gly Lys Ser
 385 390 395 400
 Asp Lys Pro Asp Leu Gly Tyr Phe Phe Asp Asp His Val Arg Phe Met
 405 410 415
 Asp Ala Phe Ile Glu Ala Leu Gly Leu Glu Glu Val Val Leu Val Ile
 420 425 430
 His Asp Trp Gly Ser Ala Leu Gly Phe His Trp Ala Lys Arg Asn Pro
 435 440 445
 Glu Arg Val Lys Gly Ile Ala Phe Met Glu Phe Ile Arg Pro Ile Pro
 450 455 460
 Thr Trp Asp Glu Trp Pro Glu Phe Ala Arg Glu Thr Phe Gln Ala Phe
 465 470 475 480
 Arg Thr Thr Asp Val Gly Arg Lys Leu Ile Ile Asp Gln Asn Val Phe
 485 490 495

155193_1

Ile Glu Gly Thr Leu Pro Met Gly Val Val Arg Pro Leu Thr Glu Val
500 505 510

Glu Met Asp His Tyr Arg Glu Pro Phe Leu Asn Pro Val Asp Arg Glu
515 520 525

Pro Leu Trp Arg Phe Pro Asn Glu Leu Pro Ile Ala Gly Glu Pro Ala
530 535 540

Asn Ile Val Ala Leu Val Glu Glu Tyr Met Asp Trp Leu His Gln Ser
545 550 555 560

Pro Val Pro Lys Leu Leu Phe Trp Gly Thr Pro Gly Val Leu Ile Pro
565 570 575

Pro Ala Glu Ala Ala Arg Leu Ala Lys Ser Leu Pro Asn Cys Lys Ala
580 585 590

Val Asp Ile Gly Pro Gly Leu Asn Leu Leu Gln Glu Asp Asn Pro Asp
595 600 605

Leu Ile Gly Ser Glu Ile Ala Arg Trp Leu Ser Thr Leu Glu Ile Ser
610 615 620

Gly
625

<210> 61
<211> 1875
<212> DNA
<213> Artificial Sequence

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

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cgcctcaagg agctggtgcc caccctgccc cagaaccgca aagtgaagcaa ggtggagatc 180
ctgcagcatg taatcgacta catcagggac ctgcagctgg agctgaactc ggagtctgaa 240
gtcgggacca ccggaggccg gggactgcct gtccgcgccc cgctcagcac cctgaacggc 300
gagatcagtg ccttggcggc cgaggcggca tgtgttccag ccgacgatcg catcttgtgt 360
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atggtgttta cattggagga tttcgttgga gactggcggc agacagctgg atacaaccta 480
gatcaagtgt tagaacaagg aggattgtct agtctgttcc aaaagctggg agtgtcagtc 540
acccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc 600

155193_1

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attgacggtg tgacaccaaa catgattgac tactttggac gcccttacga ggaattgct	780
gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt	840
gatgagcgcc tgatcaaccc agatgggttca ctctcttcc gcgttactat caatggagtc	900
accggatggc gcctttgcga gcgtattctt gccgtttctc tcgagccaac cactgaggat	960
ctgtactttc agagcgataa cgatggatcc gaaatcggta ctggctttcc attcgacccc	1020
cattatgtgg aagtcctggg cgagcgcatg cactacgtcg atgttgggtc gcgcgatggc	1080
accctgtgc tgttcctgca cggtaaccgc acctcctcct acgtgtggcg caacatcatc	1140
ccgcattgtg caccgaccca tcgctgcatt gctccagacc tgatcgggtat gggcaaatcc	1200
gacaaaccag acctgggtta tttcttcgac gaccacgtcc gttcatgga tgccttcac	1260
gaagccctgg gtctggaaga ggtcgtcctg gtcattcacg actggggctc cgctctgggt	1320
ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcatc	1380
cgccctatcc cgacctggga cgaatggcca gaatttgccc gcgagacctt ccaggccttc	1440
cgcaccaccg acgtcggccg caagctgatc atcgatcaga acgtttttat cgaggggtacg	1500
ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgcgagccg	1560
ttcctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc	1620
ggtgagccag cgaacatcgt cgcgctggtc gaagaataca tggactggct gcaccagtcc	1680
cctgtcccga agctgctgtt ctggggcacc ccaggcggtt tgatcccacc ggccgaagcc	1740
gctgccttgg ccaaaagcct gcctaactgc aaggctgtgg acatcgcccc gggctctgaat	1800
ctgctgcaag aagacaaccc ggacctgatc ggcagcgaga tcgctgcgtg gctgtctact	1860
ctggagattt ccggt	1875

<210> 62
 <211> 625
 <212> PRT
 <213> Artificial Sequence

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

<400> 62
 Met Leu Gly Leu Ser Glu Gln Ser Val Ser Ile Ser Arg Cys Ala Gly
 1 5 10 15

Thr Arg Leu Pro Ala Leu Leu Asp Glu Gln Gln Val Asn Val Leu Leu
 20 25 30

Tyr Asp Met Asn Gly Cys Tyr Ser Arg Leu Lys Glu Leu Val Pro Thr
 35 40 45

Leu Pro Gln Asn Arg Lys Val Ser Lys Val Glu Ile Leu Gln His Val
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50 55 60

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

Val Gly Thr Thr Gly Gly Arg Gly Leu Pro Val Arg Ala Pro Leu Ser
85 90 95

Thr Leu Asn Gly Glu Ile Ser Ala Leu Ala Ala Glu Ala Ala Cys Val
100 105 110

Pro Ala Asp Asp Arg Ile Leu Cys Arg Val Ser Leu Glu Asn Leu Tyr
115 120 125

Phe Gln Ala Ser Gly Gly Gly Gly Gly Ala Ile Ala Met Val Phe Thr
130 135 140

Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu
145 150 155 160

Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu Phe Gln Lys Leu
165 170 175

Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu Ser Gly Glu Asn
180 185 190

Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
195 200 205

Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
210 215 220

Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
225 230 235 240

Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
245 250 255

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
260 265 270

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

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
290 295 300

Leu Cys Glu Arg Ile Leu Ala Val Ser Leu Glu Pro Thr Thr Glu Asp
305 310 315 320

Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile Gly Thr Gly Phe

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325	330	335
Pro Phe Asp	Pro His Tyr Val Glu Val Leu Gly Glu Arg Met His Tyr	
	340 345 350	
Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu Phe Leu His Gly		
	355 360 365	
Asn Pro Thr Ser Ser Tyr Val Trp Arg Asn Ile Ile Pro His Val Ala		
	370 375 380	
Pro Thr His Arg Cys Ile Ala Pro Asp Leu Ile Gly Met Gly Lys Ser		
	385 390 395 400	
Asp Lys Pro Asp Leu Gly Tyr Phe Phe Asp Asp His Val Arg Phe Met		
	405 410 415	
Asp Ala Phe Ile Glu Ala Leu Gly Leu Glu Glu Val Val Leu Val Ile		
	420 425 430	
His Asp Trp Gly Ser Ala Leu Gly Phe His Trp Ala Lys Arg Asn Pro		
	435 440 445	
Glu Arg Val Lys Gly Ile Ala Phe Met Glu Phe Ile Arg Pro Ile Pro		
	450 455 460	
Thr Trp Asp Glu Trp Pro Glu Phe Ala Arg Glu Thr Phe Gln Ala Phe		
	465 470 475 480	
Arg Thr Thr Asp Val Gly Arg Lys Leu Ile Ile Asp Gln Asn Val Phe		
	485 490 495	
Ile Glu Gly Thr Leu Pro Met Gly Val Val Arg Pro Leu Thr Glu Val		
	500 505 510	
Glu Met Asp His Tyr Arg Glu Pro Phe Leu Asn Pro Val Asp Arg Glu		
	515 520 525	
Pro Leu Trp Arg Phe Pro Asn Glu Leu Pro Ile Ala Gly Glu Pro Ala		
	530 535 540	
Asn Ile Val Ala Leu Val Glu Glu Tyr Met Asp Trp Leu His Gln Ser		
	545 550 555 560	
Pro Val Pro Lys Leu Leu Phe Trp Gly Thr Pro Gly Val Leu Ile Pro		
	565 570 575	
Pro Ala Glu Ala Ala Arg Leu Ala Lys Ser Leu Pro Asn Cys Lys Ala		
	580 585 590	
Val Asp Ile Gly Pro Gly Leu Asn Leu Leu Gln Glu Asp Asn Pro Asp		

595 600 155193_1 605
 Leu Ile Gly Ser Glu Ile Ala Arg Trp Leu Ser Thr Leu Glu Ile Ser
 610 615 620

Gly
625

<210> 63
 <211> 1875
 <212> DNA
 <213> Artificial Sequence

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

<400> 63
 atgcttggtc tgtcggagca aagcgtgtcc atctcgcgct gcgctgggac ggcctgccc 60
 gccttgctgg acgagcagca ggtgaacgtc ctgctctacg acatgaacgg ctgctactca 120
 cgcctcaagg agctggtgcc caccctgccc cagaaccgca aagtgaagca ggtggagatc 180
 ctgcagcatg taatcgacta catcagggac ctgcagctgg agctgaactc ggagtctgaa 240
 gtcgggacca ccggaggccg gggactgcct gtccgcgccc cgctcagcac cctgaacggc 300
 gagatcagtg ccttggcggc cgaggcggca tgtgttccag ccgacgatcg catcttgtgt 360
 cgcgtttctc ttgagaatct ttattttcag gcgtctggag gtggtggcgg agcgatcgcc 420
 atggtgttta cattggagga tttcgttga gactggcggc agacagctgg atacaaccta 480
 gatcaagtgt tagaacaagg aggagtgtct agtctgttcc aaaagctggg agtgtcaatc 540
 accccaatcc agaaaattgt gctgtctggg gagaatgggt taaaaattga tattcatgtc 600
 atcatccctt acgagggact cagtggttat caaatgggtc agattgaaaa gatcttcaaa 660
 gttgtttacc cagtggatga tcatcatttc aaggttattc tccattatgg tacactcgtt 720
 attgacggtg tgacaccaa catgattgac tactttggac gcccttacga ggggaattgct 780
 gtgtttgacg gcaagaagat cacagttact ggaactctgt ggaacggcaa caagatcatt 840
 gatgagcgcc tgatcaaccc agatggttca ctctcttcc gcgttactat caatggagtc 900
 accggatggc gcctttgcga gcgtattctt gccgtttctc tcgagccaac cactgaggat 960
 ctgtactttc agagcgataa cgatggatcc gaaatcggta ctggctttcc attcgacccc 1020
 cattatgtgg aagtcctggg cgagcgcgtg cactacgtcg atgttgggtc gcgcgatggc 1080
 acccctgtgc tgttcctgca cggtaaccgg acctcctcct acgtgtggcg caacatcatc 1140
 ccgcatgttg caccgaccca tcgctgcatt gctccagacc tgatcgggtat gggcaaatcc 1200
 gacaaaccag acctgggtta tttcttcgac gaccacgtcc gttcatgga tgccttcac 1260
 gaagccctgg gtctggaaga ggtcgtcctg gtcattcacg actggggctc cgctctgggt 1320
 ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcatc 1380
 cgccctatcc cgacctggga cgaatggcca gaatttgccc gcgagacctt ccaggccttc 1440

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```

cgcaccaccg acgtcggccg caagctgatc atcgatcaga acgtttttat cgagggtacg      1500
ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgcgagccg      1560
ttcctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc      1620
ggtagagccag cgaacatcgt cgcgctggtc gaagaataca tggactggct gcaccagtcc      1680
cctgtcccga agctgctggt ctggggcacc ccaggcggtc tgatcccacc ggccgaagcc      1740
gctcgcctgg ccaaaagcct gcctaactgc aaggctgtgg acatcggccg gggctctgaat      1800
ctgctgcaag aagacaaccc ggacctgacg ggcagcgaga tcgcgcgctg gctgtctact      1860
ctggagattt ccggt                                                         1875

```

<210> 64

<211> 625

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 64

```

Met Leu Gly Leu Ser Glu Gln Ser Val Ser Ile Ser Arg Cys Ala Gly
1           5           10           15

```

```

Thr Arg Leu Pro Ala Leu Leu Asp Glu Gln Gln Val Asn Val Leu Leu
          20           25           30

```

```

Tyr Asp Met Asn Gly Cys Tyr Ser Arg Leu Lys Glu Leu Val Pro Thr
          35           40           45

```

```

Leu Pro Gln Asn Arg Lys Val Ser Lys Val Glu Ile Leu Gln His Val
          50           55           60

```

```

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

```

```

Val Gly Thr Thr Gly Gly Arg Gly Leu Pro Val Arg Ala Pro Leu Ser
          85           90           95

```

```

Thr Leu Asn Gly Glu Ile Ser Ala Leu Ala Ala Glu Ala Ala Cys Val
          100          105          110

```

```

Pro Ala Asp Asp Arg Ile Leu Cys Arg Val Ser Leu Glu Asn Leu Tyr
          115          120          125

```

```

Phe Gln Ala Ser Gly Gly Gly Gly Gly Ala Ile Ala Met Val Phe Thr
          130          135          140

```

```

Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu
145          150          155          160

```

Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Lys Leu
 165 170 175

Gly Val Ser Ile Thr Pro Ile Gln Lys Ile Val Leu Ser Gly Glu Asn
 180 185 190

Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
 195 200 205

Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
 210 215 220

Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
 225 230 235 240

Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
 245 250 255

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
 260 265 270

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

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
 290 295 300

Leu Cys Glu Arg Ile Leu Ala Val Ser Leu Glu Pro Thr Thr Glu Asp
 305 310 315 320

Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile Gly Thr Gly Phe
 325 330 335

Pro Phe Asp Pro His Tyr Val Glu Val Leu Gly Glu Arg Met His Tyr
 340 345 350

Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu Phe Leu His Gly
 355 360 365

Asn Pro Thr Ser Ser Tyr Val Trp Arg Asn Ile Ile Pro His Val Ala
 370 375 380

Pro Thr His Arg Cys Ile Ala Pro Asp Leu Ile Gly Met Gly Lys Ser
 385 390 395 400

Asp Lys Pro Asp Leu Gly Tyr Phe Phe Asp Asp His Val Arg Phe Met
 405 410 415

Asp Ala Phe Ile Glu Ala Leu Gly Leu Glu Glu Val Val Leu Val Ile
 420 425 430

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His Asp Trp Gly Ser Ala Leu Gly Phe His Trp Ala Lys Arg Asn Pro
435 440 445

Glu Arg Val Lys Gly Ile Ala Phe Met Glu Phe Ile Arg Pro Ile Pro
450 455 460

Thr Trp Asp Glu Trp Pro Glu Phe Ala Arg Glu Thr Phe Gln Ala Phe
465 470 475 480

Arg Thr Thr Asp Val Gly Arg Lys Leu Ile Ile Asp Gln Asn Val Phe
485 490 495

Ile Glu Gly Thr Leu Pro Met Gly Val Val Arg Pro Leu Thr Glu Val
500 505 510

Glu Met Asp His Tyr Arg Glu Pro Phe Leu Asn Pro Val Asp Arg Glu
515 520 525

Pro Leu Trp Arg Phe Pro Asn Glu Leu Pro Ile Ala Gly Glu Pro Ala
530 535 540

Asn Ile Val Ala Leu Val Glu Glu Tyr Met Asp Trp Leu His Gln Ser
545 550 555 560

Pro Val Pro Lys Leu Leu Phe Trp Gly Thr Pro Gly Val Leu Ile Pro
565 570 575

Pro Ala Glu Ala Ala Arg Leu Ala Lys Ser Leu Pro Asn Cys Lys Ala
580 585 590

Val Asp Ile Gly Pro Gly Leu Asn Leu Leu Gln Glu Asp Asn Pro Asp
595 600 605

Leu Ile Gly Ser Glu Ile Ala Arg Trp Leu Ser Thr Leu Glu Ile Ser
610 615 620

Gly
625

<210> 65
<211> 636
<212> DNA
<213> Artificial Sequence

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

<400> 65	
atggtgttta cactcgaaga tttcgtagg gactggcggc agacagccgg ctacaacctg	60
gaccaagtcc ttgagcaggg cggctctgtcc agtttgtttc agaaactcgg ggtgtccgta	120
acaccgatcc aaaagattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc	180

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atcatcccg	atgaagg	tct gagcgg	ctat cagatg	ggcc agatcg	aaaa aatttt	taag	240
gtggtgt	acc ctgtgg	atga tcatcact	ttt aagg	tgattc tg	cactat	gg cactg	300
gtggtgt	acc ctgtgg	atga tcatcact	ttt aagg	tgattc tg	cactat	gg cactg	360
gtggtgt	acc ctgtgg	atga tcatcact	ttt aagg	tgattc tg	cactat	gg cactg	420
gtggtgt	acc ctgtgg	atga tcatcact	ttt aagg	tgattc tg	cactat	gg cactg	480
gtggtgt	acc ctgtgg	atga tcatcact	ttt aagg	tgattc tg	cactat	gg cactg	540
gtggtgt	acc ctgtgg	atga tcatcact	ttt aagg	tgattc tg	cactat	gg cactg	600
gtggtgt	acc ctgtgg	atga tcatcact	ttt aagg	tgattc tg	cactat	gg cactg	636

<210> 66
 <211> 82
 <212> DNA
 <213> Unknown

<220>
 <223> Description of Unknown: antioxidant response element (2X ARE) oligonucleotide

<400> 66	
tagcttg	60
gaa atgacatt	
gc taatgg	
tgc aaagca	
actt ttagct	
tgg aatgac	
attg	82

<210> 67
 <211> 45
 <212> DNA
 <213> Unknown

<220>
 <223> Description of Unknown: heat shock response element (HRE) oligonucleotide

<400> 67	
ctggaat	45
ttt ctagact	
gga atttt	
ctaga ctgga	
at tttt	
ctaga	

<210> 68
 <211> 516
 <212> DNA
 <213> Artificial Sequence

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

<400> 68	
atggtgt	60
ttta cactc	
gaaga tttc	
gtagg gact	
ggcg agac	
agccg ctaca	
actg	
gaccaag	120
tcc ttgag	
cagg cgg	
tctgtc agtt	
tgtttc aga	
atctcg ggt	
gtccgt	
acaccga	180
tcc aaa	
agattgt cct	
gagcgg gaaa	
acggcc tga	
agatcga cat	
ccatgtc	
atcatcc	240
cg	
atgaagg	
tct gagc	
ggctat cagat	
gccc agat	
cgaaaa aatt	
tttaag	
gtggtgt	300
acc ctgt	
ggatga tcat	
cacttt aagg	
tgattc tg	
cactat	
gg cact	
ggtg	
gtcgt	
acccga	360
tcatcact	
ttt aagg	
tgattc tg	
cactat	
gg cact	
ggtg	
gtcgt	
acccga	420

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gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg 480
accggctggc ggctgtgcga ggcgattttg gcggga 516

<210> 69
<211> 172
<212> PRT
<213> Artificial Sequence

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

<400> 69
Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly
165 170

<210> 70
<211> 516
<212> DNA
<213> Artificial Sequence

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

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<400> 70
 atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg 60
 gaccaagtcc ttgagcaggg cggctgtgcc agtttgtttc agaattctcg ggtgtccgta 120
 actccgatcc aaaagattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc 180
 atcatcccgat atgaaggctt gagcggctat cagatgggcc agatcgaaaa aatttttaag 240
 gtggtgtacc ctgtggatga tcatcacttt aagggtgattc tgcactatgg cacactggta 300
 atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgatga aggcacgcc 360
 gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaattatc 420
 gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg 480
 accggctggc ggctgtgcga gcgcattttg gcggga 516

<210> 71
 <211> 172
 <212> PRT
 <213> Artificial Sequence

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

<400> 71
 Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
 20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val

145 150 155193_1 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly
165 170

<210> 72
<211> 516
<212> DNA
<213> Artificial Sequence

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

<400> 72
atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg 60
gaccaagtcc ttgagcaggg cggcctgtcc agtttgtttc agaatctcgg ggtgtccgta 120
acaccgatcc aaaagattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc 180
atcatcccggt atgaagggtct gagcggctat cagatgggccc agatcgaaaa aatttttaag 240
gtggtgtacc ctgtggatga tcatcacttt aagggtgattc tgcactatgg cacactggta 300
atcgacgggg ttacgccgaa cttgatcgac tatttcggac gtccgtatga aggcacgcgc 360
gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc 420
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg 480
accggctggc ggctgtgcga ggcgattttg gcggga 516

<210> 73
<211> 172
<212> PRT
<213> Artificial Sequence

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

<400> 73
Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
85 90 95

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Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Leu Ile Asp Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly
165 170

<210> 74
<211> 516
<212> DNA
<213> Artificial Sequence

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

<400> 74
atggtgttta cactcgaaga tttcgtagg gactggcagc agacagccgg ctacaacctg 60
gaccaagtcc ttgagcaggg cggtctgtcc agtttgtttc agaatctcgg ggtgtccgta 120
actccgatcc aaaagattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc 180
atcatcccgat atgaagggtc gagcggctat cagatgggccc agatcgaaaa aatttttaag 240
gtggtgtacc ctgtggatga tcatcacttt aagggtgattc tgcactatgg cactctggtg 300
atcgacgggg ttacgccgaa catgatcgac tttttcggac ggccgtatga aggcacgccc 360
gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc 420
gacgagcgcc tgatcaaccc cgacgggtcc ctgctgttcc gcgtaaccat caacggagtg 480
accggctggc ggctgtgcga gcgcattttg gcggga 516

<210> 75
<211> 172
<212> PRT
<213> Artificial Sequence

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

<400> 75
Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Gln Gln Thr Ala
1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
20 25 30

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Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly
165 170

<210> 76

<211> 1797

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 76

atgcttggtc tgtcggagca aagcgtgtcc atctcgcgct gcgctgggac ggcctgccc 60

gccttgctgg acgagcagca ggtgaacgtc ctgctctacg acatgaacgg ctgctactca 120

cgcctcaagg agctggtgcc caccctgccc cagaaccgca aagtgaagca ggtggagatc 180

ctgcagcatg taatcgacta catcaggac ctgcagctgg agctgaactc ggagtctgaa 240

gtcgggacca ccggaggccg gggactgcct gtccgcgccc cgctcagcac cctgaacggc 300

gagatcagtg ccttggcggc cgaggcggca tgtgttccag ccgacgatcg catcttgtgt 360

cgcgtttctc ttgagaatct ttattttcag gcgtctggag gtggtggcgg agcgatcgcc 420

atggtgttta cactcgaaga tttcgtagg gactggcggc agacagccgg ctacaacctg 480

gaccaagtcc ttgagcaggc cggcctgtcc agtttgtttc agaatctcgg ggtgtccgta 540

acaccgatcc aaaagattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc 600

atcatcccgat gaaggtct gagcggctat cagatgggccc agatcgaaaa aatttttaag 660

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gtggtgtacc ctgtggatga tcatcacttt aaggtgattc tgcactatgg cactactggta 720
atcgacgggg ttacgccgaa cttgatcgac tatttcggac gtccgtatga aggcacgcgc 780
gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc 840
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg 900
accggctggc ggctgtgcga gcgcatTTTtgcgggatatc tcgagccaac cactgaggat 960
ctgtactttt agagcgataa cgatggatcc gaaatcggta ctggctttcc attcgacccc 1020
cattatgtgg aagtcctggg cgagcgcatg cactacgtcg atgttggtcc gcgcgatggc 1080
accctgtgac tgttcctgca cggtaacccg acctcctcct acgtgtggcg caacatcatc 1140
ccgcatgttg caccgaccca tcgctgcatt gctccagacc tgatcgggat gggcaaatcc 1200
gacaaaccag acctgggtta tttcttcgac gaccacgtcc gcttcatgga tgccttcac 1260
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cgccctatcc cgacctggga cgaatggcca gaatttgccc gcgagacctt ccaggccttc 1440
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ggtagaccag cgaacatcgt cgcgctggtc gaagaatata tggactggct gcaccagtcc 1680
cctgtcccga agctgctgtt ctggggcacc ccaggcggtt tgatcccacc ggccgaagcc 1740
gctcgcctgg ccaaaagcct gcctaactgc aaggctgtgg acatcgggcc ggggtctg 1797

<210> 77

<211> 599

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 77

Met Leu Gly Leu Ser Glu Gln Ser Val Ser Ile Ser Arg Cys Ala Gly
1 5 10 15

Thr Arg Leu Pro Ala Leu Leu Asp Glu Gln Gln Val Asn Val Leu Leu
20 25 30

Tyr Asp Met Asn Gly Cys Tyr Ser Arg Leu Lys Glu Leu Val Pro Thr
35 40 45

Leu Pro Gln Asn Arg Lys Val Ser Lys Val Glu Ile Leu Gln His Val
50 55 60

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

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Val Gly Thr Thr Gly Gly Arg Gly Leu Pro Val Arg Ala Pro Leu Ser
 85 90 95
 Thr Leu Asn Gly Glu Ile Ser Ala Leu Ala Ala Glu Ala Ala Cys Val
 100 105 110
 Pro Ala Asp Asp Arg Ile Leu Cys Arg Val Ser Leu Glu Asn Leu Tyr
 115 120 125
 Phe Gln Ala Ser Gly Gly Gly Gly Gly Ala Ile Ala Met Val Phe Thr
 130 135 140
 Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu
 145 150 155 160
 Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu Phe Gln Asn Leu
 165 170 175
 Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu Ser Gly Glu Asn
 180 185 190
 Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
 195 200 205
 Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
 210 215 220
 Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
 225 230 235 240
 Ile Asp Gly Val Thr Pro Asn Leu Ile Asp Tyr Phe Gly Arg Pro Tyr
 245 250 255
 Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
 260 265 270
 Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
 275 280 285
 Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
 290 295 300
 Leu Cys Glu Arg Ile Leu Ala Gly Tyr Leu Glu Pro Thr Thr Glu Asp
 305 310 315 320
 Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile Gly Thr Gly Phe
 325 330 335
 Pro Phe Asp Pro His Tyr Val Glu Val Leu Gly Glu Arg Met His Tyr
 340 345 350

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Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu Phe Leu His Gly
355 360 365

Asn Pro Thr Ser Ser Tyr Val Trp Arg Asn Ile Ile Pro His Val Ala
370 375 380

Pro Thr His Arg Cys Ile Ala Pro Asp Leu Ile Gly Met Gly Lys Ser
385 390 395 400

Asp Lys Pro Asp Leu Gly Tyr Phe Phe Asp Asp His Val Arg Phe Met
405 410 415

Asp Ala Phe Ile Glu Ala Leu Gly Leu Glu Glu Val Val Leu Val Ile
420 425 430

His Asp Trp Gly Ser Ala Leu Gly Phe His Trp Ala Lys Arg Asn Pro
435 440 445

Glu Arg Val Lys Gly Ile Ala Phe Met Glu Phe Ile Arg Pro Ile Pro
450 455 460

Thr Trp Asp Glu Trp Pro Glu Phe Ala Arg Glu Thr Phe Gln Ala Phe
465 470 475 480

Arg Thr Thr Asp Val Gly Arg Lys Leu Ile Ile Asp Gln Asn Val Phe
485 490 495

Ile Glu Gly Thr Leu Pro Met Gly Val Val Arg Pro Leu Thr Glu Val
500 505 510

Glu Met Asp His Tyr Arg Glu Pro Phe Leu Asn Pro Val Asp Arg Glu
515 520 525

Pro Leu Trp Arg Phe Pro Asn Glu Leu Pro Ile Ala Gly Glu Pro Ala
530 535 540

Asn Ile Val Ala Leu Val Glu Glu Tyr Met Asp Trp Leu His Gln Ser
545 550 555 560

Pro Val Pro Lys Leu Leu Phe Trp Gly Thr Pro Gly Val Leu Ile Pro
565 570 575

Pro Ala Glu Ala Ala Arg Leu Ala Lys Ser Leu Pro Asn Cys Lys Ala
580 585 590

Val Asp Ile Gly Pro Gly Leu
595

<210> 78
<211> 1875

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 78

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cgctcaagg	agctggtgcc	caccctgccc	cagaaccgca	aagtgagcaa	ggtggagatc	180
ctgcagcatg	taatcgacta	catcagggac	ctgcagctgg	agctgaactc	ggagtctgaa	240
gtcgggacca	ccggaggccg	gggactgcct	gtccgcgccc	cgctcagcac	cctgaacggc	300
gagatcagtg	ccttggcggc	cgaggcggca	tgtgttccag	ccgacgatcg	catcttgtgt	360
cgcgtttctc	ttgagaatct	ttattttcag	gcgtctggag	gtggtggcgg	agcgatcgcc	420
atggtgttta	cactcgaaga	tttcgtaggg	gactggcagc	agacagccgg	ctacaacctg	480
gaccaagtcc	ttgagcaggg	cggtctgtcc	agtttgtttc	agaatctcgg	ggtgtccgta	540
actccgatcc	aaaagattgt	cctgagcggc	gaaaacggcc	tgaagatcga	catccatgtc	600
atcatcccg	atgaaggctc	gagcggctat	cagatgggccc	agatcgaaaa	aatttttaag	660
gtggtgtacc	ctgtggatga	tcatcacttt	aagggtgattc	tgactatgg	cacactggta	720
atcgacgggg	ttacgccgaa	catgatcgac	tatttcggac	ggccgtatga	aggcatcgcc	780
gtgttcgacg	gaaaaagat	cactgtaacc	gggaccctgt	ggaacggcaa	caaaattatc	840
gacgagcgcc	tgatcaaccc	cgacggctcc	ctgctgttcc	gcgtaaccat	caacggagtg	900
accggctggc	ggctgtgcga	gcgcattttg	gcgggatatc	tcgagccaac	cactgaggat	960
ctgtactttc	agagcgataa	cgatggatcc	gaaatcggtc	ctggctttcc	attcgacccc	1020
cattatgtgg	aagtcctggg	cgagcgcgatg	cactacgtcg	atgttggtcc	gcgcgatggc	1080
acccctgtgc	tgttcctgca	cggtaacccg	acctcctcct	acgtgtggcg	caacatcatc	1140
ccgcatgttg	caccgaccca	tcgctgcatt	gctccagacc	tgatcgggat	gggcaaattc	1200
gacaaaccag	acctgggtta	tttcttcgac	gaccacgtcc	gcttcatgga	tgcttcatc	1260
gaagccctgg	gtctggaaga	ggtcgtcctg	gtcattcacg	actggggctc	cgctctgggt	1320
ttccactggg	ccaagcgcaa	tccagagcgc	gtcaaaggta	ttgcatttat	ggagttcatc	1380
cgccctatcc	cgacctggga	cgaatggcca	gaatttgccc	gcgagacctt	ccaggccttc	1440
cgcaccaccg	acgtcggccg	caagctgatc	atcgatcaga	acgtttttat	cgagggtacg	1500
ctgccgatgg	gtgtcgtccg	cccgtgact	gaagtcgaga	tggaaccatta	ccgcgagccg	1560
ttcctgaatc	ctgttgaccg	cgagccactg	tggcgcttcc	caaacgagct	gccaatcgcc	1620
ggtgagccag	cgaacatcgt	cgcgctggtc	gaagaataca	tggactggct	gcaccagtcc	1680
cctgtcccga	agctgctgtt	ctggggcacc	ccaggcggtc	tgatcccacc	ggccgaagcc	1740
gctcgcctgg	ccaaaagcct	gcctaactgc	aaggctgtgg	acatcgggcc	gggtctgaat	1800

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ctgctgcaag aagacaaccc ggacctgac gccagcgaga tcgcgcgctg gctgtctact 1860
ctggagattt ccggt 1875

<210> 79
<211> 625
<212> PRT
<213> Artificial Sequence

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

<400> 79
Met Leu Gly Leu Ser Glu Gln Ser Val Ser Ile Ser Arg Cys Ala Gly
1 5 10 15

Thr Arg Leu Pro Ala Leu Leu Asp Glu Gln Gln Val Asn Val Leu Leu
20 25 30

Tyr Asp Met Asn Gly Cys Tyr Ser Arg Leu Lys Glu Leu Val Pro Thr
35 40 45

Leu Pro Gln Asn Arg Lys Val Ser Lys Val Glu Ile Leu Gln His Val
50 55 60

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

Val Gly Thr Thr Gly Gly Arg Gly Leu Pro Val Arg Ala Pro Leu Ser
85 90 95

Thr Leu Asn Gly Glu Ile Ser Ala Leu Ala Ala Glu Ala Ala Cys Val
100 105 110

Pro Ala Asp Asp Arg Ile Leu Cys Arg Val Ser Leu Glu Asn Leu Tyr
115 120 125

Phe Gln Ala Ser Gly Gly Gly Gly Ala Ile Ala Met Val Phe Thr
130 135 140

Leu Glu Asp Phe Val Gly Asp Trp Gln Gln Thr Ala Gly Tyr Asn Leu
145 150 155 160

Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu Phe Gln Asn Leu
165 170 175

Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu Ser Gly Glu Asn
180 185 190

Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
195 200 205

Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
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 210 215 220
 Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
 225 230 235 240
 Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
 245 250 255
 Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
 260 265 270
 Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
 275 280 285
 Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
 290 295 300
 Leu Cys Glu Arg Ile Leu Ala Gly Tyr Leu Glu Pro Thr Thr Glu Asp
 305 310 315 320
 Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile Gly Thr Gly Phe
 325 330 335
 Pro Phe Asp Pro His Tyr Val Glu Val Leu Gly Glu Arg Met His Tyr
 340 345 350
 Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu Phe Leu His Gly
 355 360 365
 Asn Pro Thr Ser Ser Tyr Val Trp Arg Asn Ile Ile Pro His Val Ala
 370 375 380
 Pro Thr His Arg Cys Ile Ala Pro Asp Leu Ile Gly Met Gly Lys Ser
 385 390 395 400
 Asp Lys Pro Asp Leu Gly Tyr Phe Phe Asp Asp His Val Arg Phe Met
 405 410 415
 Asp Ala Phe Ile Glu Ala Leu Gly Leu Glu Glu Val Val Leu Val Ile
 420 425 430
 His Asp Trp Gly Ser Ala Leu Gly Phe His Trp Ala Lys Arg Asn Pro
 435 440 445
 Glu Arg Val Lys Gly Ile Ala Phe Met Glu Phe Ile Arg Pro Ile Pro
 450 455 460
 Thr Trp Asp Glu Trp Pro Glu Phe Ala Arg Glu Thr Phe Gln Ala Phe
 465 470 475 480
 Arg Thr Thr Asp Val Gly Arg Lys Leu Ile Ile Asp Gln Asn Val Phe

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485								495							
Ile	Glu	Gly	Thr 500	Leu	Pro	Met	Gly	Val 505	Val	Arg	Pro	Leu	Thr 510	Glu	Val
Glu	Met	Asp 515	His	Tyr	Arg	Glu	Pro 520	Phe	Leu	Asn	Pro	Val 525	Asp	Arg	Glu
Pro	Leu 530	Trp	Arg	Phe	Pro	Asn 535	Glu	Leu	Pro	Ile	Ala 540	Gly	Glu	Pro	Ala
Asn 545	Ile	Val	Ala	Leu	Val 550	Glu	Glu	Tyr	Met	Asp 555	Trp	Leu	His	Gln	Ser 560
Pro	Val	Pro	Lys	Leu 565	Leu	Phe	Trp	Gly	Thr 570	Pro	Gly	Val	Leu	Ile 575	Pro
Pro	Ala	Glu	Ala 580	Ala	Arg	Leu	Ala	Lys 585	Ser	Leu	Pro	Asn	Cys 590	Lys	Ala
Val	Asp	Ile 595	Gly	Pro	Gly	Leu	Asn 600	Leu	Leu	Gln	Glu	Asp 605	Asn	Pro	Asp
Leu	Ile 610	Gly	Ser	Glu	Ile	Ala 615	Arg	Trp	Leu	Ser	Thr 620	Leu	Glu	Ile	Ser
Gly 625															

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<210> 81
<211> 172
<212> PRT
<213> Artificial Sequence

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

<400> 81
Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly
165 170

<210> 82
<211> 516
<212> DNA
<213> Artificial Sequence

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

<400> 82
atggtgttta cactcgaaga tttcgtagg gactggcggc agacagccgg ctacaacctg 60

gatcaagtcc ttgagcaggg cggctctgtcc agtttgtttc agaatctcgg ggtgtccgta 120

155193_1

acaccgatcc aaaagattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc	180
atcatcccgt atgaaggtct gaacggctat cagatgggccc agatcgaaaa aatttttaag	240
gtggtgtacc ctgtggatga tcatcacttt aaggtgattc tgcactatgg cactctggta	300
atcgacgggg ttacgccgaa catgatcgac tttttcggac ggccgtatga aggcacgcgc	360
gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc	420
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg	480
accggctggc ggctgtgcga gcgcatTTTT gcgggg	516

<210> 83
 <211> 172
 <212> PRT
 <213> Artificial Sequence

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

<400> 83
 Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
 20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Asn Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly
 165 170

<210> 84
 <211> 1866
 <212> DNA
 <213> Artificial Sequence

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

<400> 84
 atgcttggtc tgtcggagca aagcgtgtcc atctcgcgct gcgctgggac gcgcctgccc 60
 gccttgctgg acgagcagca ggtgaacgtc ctgctctacg acatgaacgg ctgctactca 120
 cgcctcaagg agctgggtgcc caccctgccc cagaaccgca aagtgagcaa ggtggagatc 180
 ctgcagcatg taatcgacta catcagggac ctgcagctgg agctgaactc ggagtctgaa 240
 gtcgggacca ccggaggccg gggactgcct gtccgcgccc cgctcagcac cctgaacggc 300
 gagatcagtg ccttggcggc cgaggcggca tgtgttccag ccgacgatcg catcttgtgt 360
 cgcgttttctc ttgagaatct ttattttcag gcgtctggag gtggtggcgg agcgatcgcc 420
 atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg 480
 gaccaagtcc ttgagcaggg cggctctgtcc agtttgtttc agaatctcgg ggtgtccgta 540
 acaccgatcc aaaggattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc 600
 atcatcccgat gaaggtct gagcggcgat cagatgggcc agatcgaaaa aatttttaag 660
 gtggtgtacc ctgtggatga tcatcacttt aagggtgattc tgcactatgg cactctggtg 720
 atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgatga aggcacgccc 780
 gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc 840
 gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg 900
 accggctggc ggctgtgcga gcgcattttg gcgggatatc tcgagccaac cactgaggat 960
 ctgtactttc agagcgataa cgatggatcc gaaatcggtg ctggctttcc attcgacccc 1020
 cattatgtgg aagtcctggg cgagcgcgtg cactacgtcg atgttgggtc gcgcgatggc 1080
 acccctgtgc tgttcctgca cggtaacccg acctcctcct acgtgtggcg caacatcatc 1140
 ccgcatgttg caccgaccca tcgctgcatt gctccagacc tgatcggtat gggcaaatcc 1200
 gacaaaccag acctgggtta tttcttcgac gaccacgtcc gcttcatgga tgccttcac 1260
 gaagccctgg gtctggaaga ggtcgtcctg gtcattcacg actggggctc cgctctgggt 1320
 ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcatc 1380
 cgccctatcc cgacctggga cgaatggcca gaatttgccc gcgagacctt ccaggccttc 1440
 cgcaccaccg acgtcggccg caagctgatc atcgatcaga acgtttttat cgaggggtacg 1500
 ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgcgagccg 1560
 ttctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc 1620
 ggtgagccag cgaacatcgt cgcgctgggt gaagaatata tggactggct gcaccagtcc 1680
 cctgtcccga agctgctgtt ctggggcacc ccaggcggtt tgatcccacc ggccgaagcc 1740

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gctcgctgg ccaaaagcct gcctaactgc aaggctgtgg acatcggccg gggctctgaat 1800
 ctgctgcaag aagacaaccc ggacctgacg ggcagcgaga tcgcgcgctg gctgtctact 1860
 ctggag 1866

<210> 85
 <211> 625
 <212> PRT
 <213> Artificial Sequence

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

<400> 85
 Met Leu Gly Leu Ser Glu Gln Ser Val Ser Ile Ser Arg Cys Ala Gly
 1 5 10 15

Thr Arg Leu Pro Ala Leu Leu Asp Glu Gln Gln Val Asn Val Leu Leu
 20 25 30

Tyr Asp Met Asn Gly Cys Tyr Ser Arg Leu Lys Glu Leu Val Pro Thr
 35 40 45

Leu Pro Gln Asn Arg Lys Val Ser Lys Val Glu Ile Leu Gln His Val
 50 55 60

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

Val Gly Thr Thr Gly Gly Arg Gly Leu Pro Val Arg Ala Pro Leu Ser
 85 90 95

Thr Leu Asn Gly Glu Ile Ser Ala Leu Ala Ala Glu Ala Ala Cys Val
 100 105 110

Pro Ala Asp Asp Arg Ile Leu Cys Arg Val Ser Leu Glu Asn Leu Tyr
 115 120 125

Phe Gln Ala Ser Gly Gly Gly Gly Ala Ile Ala Met Val Phe Thr
 130 135 140

Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu
 145 150 155 160

Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu Phe Gln Asn Leu
 165 170 175

Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn
 180 185 190

Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
 195 200 205

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Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
210 215 220

Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
225 230 235 240

Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
245 250 255

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
260 265 270

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

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
290 295 300

Leu Cys Glu Arg Ile Leu Ala Gly Tyr Leu Glu Pro Thr Thr Glu Asp
305 310 315 320

Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile Gly Thr Gly Phe
325 330 335

Pro Phe Asp Pro His Tyr Val Glu Val Leu Gly Glu Arg Met His Tyr
340 345 350

Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu Phe Leu His Gly
355 360 365

Asn Pro Thr Ser Ser Tyr Val Trp Arg Asn Ile Ile Pro His Val Ala
370 375 380

Pro Thr His Arg Cys Ile Ala Pro Asp Leu Ile Gly Met Gly Lys Ser
385 390 395 400

Asp Lys Pro Asp Leu Gly Tyr Phe Phe Asp Asp His Val Arg Phe Met
405 410 415

Asp Ala Phe Ile Glu Ala Leu Gly Leu Glu Glu Val Val Leu Val Ile
420 425 430

His Asp Trp Gly Ser Ala Leu Gly Phe His Trp Ala Lys Arg Asn Pro
435 440 445

Glu Arg Val Lys Gly Ile Ala Phe Met Glu Phe Ile Arg Pro Ile Pro
450 455 460

Thr Trp Asp Glu Trp Pro Glu Phe Ala Arg Glu Thr Phe Gln Ala Phe
465 470 475 480

155193_1

Arg Thr Thr Asp Val Gly Arg Lys Leu Ile Ile Asp Gln Asn Val Phe
485 490 495

Ile Glu Gly Thr Leu Pro Met Gly Val Val Arg Pro Leu Thr Glu Val
500 505 510

Glu Met Asp His Tyr Arg Glu Pro Phe Leu Asn Pro Val Asp Arg Glu
515 520 525

Pro Leu Trp Arg Phe Pro Asn Glu Leu Pro Ile Ala Gly Glu Pro Ala
530 535 540

Asn Ile Val Ala Leu Val Glu Glu Tyr Met Asp Trp Leu His Gln Ser
545 550 555 560

Pro Val Pro Lys Leu Leu Phe Trp Gly Thr Pro Gly Val Leu Ile Pro
565 570 575

Pro Ala Glu Ala Ala Arg Leu Ala Lys Ser Leu Pro Asn Cys Lys Ala
580 585 590

Val Asp Ile Gly Pro Gly Leu Asn Leu Leu Gln Glu Asp Asn Pro Asp
595 600 605

Leu Ile Gly Ser Glu Ile Ala Arg Trp Leu Ser Thr Leu Glu Ile Ser
610 615 620

Gly
625

<210> 86
<211> 1875
<212> DNA
<213> Artificial Sequence

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

<400> 86
atgcttggtc tgtcggagca aagcgtgtcc atctcgcgct gcgctgggac ggcctgccc 60
gccttgctgg acgagcagca ggtgaacgtc ctgctctacg acatgaacgg ctgctactca 120
cgctcaagg agctggtgcc caccctgccc cagaaccgca aagtgaagca ggtggagatc 180
ctgcagcatg taatcgacta catcagggac ctgcagctgg agctgaactc ggagtctgaa 240
gtcgggacca ccggaggccg gggactgcct gtccgcgccc cgctcagcac cctgaacggc 300
gagatcagtg ccttggcggc cgaggcggca tgtgttccag ccgacgatcg catcttgtgt 360
cgcgtttctc ttgagaatct ttatcttcag gcgtctggag gtggtggcgg agcgatcgcc 420
atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg 480

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gatcaagtcc ttgagcaggg cggctctgtcc agtttgtttc agaatctcgg ggtgtccgta	540
acaccgatcc aaaagattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc	600
atcatcccgat atgaagggtct gaacggctat cagatgggccc agatcgaaaa aatttttaag	660
gtggtgtacc ctgtggatga tcatcacttt aagggtgattc tgcactatgg cactctggta	720
atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgatga aggcacgcgc	780
gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc	840
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagt	900
accggctggc ggctgtgcga gcgcattttg gcgggatatc tcgagccaac cactgaggat	960
ctgtactttc agagcgataa cgatggatcc gaaatcggta ctggctttcc attcgacccc	1020
cattatgtgg aagtcctggg cgagcgcatg cactacgtcg atgttggtcc gcgcgatggc	1080
accctgtgc tgttcctgca cggtaacccg acctcctcct acgtgtggcg caacatcatc	1140
ccgcatgttg caccgaccca tcgctgcatt gctccagacc tgatcgggat gggcaaatcc	1200
gacaaaccag acctgggtta tttcttcgac gaccacgtcc gcttcatgga tgccttcac	1260
gaagccctgg gtctggaaga ggtcgtcctg gtcattcacg actggggctc cgctctgggt	1320
ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcatc	1380
cgccctatcc cgacctggga cgaatggcca gaatttgccc gcgagacctt ccaggccttc	1440
cgccaccacg acgtcggccg caagctgatc atcgatcaga acgtttttat cgagggtacg	1500
ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgcgagccg	1560
ttcctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc	1620
ggtagaccag cgaacatcgt cgcgctggc gaagaatata tggactggct gcaccagtcc	1680
cctgtcccga agctgctgtt ctggggcacc ccaggcgctt tgatcccacc ggccgaagcc	1740
gctgcctgg ccaaaagcct gcctaactgc aaggctgtgg acatcgcccc gggctctgaat	1800
ctgctgcaag aagacaaccc ggacctgatc ggcagcgaga tcgcgcgctg gctgtctact	1860
ctggagattt ccggt	1875

<210> 87
 <211> 625
 <212> PRT
 <213> Artificial Sequence

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

<400> 87
 Met Leu Gly Leu Ser Glu Gln Ser Val Ser Ile Ser Arg Cys Ala Gly
 1 5 10 15

Thr Arg Leu Pro Ala Leu Leu Asp Glu Gln Gln Val Asn Val Leu Leu
 20 25 30

Tyr Asp Met Asn Gly Cys Tyr Ser Arg Leu Lys Glu Leu Val Pro Thr
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35		40		45											
Leu	Pro	Gln	Asn	Arg	Lys	Val	Ser	Lys	Val	Glu	Ile	Leu	Gln	His	Val
	50					55					60				
Ile	Asp	Tyr	Ile	Arg	Asp	Leu	Gln	Leu	Glu	Leu	Asn	Ser	Glu	Ser	Glu
65					70					75					80
Val	Gly	Thr	Thr	Gly	Gly	Arg	Gly	Leu	Pro	Val	Arg	Ala	Pro	Leu	Ser
				85					90					95	
Thr	Leu	Asn	Gly	Glu	Ile	Ser	Ala	Leu	Ala	Ala	Glu	Ala	Ala	Cys	Val
			100					105					110		
Pro	Ala	Asp	Asp	Arg	Ile	Leu	Cys	Arg	Val	Ser	Leu	Glu	Asn	Leu	Tyr
		115					120					125			
Phe	Gln	Ala	Ser	Gly	Gly	Gly	Gly	Gly	Ala	Ile	Ala	Met	Val	Phe	Thr
	130					135					140				
Leu	Glu	Asp	Phe	Val	Gly	Asp	Trp	Arg	Gln	Thr	Ala	Gly	Tyr	Asn	Leu
145					150					155					160
Asp	Gln	Val	Leu	Glu	Gln	Gly	Gly	Leu	Ser	Ser	Leu	Phe	Gln	Asn	Leu
				165					170					175	
Gly	Val	Ser	Val	Thr	Pro	Ile	Gln	Lys	Ile	Val	Leu	Ser	Gly	Glu	Asn
			180					185					190		
Gly	Leu	Lys	Ile	Asp	Ile	His	Val	Ile	Ile	Pro	Tyr	Glu	Gly	Leu	Asn
		195					200					205			
Gly	Tyr	Gln	Met	Gly	Gln	Ile	Glu	Lys	Ile	Phe	Lys	Val	Val	Tyr	Pro
	210					215					220				
Val	Asp	Asp	His	His	Phe	Lys	Val	Ile	Leu	His	Tyr	Gly	Thr	Leu	Val
	225				230					235					240
Ile	Asp	Gly	Val	Thr	Pro	Asn	Met	Ile	Asp	Tyr	Phe	Gly	Arg	Pro	Tyr
				245					250					255	
Glu	Gly	Ile	Ala	Val	Phe	Asp	Gly	Lys	Lys	Ile	Thr	Val	Thr	Gly	Thr
			260					265					270		
Leu	Trp	Asn	Gly	Asn	Lys	Ile	Ile	Asp	Glu	Arg	Leu	Ile	Asn	Pro	Asp
		275					280					285			
Gly	Ser	Leu	Leu	Phe	Arg	Val	Thr	Ile	Asn	Gly	Val	Thr	Gly	Trp	Arg
	290					295					300				
Leu	Cys	Glu	Arg	Ile	Leu	Ala	Gly	Tyr	Leu	Glu	Pro	Thr	Thr	Glu	Asp

305 310 155193_1 320
 315
 Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile Gly Thr Gly Phe
 325 330 335
 Pro Phe Asp Pro His Tyr Val Glu Val Leu Gly Glu Arg Met His Tyr
 340 345 350
 Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu Phe Leu His Gly
 355 360 365
 Asn Pro Thr Ser Ser Tyr Val Trp Arg Asn Ile Ile Pro His Val Ala
 370 375 380
 Pro Thr His Arg Cys Ile Ala Pro Asp Leu Ile Gly Met Gly Lys Ser
 385 390 395 400
 Asp Lys Pro Asp Leu Gly Tyr Phe Phe Asp Asp His Val Arg Phe Met
 405 410 415
 Asp Ala Phe Ile Glu Ala Leu Gly Leu Glu Glu Val Val Leu Val Ile
 420 425 430
 His Asp Trp Gly Ser Ala Leu Gly Phe His Trp Ala Lys Arg Asn Pro
 435 440 445
 Glu Arg Val Lys Gly Ile Ala Phe Met Glu Phe Ile Arg Pro Ile Pro
 450 455 460
 Thr Trp Asp Glu Trp Pro Glu Phe Ala Arg Glu Thr Phe Gln Ala Phe
 465 470 475 480
 Arg Thr Thr Asp Val Gly Arg Lys Leu Ile Ile Asp Gln Asn Val Phe
 485 490 495
 Ile Glu Gly Thr Leu Pro Met Gly Val Val Arg Pro Leu Thr Glu Val
 500 505 510
 Glu Met Asp His Tyr Arg Glu Pro Phe Leu Asn Pro Val Asp Arg Glu
 515 520 525
 Pro Leu Trp Arg Phe Pro Asn Glu Leu Pro Ile Ala Gly Glu Pro Ala
 530 535 540
 Asn Ile Val Ala Leu Val Glu Glu Tyr Met Asp Trp Leu His Gln Ser
 545 550 555 560
 Pro Val Pro Lys Leu Leu Phe Trp Gly Thr Pro Gly Val Leu Ile Pro
 565 570 575
 Pro Ala Glu Ala Ala Arg Leu Ala Lys Ser Leu Pro Asn Cys Lys Ala

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Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

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Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
165 170

<210> 90

<211> 1875

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 90

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gccttgctgg acgagcagca ggtgaacgtc ctgctctacg acatgaacgg ctgctactca	120
cgcctcaagg agctggtgcc caccctgccc cagaaccgca aagtgagcaa ggtggagatc	180
ctgcagcatg taatcgacta catcagggac ctgcagctgg agctgaactc ggagtctgaa	240
gtcgggacca ccggaggccg gggactgcct gtccgcgccc cgctcagcac cctgaacggc	300
gagatcagtg ccttggcggc cgaggcgga tgtgttccag ccgacgatcg catcttgtgt	360
cgcgtttctc ttgagaatct ttattttcag gcgtctggag gtggtggcgg agcgatcgcc	420
atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg	480
gaccaagtcc ttgagcaggg cgggtgtgtcc agtttgtttc agaattctcg ggtgtccgta	540
actccgatcc aaaggattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc	600
atcatcccgat atgaagggtc gagcggcgat cagatgggccc agatcgaaaa aatttttaag	660
gtggtgtacc ctgtggatga tcatcacttt aagggtgattc tgcactatgg cactctggta	720
atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgtatga aggcacgcgc	780
gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc	840

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gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg	900
accggctggc ggctgtgcga ggcgattttg gcgggatatc tcgagccaac cactgaggat	960
ctgtactttc agagcgataa cgatggatcc gaaatcggtg ctggctttcc attcgacccc	1020
cattatgtgg aagtcctggg cgagcgcatg cactacgtcg atgttgggtc gcgcgatggc	1080
accctgtgc tgttcctgca cggtaacccg acctcctcct acgtgtggcg caacatcatc	1140
ccgcatgttg caccgaccca tcgctgcatt gctccagacc tgatcggtat gggcaaatcc	1200
gacaaaccag acctgggtta tttcttcgac gaccacgtcc gcttcatgga tgccttcatc	1260
gaagccctgg gtctggaaga ggtcgtcctg gtcattcacg actggggctc cgctctgggt	1320
ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcatc	1380
cgccctatcc cgacctggga cgaatggcca gaatttgccc gcgagacctt ccaggccttc	1440
cgcaccaccg acgtcggccg caagctgatc atcgatcaga acgtttttat cgagggtacg	1500
ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgcgagccg	1560
ttcctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc	1620
ggtgagccag cgaacatcgt cgcgctggtc gaagaataca tggactggct gcaccagtcc	1680
cctgtcccga agctgctgtt ctggggcacc ccaggcgctt tgatcccacc ggccgaagcc	1740
gctcgcctgg ccaaaagcct gcctaactgc aaggctgtgg acatcgcccc gggctctgaat	1800
ctgctgcaag aagacaaccc ggacctgatc ggcagcgaga tcgcgcgctg gctgtctact	1860
ctggagattt ccggt	1875

<210> 91
 <211> 625
 <212> PRT
 <213> Artificial Sequence

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

<400> 91
 Met Leu Gly Leu Ser Glu Gln Ser Val Ser Ile Ser Arg Cys Ala Gly
 1 5 10 15

Thr Arg Leu Pro Ala Leu Leu Asp Glu Gln Gln Val Asn Val Leu Leu
 20 25 30

Tyr Asp Met Asn Gly Cys Tyr Ser Arg Leu Lys Glu Leu Val Pro Thr
 35 40 45

Leu Pro Gln Asn Arg Lys Val Ser Lys Val Glu Ile Leu Gln His Val
 50 55 60

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

Val Gly Thr Thr Gly Gly Arg Gly Leu Pro Val Arg Ala Pro Leu Ser
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85 90 95

Thr Leu Asn Gly Glu Ile Ser Ala Leu Ala Ala Glu Ala Ala Cys Val
 100 105 110

Pro Ala Asp Asp Arg Ile Leu Cys Arg Val Ser Leu Glu Asn Leu Tyr
 115 120 125

Phe Gln Ala Ser Gly Gly Gly Gly Gly Ala Ile Ala Met Val Phe Thr
 130 135 140

Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu
 145 150 155 160

Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu
 165 170 175

Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn
 180 185 190

Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
 195 200 205

Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
 210 215 220

Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
 225 230 235 240

Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
 245 250 255

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
 260 265 270

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

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
 290 295 300

Leu Cys Glu Arg Ile Leu Ala Gly Tyr Leu Glu Pro Thr Thr Glu Asp
 305 310 315 320

Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile Gly Thr Gly Phe
 325 330 335

Pro Phe Asp Pro His Tyr Val Glu Val Leu Gly Glu Arg Met His Tyr
 340 345 350

Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu Phe Leu His Gly

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355		360		365											
Asn	Pro	Thr	Ser	Ser	Tyr	Val	Trp	Arg	Asn	Ile	Ile	Pro	His	Val	Ala
	370					375					380				
Pro	Thr	His	Arg	Cys	Ile	Ala	Pro	Asp	Leu	Ile	Gly	Met	Gly	Lys	Ser
385					390					395					400
Asp	Lys	Pro	Asp	Leu	Gly	Tyr	Phe	Phe	Asp	Asp	His	Val	Arg	Phe	Met
				405					410					415	
Asp	Ala	Phe	Ile	Glu	Ala	Leu	Gly	Leu	Glu	Glu	Val	Val	Leu	Val	Ile
			420					425					430		
His	Asp	Trp	Gly	Ser	Ala	Leu	Gly	Phe	His	Trp	Ala	Lys	Arg	Asn	Pro
		435					440					445			
Glu	Arg	Val	Lys	Gly	Ile	Ala	Phe	Met	Glu	Phe	Ile	Arg	Pro	Ile	Pro
	450					455					460				
Thr	Trp	Asp	Glu	Trp	Pro	Glu	Phe	Ala	Arg	Glu	Thr	Phe	Gln	Ala	Phe
465					470					475					480
Arg	Thr	Thr	Asp	Val	Gly	Arg	Lys	Leu	Ile	Ile	Asp	Gln	Asn	Val	Phe
				485					490					495	
Ile	Glu	Gly	Thr	Leu	Pro	Met	Gly	Val	Val	Arg	Pro	Leu	Thr	Glu	Val
			500					505					510		
Glu	Met	Asp	His	Tyr	Arg	Glu	Pro	Phe	Leu	Asn	Pro	Val	Asp	Arg	Glu
		515					520					525			
Pro	Leu	Trp	Arg	Phe	Pro	Asn	Glu	Leu	Pro	Ile	Ala	Gly	Glu	Pro	Ala
	530					535					540				
Asn	Ile	Val	Ala	Leu	Val	Glu	Glu	Tyr	Met	Asp	Trp	Leu	His	Gln	Ser
545					550					555					560
Pro	Val	Pro	Lys	Leu	Leu	Phe	Trp	Gly	Thr	Pro	Gly	Val	Leu	Ile	Pro
				565					570					575	
Pro	Ala	Glu	Ala	Ala	Arg	Leu	Ala	Lys	Ser	Leu	Pro	Asn	Cys	Lys	Ala
			580					585					590		
Val	Asp	Ile	Gly	Pro	Gly	Leu	Asn	Leu	Leu	Gln	Glu	Asp	Asn	Pro	Asp
		595					600					605			
Leu	Ile	Gly	Ser	Glu	Ile	Ala	Arg	Trp	Leu	Ser	Thr	Leu	Glu	Ile	Ser
	610					615					620				

Gly

625

<210> 92
 <211> 513
 <212> DNA
 <213> Artificial Sequence

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

<400> 92
 atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg 60
 gaccaagtcc ttgagcaggg cggctctgtcc agtttgtttc agaatctcgg ggtgtccgta 120
 actccgatcc aaaggattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc 180
 atcatcccggt atgaagggtct gagcggcgat cagatggggc agatcgaaaa aatttttaag 240
 gtggtgtacc ctgtggatga tcatcacttt aagggtgattc tgcactatgg cacactggta 300
 atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgtatga aggcacgcgc 360
 gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc 420
 gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg 480
 accggctggc ggctgtgcga gcgcattttg gcg 513

<210> 93
 <211> 171
 <212> PRT
 <213> Artificial Sequence

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

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

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Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
 165 170

<210> 94

<211> 1875

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 94

atgcttggtc tgtcggagca aagcgtgtcc atctcgcgct gcgctgggac ggcctgccc	60
gccttgctgg acgagcagca ggtgaacgtc ctgctctacg acatgaacgg ctgctactca	120
cgcttcaagg agctggtgcc caccctgccc cagaaccgca aagtgaacaa ggtggagatc	180
ctgcagcatg taatcgacta catcagggac ctgcagctgg agctgaactc ggagtctgaa	240
gtcgggacca ccggaggccg gggactgcct gtccgcgccc cgctcagcac cctgaacggc	300
gagatcagtg ccttggcggc cgaggcggca tgtgttccag ccgacgatcg catcttgtgt	360
cgcgtttctc ttgagaatct ttattttcag gcgtctggag gtggtggcgg agcgatcgcc	420
atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg	480
gaccaagtcc ttgagcaggg cggctctgtcc agtttgtttc agaatctcgg ggtgtccgta	540
actccgatcc aaaggattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc	600
atcatcccgatgaaggtct gagcggcgat cagatgggccc agatcgaaaa aatttttaag	660
gtggtgtacc ctgtggatga tcatcacttt aagggtgattc tgcactatgg cacttggtta	720
atcgacgggg ttacgccgaa catgatcgac ttttcggac ggccgtatga aggcacgccc	780
gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc	840
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg	900
accggctggc ggctgtgcga gcgcattttg gcgggatatc tcgagccaac cactgaggat	960
ctgtactttc agagcgataa cgatggatcc gaaatcggtta ctggctttcc attcgacccc	1020
cattatgtgg aagtcctggg cgagcgcgat cactacgtcg atgttggtcc gcgcgatggc	1080
accctgtgc tgttcctgca cggtaacccg acctctcct acgtgtggcg caacatcatc	1140
ccgcatgttg caccgaccca tcgctgcatt gctccagacc tgatcgggtat gggcaaatcc	1200

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gacaaaccag acctgggtta tttcttcgac gaccacgtcc gcttcatgga tgccttcac	1260
gaagccctgg gtctggaaga ggtcgtcctg gtcattcacg actggggctc cgctctgggt	1320
ttccactggg ccaagcgcaa tccagagcgc gtcaaaggta ttgcatttat ggagttcac	1380
cgccttatcc cgacctggga cgaatggcca gaatttgccc gcgagacctt ccaggccttc	1440
cgcaccaccg acgtcggccg caagctgac atcgatcaga acgtttttat cgagggtacg	1500
ctgccgatgg gtgtcgtccg cccgctgact gaagtcgaga tggaccatta ccgcgagccg	1560
ttcctgaatc ctgttgaccg cgagccactg tggcgcttcc caaacgagct gccaatcgcc	1620
ggtagaccag cgaacatcgt cgcgctggc gaagaataca tggactggct gcaccagtcc	1680
cctgtcccga agctgctgtt ctggggcacc ccaggcgctt tgatcccacc ggccgaagcc	1740
gctcgcctgg caaaaagcct gcctaactgc aaggctgtgg acatcgcccc gggctctgaat	1800
ctgctgcaag aagacaaccc ggacctgatc ggcagcgaga tcgcgcgctg gctgtctact	1860
ctggagattt ccggt	1875

<210> 95
 <211> 625
 <212> PRT
 <213> Artificial Sequence

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

<400> 95
 Met Leu Gly Leu Ser Glu Gln Ser Val Ser Ile Ser Arg Cys Ala Gly
 1 5 10 15

Thr Arg Leu Pro Ala Leu Leu Asp Glu Gln Gln Val Asn Val Leu Leu
 20 25 30

Tyr Asp Met Asn Gly Cys Tyr Ser Arg Leu Lys Glu Leu Val Pro Thr
 35 40 45

Leu Pro Gln Asn Arg Lys Val Ser Lys Val Glu Ile Leu Gln His Val
 50 55 60

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

Val Gly Thr Thr Gly Gly Arg Gly Leu Pro Val Arg Ala Pro Leu Ser
 85 90 95

Thr Leu Asn Gly Glu Ile Ser Ala Leu Ala Ala Glu Ala Ala Cys Val
 100 105 110

Pro Ala Asp Asp Arg Ile Leu Cys Arg Val Ser Leu Glu Asn Leu Tyr
 115 120 125

Phe Gln Ala Ser Gly Gly Gly Gly Gly Ala Ile Ala Met Val Phe Thr
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130 135 155193_1 140

Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu
145 150 155 160

Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu Phe Gln Asn Leu
165 170 175

Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn
180 185 190

Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
195 200 205

Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
210 215 220

Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
225 230 235 240

Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
245 250 255

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
260 265 270

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

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
290 295 300

Leu Cys Glu Arg Ile Leu Ala Gly Tyr Leu Glu Pro Thr Thr Glu Asp
305 310 315 320

Leu Tyr Phe Gln Ser Asp Asn Asp Gly Ser Glu Ile Gly Thr Gly Phe
325 330 335

Pro Phe Asp Pro His Tyr Val Glu Val Leu Gly Glu Arg Met His Tyr
340 345 350

Val Asp Val Gly Pro Arg Asp Gly Thr Pro Val Leu Phe Leu His Gly
355 360 365

Asn Pro Thr Ser Ser Tyr Val Trp Arg Asn Ile Ile Pro His Val Ala
370 375 380

Pro Thr His Arg Cys Ile Ala Pro Asp Leu Ile Gly Met Gly Lys Ser
385 390 395 400

Asp Lys Pro Asp Leu Gly Tyr Phe Phe Asp Asp His Val Arg Phe Met

155193_1

<400> 96
gcaccagaca gtgacgtcag ctgccagatc ccatggccgt catactgtga cgtctttcag 60
acacccttg acgtcaatgg gagaaca 87

<210> 97
<211> 516
<212> DNA
<213> Artificial Sequence

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

<400> 97
atggatgatc atcactttaa ggtgattctg cactatggca cactggtaat cgacggggtt 60
acgccgaaca tgatcgacta tttcggacgg ccgtatgaag gcatcgccgt gttcgacggc 120
aaaaagatca ctgtaaccgg gaccctgtgg aacggcaaca aaattatcga cgagcgctg 180
atcaaccccg acggctccct gctgttccgc gtaaccatca acggagtgc cggctggcgg 240
ctgtgcgagc gcattttggc gatgggtgtt acactcgaag atttcgtagg ggactggcgg 300
cagacagccg gctacaacct ggaccaagtc cttgagcagg gcggtgtgtc cagtttgttt 360
cagaatctcg ggggtgtccgt aactccgac caaaggattg tcctgagcgg tgaaaacggc 420
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcggcga tcagatgggc 480
cagatcga aaatttttaa ggtggtgtac cctgtg 516

<210> 98
<211> 172
<212> PRT
<213> Artificial Sequence

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

<400> 98
Met Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
1 5 10 15

Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
20 25 30

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
35 40 45

Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
50 55 60

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
65 70 75 80

Leu Cys Glu Arg Ile Leu Ala Met Val Phe Thr Leu Glu Asp Phe Val
85 90 95

155193_1

Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu
100 105 110

Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr
115 120 125

Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp
130 135 140

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly
145 150 155 160

Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val
165 170

<210> 99
<211> 531
<212> DNA
<213> Artificial Sequence

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

<400> 99
atggatgatac atcactttaaa ggtgattctg cactatggca cactggtaat cgacgggggtt 60
acgccgaaca tgatcgacta tttcggacgg ccgtatgaag gcatcgccgt gttcgacggc 120
aaaaagatca ctgtaaccgg gaccctgtgg aacggcaaca aaattatcga cgagcgcctg 180
atcaaccccg acggctccct gctgttccgc gtaaccatca acggagtgc cggctggcgg 240
ctgtgacgagc gcattttggc ggggagctcc ggtggaatgg tgtttacact cgaagatttc 300
gtaggggact ggcggcagac agccggctac aacctggacc aagtccttga gcagggcggt 360
gtgtccagtt tgtttcagaa tctcggggtg tccgtaactc cgatccaaag gattgtcctg 420
agcggtgaaa acggcctgaa gatcgacatc catgtcatca tcccgtatga aggtctgagc 480
ggcgatcaga tgggccagat cgaaaaaatt ttaaggtgg tgtaccctgt g 531

<210> 100
<211> 177
<212> PRT
<213> Artificial Sequence

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

<400> 100
Met Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
1 5 10 15

Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
20 25 30

155193_1

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
35 40 45

Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
50 55 60

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
65 70 75 80

Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Met Val Phe Thr
85 90 95

Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu
100 105 110

Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu
115 120 125

Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn
130 135 140

Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
145 150 155 160

Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
165 170 175

Val

<210> 101
<211> 546
<212> DNA
<213> Artificial Sequence

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

<400> 101
atggatgac atcacttta ggtgattctg cactatggca cactggtaat cgacggggtt 60
acgccgaaca tgatcgacta tttcggacgg ccgtatgaag gcatcgccgt gttcgacggc 120
aaaaagatca ctgtaaccgg gaccctgtgg aacggcaaca aaattatcga cgagcgcctg 180
atcaaccccg acggctccct gctgttccgc gtaaccatca acggagtgc cggctggcgg 240
ctgtgcgagc gcattttggc gggaagttct ggtggaggga gctccggtgg aatggtgttt 300
acactcgaag atttcgtagg ggactggcgg cagacagccg gctacaacct ggaccaagtc 360
cttgagcagg gcggtgtgtc cagtttgttt cagaatctcg ggtgtccgt aactccgatc 420
caaaggattg tcctgagcgg tgaacacggc ctgaagatcg acatccatgt catcatcccg 480
tatgaaggtc tgagcggcga tcagatgggc cagatcga aaatttttaa ggtggtgtac 540

cctgtg

<210> 102
 <211> 182
 <212> PRT
 <213> Artificial Sequence

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

<400> 102
 Met Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
 1 5 10 15

Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
 20 25 30

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
 35 40 45

Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
 50 55 60

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
 65 70 75 80

Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly
 85 90 95

Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr
 100 105 110

Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser
 115 120 125

Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val
 130 135 140

Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro
 145 150 155 160

Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe
 165 170 175

Lys Val Val Tyr Pro Val
 180

<210> 103
 <211> 576
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 Page 106

polynucleotide

```

<400> 103
atggatgata atcactttaa ggtgattctg cactatggca cactggtaat cgacggggtt      60
acgccgaaca tgatcgacta tttcggacgg ccgtatgaag gcatcgccgt gttcgacggc      120
aaaaagatca ctgtaaccgg gaccctgtgg aacggcaaca aaattatcga cgagcgcctg      180
atcaaccccc acggctccct gctgttccgc gtaaccatca acggagtgaac cggctggcgg      240
ctgtgacgagc gcatTTTtggc gggaaagtTct ggtggaggga gTccgggtgg aggaagTtct      300
ggtggaggga gTccgggtgg aatggtgttt acactcgaag atttcgtagg ggactggcgg      360
cagacagccg gctacaacct ggaccaagtc cttgagcagg gcggtgtgtc cagtttgttt      420
cagaatctcg gggTgtccgt aactccgatc caaaggattg tcctgagcgg tgaaaacggc      480
ctgaagatcg acatccatgt catcatcccg tatgaaggTc tgagcggcga tcagatgggc      540
cagatcgaaa aaatttttaa ggtggtgtac cctgtg      576

```

<210> 104

<211> 192

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 104

```

Met Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
1           5           10           15

```

```

Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
20           25           30

```

```

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
35           40           45

```

```

Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
50           55           60

```

```

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
65           70           75           80

```

```

Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly
85           90           95

```

```

Gly Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu
100          105          110

```

```

Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp
115          120          125

```

```

Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly
130          135          140

```

155193_1

Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly
145 150 155 160

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

Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val
180 185 190

<210> 105

<211> 516

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 105

atgggcacac tggtaatcga cgggggttacg ccgaacatga tcgactat	60
ttt cggacggccg tatgaaggca tcgccgtggt cgacggcaaa aagatcactg	120
taaccgggac cctgtggaac ggcaacaaaa ttatcgacga gcgctgatc aaccccgacg	180
gctccctgct gttccgcgta accatcaacg gagtgaccgg ctggcggctg	240
tgcgagcgca ttttggcgat ggtgtttaca ctcgaagatt	300
tcgtagggga ctggcggcag acagccggct acaacctgga ccaagtcctt	360
gagcagggcg gtgtgtccag tttgtttcag aatctcgggg	420
tgtccgtaac tccgatccaa aggattgtcc tgagcggatga	480
aaacggcctg aagatcgaca tccatgtcat catcccgtat	516
gaaggtctga gcggcgatca gatgggccag atcgaaaaaa	
ttttaaggt ggtgtaccct gtggatgatc atcactttaa	
ggtgattctg cactat	

<210> 106

<211> 172

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 106

Met Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr
1 5 10 15

Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile
20 25 30

Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg
35 40 45

Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly
50 55 60

155193_1

Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Met Val Phe Thr
65 70 75 80

Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu
85 90 95

Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu
100 105 110

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

Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
130 135 140

Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
145 150 155 160

Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
165 170

<210> 107

<211> 531

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 107

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atgggcacac tggtaatcga cgggggttacg ccgaacatga tcgactatatt cggacggccg      60
tatgaaggca tcgccgtggt cgacggcaaa aagatcactg taaccggggac cctgtggaac      120
ggcaacaaaa ttatcgacga ggcctgatc aaccccgacg gctccctgct gttccgcgta      180
accatcaacg gagtgaccgg ctggcggctg tgcgagcgca ttttggcggg gagctccggt      240
ggaatggtgt ttactctga agatttcgta ggggactggc ggcagacagc cggctacaac      300
ctggaccaag tccttgagca gggcgggtgtg tccagtttgt ttcagaatct cggggtgtcc      360
gtaactccga tccaaaggat tgtcctgagc ggtgaaaacg gcctgaagat cgacatccat      420
gtcatcatcc cgtatgaagg tctgagcggc gatcagatgg gccagatcga aaaaattttt      480
aagggtggtgt accctgtgga tgatcatcac tttaagggtga ttctgcacta t          531
```

<210> 108

<211> 177

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 108

155193_1

Met Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr
1 5 10 15

Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile
20 25 30

Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg
35 40 45

Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly
50 55 60

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

Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr
85 90 95

Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser
100 105 110

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

Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro
130 135 140

Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe
145 150 155 160

Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His
165 170 175

Tyr

<210> 109
<211> 546
<212> DNA
<213> Artificial Sequence

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

<400> 109
atgggcacac tggtaatcga cggggttacg ccgaacatga tcgactatatt cggacggccg 60
tatgaaggca tcgccgtggt cgacggcaaa aagatcactg taaccgggac cctgtggaac 120
ggcaacaaaa ttatcgacga ggcctgatc aaccccgacg gctccctgct gttccgcgta 180
accatcaacg gagtgaccgg ctggcggctg tgcgagcgca ttttggcggg aagttctggt 240
ggagggagct ccggtggaat ggtgtttaca ctcgaagatt tcgtagggga ctggcggcag 300

155193_1

acagccggct acaacctgga ccaagtcctt gagcagggcg gtgtgtccag tttgtttcag	360
aatctcgggg tgtccgtaac tccgatccaa aggattgtcc tgagcgggta aaacggcctg	420
aagatcgaca tccatgtcat catcccgtat gaaggtctga gcggcgatca gatgggccag	480
atcgaaaaaa tttttaaggt ggtgtaccct gtggatgatc atcactttaa ggtgattctg	540
cactat	546

<210> 110
 <211> 182
 <212> PRT
 <213> Artificial Sequence

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

<400> 110
 Met Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr
 1 5 10 15

Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile
 20 25 30

Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg
 35 40 45

Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly
 50 55 60

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

Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
 85 90 95

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
 100 105 110

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
 115 120 125

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
 130 135 140

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
 145 150 155 160

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
 165 170 175

Lys Val Ile Leu His Tyr
 180

<210> 111
 <211> 576
 <212> DNA
 <213> Artificial Sequence

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

<400> 111
 atgggcacac tggtaatcga cgggggttacg ccgaacatga tcgactatatt cggacggccg 60
 tatgaaggca tcgccgtggt cgacggcaaa aagatcactg taaccgggac cctgtggaac 120
 ggcaacaaaa ttatcgacga ggcgctgatc aaccccgacg gctccctgct gttccgcgta 180
 accatcaacg gagtgaccgg ctggcggctg tgcgagcgca ttttggcggg aagttctggt 240
 ggagggagct ccggtggagg aagttctggt ggagggagct ccggtggaat ggtgtttaca 300
 ctcgaagatt tcgtagggga ctggcggcag acagccggct acaacctgga ccaagtcctt 360
 gagcagggcg gtgtgtccag tttgtttcag aatctcgggg tgtccgtaac tccgatccaa 420
 aggattgtcc tgagcgggtga aaacggcctg aagatcgaca tccatgtcat catcccgat 480
 gaaggtctga gcggcgatca gatgggcca atcgaaaaa tttttaaggt ggtgtaccct 540
 gtggatgatc atcactttaa ggtgattctg cactat 576

<210> 112
 <211> 192
 <212> PRT
 <213> Artificial Sequence

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

<400> 112
 Met Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr 1 5 10 15
 Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile 20 25 30
 Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg 35 40 45
 Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly 50 55 60
 Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly 65 70 75 80
 Gly Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly 85 90 95
 Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala 100 105 110

155193_1

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
115 120 125

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
130 135 140

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
145 150 155 160

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
165 170 175

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
180 185 190

<210> 113
<211> 5
<212> PRT
<213> Artificial Sequence

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

<400> 113
Gly Ser Ser Gly Gly
1 5

<210> 114
<211> 615
<212> DNA
<213> Artificial Sequence

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

<400> 114
atggatttcg taggggactg gcggcagaca gccggctaca acctggacca agtccttgag 60
cagggcggtg tgtccagttt gtttcagaat ctcggggtgt ccgtaactcc gatccaaagg 120
attgtcctga gcggtgaaaa cggcctgaag atcgacatcc atgtcatcat cccgtatgaa 180
ggtctgagcg gcgatcagat gggccagatc gaaaaaattt ttaagggtgt gtaccctgtg 240
gatgatcatc actttaagggt gattctgcac tatggcacac tggtaatcga cggggttacg 300
ccgaacatga tcgactattt cggacggccg tatgaaggca tcgccgtgtt cgacggcaaa 360
aagatcactg taaccgggac cctgtggaac ggcaacaaaa ttatcgacga gcgcctgatc 420
aaccgacg gctccctgct gttccgcgta accatcaacg gagtgaccgg ctggcggctg 480
tgcgagcgca ttttgccggg aagttctggt ggaggaagtt ctggtggaga gcctactact 540
gagaacttgt acttccagag cgataacgga agttctggtg gaggaagttc tgggtggaatg 600
gtgttttacac tcgaa 615

155193_1

<210> 115
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 115
 Met Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp
 1 5 10 15

Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly
 20 25 30

Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly
 35 40 45

Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly
 50 55 60

Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val
 65 70 75 80

Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile
 85 90 95

Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu
 100 105 110

Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu
 115 120 125

Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly
 130 135 140

Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu
 145 150 155 160

Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly
 165 170 175

Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser
 180 185 190

Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu
 195 200 205

<210> 116
 <211> 615
 <212> DNA
 <213> Artificial Sequence

155193_1

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 116

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atgttcgtag gggactggcg gcagacagcc ggctacaacc tggaccaagt ccttgagcag      60
ggcgggtgtgt ccagtttgtt tcagaatctc ggggtgtccg taactccgat ccaaaggatt      120
gtcctgagcg gtgaaaacgg cctgaagatc gacatccatg tcatcatccc gtatgaaggt      180
ctgagcggcg atcagatggg ccagatcgaa aaaattttta aggtgggtgta ccctgtggat      240
gatcatcact ttaaggtgat tctgcactat ggcacactgg taatcgacgg ggttacgccg      300
aacatgatcg actatttcgg acggccgtat gaaggcatcg ccgtgttcga cggcaaaaag      360
atcactgtaa ccgggaccct gtggaacggc aacaaaatta tcgacgagcg cctgatcaac      420
cccgacggct ccctgctgtt ccgcgtaacc atcaacggag tgaccggctg gcggctgtgc      480
gagcgcattt tggcggaag ttctggtgga ggaagtcttg gtggagagcc tactactgag      540
aacttgact tccagagcga taacggaagt tctggtggag gaagttctgg tggaatggtg      600
tttacactcg aagat                                           615
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<210> 117

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 117

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Met Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln
1          5          10          15
```

```
Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val
          20          25          30
```

```
Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu
          35          40          45
```

```
Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp
          50          55          60
```

```
Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp
65          70          75          80
```

```
Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp
          85          90          95
```

```
Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly
          100          105          110
```

```
Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp
          115          120          125
```

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Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser
130 135 140

Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys
145 150 155 160

Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu
165 170 175

Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly
180 185 190

Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp
195 200 205

<210> 118

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 118

atggtagggg actggcggca gacagccggc tacaacctgg accaagtcct tgagcagggc	60
ggtgtgtcca gtttgtttca gaatctcggg gtgtccgtaa ctccgatcca aaggattgtc	120
ctgagcgggtg aaaacggcct gaagatcgac atccatgtca tcatcccgta tgaaggctctg	180
agcggcgatc agatgggcca gatcgaaaaa atttttaagg tgggtgtaccc tgttgatgat	240
catcacttta aggtgattct gcactatggc aacttggtaa tcgacgggggt tacgccgaac	300
atgatcgact atttcggacg gccgtatgaa ggcacgcgg tggtcgacgg caaaaagatc	360
actgtaaccg ggaccctgtg gaacggcaac aaaattatcg acgagcgcct gatcaacccc	420
gacggctccc tgctgttccg cgtaaccatc aacggagtga ccggctggcg gctgtgagag	480
cgcatttttg cggaagttc tgggtggagga agttctggtg gagagcctac tactgagaac	540
ttgtacttcc agagcgataa cggaagtctt ggtggaggaa gttctggtgg aatggtgttt	600
acactcgaag atttc	615

<210> 119

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 119

Met Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val
1 5 10 15

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Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser
20 25 30

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

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

Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp
65 70 75 80

His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
85 90 95

Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
100 105 110

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
115 120 125

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
130 135 140

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
145 150 155 160

Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro
165 170 175

Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly
180 185 190

Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe
195 200 205

<210> 120

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 120

atggactggc ggcagacagc cggctacaac ctggaccaag tccttgagca gggcgggtgtg 60

tccagtttgt ttcagaatct cggggtgtcc gtaactccga tccaaaggat tgtcctgagc 120

ggtgaaaacg gcctgaagat cgacatccat gtcatcatcc cgatgaagg tctgagcggc 180

gatcagatgg gccagatcga aaaaattttt aagggtgtgt accctgtgga tgatcatcac 240

tttaaggtga ttctgcacta tggcacactg gtaatcgacg gggttacgcc gaacatgatc 300

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gactatttcg gacggccgta tgaaggcatc gccgtgttcg acggcaaaaa gatcactgta 360
accgggaccc tgtggaacgg caacaaaatt atcgacgagc gcctgatcaa ccccgacggc 420
tccctgctgt tccgcgtaac catcaacgga gtgaccggct ggcggctgtg cgagcgcatt 480
ttggcgggaa gttctggtgg aggaagttct ggtggagagc ctactactga gaacttgtag 540
ttccagagcg ataacggaag ttctggtgga ggaagttctg gtggaatggt gtttacactc 600
gaagatttcg taggg 615

<210> 121

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 121

Met Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu
1 5 10 15

Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr
20 25 30

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

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

Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His
65 70 75 80

Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
85 90 95

Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
100 105 110

Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn
115 120 125

Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe
130 135 140

Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile
145 150 155 160

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

Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser
180 185 190

Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
195 200 205

<210>	122
<211>	615
<212>	DNA
<213>	Artificial Sequence

<211> 615

<212> DNA

<213> Artificial Sequence

 $\langle 220 \rangle$

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 122

atgcggcaga	cagccggcta	caacctggac	caagtccttg	agcagggcgg	tgtgtccagt	60
ttgtttcaga	atctcggggt	gtccgtaact	ccgatccaaa	ggattgtcct	gagcggtgaa	120
aacggcctga	agatcgacat	ccatgtcatc	atcccgtatg	aaggctctgag	cggcgatcag	180
atggggccaga	tcgaaaaaat	ttttaaggty	gtgtaccctg	tggatgatca	tcactttaag	240
gtgattctgc	actatggcac	actggtaatc	gacggggtta	cgccgaacat	gatcgactat	300
ttcggacggc	cgtatgaagg	catcgccctg	ttcgacggca	aaaagatcac	tgtaaccggg	360
accctgtgga	acggcaacaa	aattatcgac	gagcgcctga	tcaaccccca	cggctccctg	420
ctgttccgcg	taaccatcaa	cggagtgacc	ggctggcggc	tgtgcgagcg	cattttggcg	480
ggaagttctg	gtggaggaag	ttctggtgga	gagcctacta	ctgagaactt	gtacttccag	540
agcgataacg	gaagttctgg	tggaggaagt	tctggtggaa	tggtgtttac	actcgaagat	600
ttcgtagggg	actgg					615

$\langle 210 \rangle$ 123

<211> 205

<212> PRT

<213> Artificial Sequence

$\langle 220 \rangle$

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 123

Met Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly
1 5 10 15

Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile
20 25 30

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

Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile
50 55 60

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

<210> 124
 <211> 603
 <212> DNA
 <213> Artificial Sequence

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

<400> 124	
cagacagccg gctacaacct ggaccaagtc cttgagcagg gcggtgtgtc cagtttgttt	60
cagaatctcg ggggtgtccgt aactccgatc caaaggattg tcctgagcgg tgaaaacggc	120
ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcggcga tcagatgggc	180
cagatcgaaa aaatttttaa ggtggtgtac cctgtggatg atcatcactt taagggtgatt	240
ctgcactatg gcacactggt aatcgacggg gttacgccga acatgatcga ctatttcgga	300
cggccgtatg aaggcatcgc cgtgttcgac ggcaaaaaga tactgtaac cgggaccctg	360
tggaacggca acaaaattat cgacgagcgc ctgatcaacc ccgacggctc cctgctgttc	420
cgcgtaacca tcaacggagt gaccggctgg cggctgtgcg agcgcatttt ggcgggaagt	480
tctggtggag gaagtcttgg tggagagcct actactgaga acttgactt ccagagcgat	540
aacggaagtt ctggtggagg aagttctggt ggaatggtgt ttacactcga agatttcgta	600
ggg	603

<210> 125

<211> 201

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 125

Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val
 1 5 10 15

Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg
 20 25 30

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

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

Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile
 65 70 75 80

Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile
 85 90 95

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

Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp
 115 120 125

Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile
 130 135 140

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

Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr
 165 170 175

Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Ser Ser Gly Gly Met
 180 185 190

Val Phe Thr Leu Glu Asp Phe Val Gly
 195 200

<210> 126

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 126
 atgggctaca acctggacca agtccttgag cagggcggtg tgtccagttt gtttcagaat 60
 ctcggggtgt ccgtaactcc gatccaaagg attgtcctga gcggtgaaaa cggcctgaag 120
 atcgacatcc atgtcatcat cccgtatgaa ggtctgagcg gcgatcagat gggccagatc 180
 gaaaaaattt ttaaggtggt gtaccctgtg gatgatcatc actttaaggt gattctgcac 240
 tatggcacac tggtaatcga cggggttacg ccgaacatga tcgactatth cggacggccg 300
 tatgaaggca tcgccgtggt cgacggcaaa aagatcactg taaccgggac cctgtggaac 360
 ggcaacaaaa ttatcgacga ggcctgatc aaccccgacg gctccctgct gttccgcgta 420
 accatcaacg gagtgaccgg ctggcggctg tgcgagcgca ttttggcggg aagttctggt 480
 ggaggaagtt ctggtggaga gcctactact gagaacttgt acttccagag cgataacgga 540
 agttctggtg gaggaagttc tgggtggaatg gtgtttacac tcgaagattt cgtaggggac 600
 tggcggcaga cagcc 615

<210> 127

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 127

Met Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser
 1 5 10 15

Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val
 20 25 30

Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro
 35 40 45

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

Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His
 65 70 75 80

Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr
 85 90 95

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

Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg
 115 120 125

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Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly
 130 135 140

Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly
 145 150 155 160

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

Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe
 180 185 190

Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 195 200 205

<210> 128

<211> 612

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 128

ctggaccaag tccttgagca gggcgggtgtg tccagtttgt ttcagaatct cgggggtgtcc	60
gtaactccga tccaaaggat tgtcctgagc ggtgaaaacg gcctgaagat cgacatccat	120
gtcatcatcc cgtatgaagg tctgagcggc gatcagatgg gccagatcga aaaaattttt	180
aagggtggtgt accctgtgga tgatcatcac tttaagggtga ttctgcacta tggcacactg	240
gtaatcgacg gggttacgcc gaacatgatc gactatttcg gacggccgta tgaaggcatc	300
gccgtgttcg acggcaaaaa gatcactgta accgggaccc tgtggaacgg caacaaaatt	360
atcgacgagc gcctgatcaa ccccgacggc tccctgctgt tccgcgtaac catcaacgga	420
gtgaccggct ggcggctgtg cgagcgcatc ttggcgggaa gttctggtgg aggaagtctt	480
ggtggagagc ctactactga gaacttgtac ttccagagcg ataacggaag ttctggtgga	540
ggaagtcttg gtggaatggt gtttactctc gaagatttcg taggggactg gcggcagaca	600
gccggctaca ac	612

<210> 129

<211> 204

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 129

Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn
 1 5 10 15

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

Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu
35 40 45

Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr
50 55 60

Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu
65 70 75 80

Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro
85 90 95

Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly
100 105 110

Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro
115 120 125

Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp
130 135 140

Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser
145 150 155 160

Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly
165 170 175

Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp
180 185 190

Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn
195 200

<210> 130

<211> 612

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 130

gtccttgagc agggcggtgt gtccagtttg tttcagaatc tcgggggtgtc cgtaactccg 60

atccaaagga ttgtcctgag cgggtgaaaac ggcctgaaga tcgacatcca tgtcatcatc 120

ccgtatgaag gtctgagcgg cgatcagatg ggccagatcg aaaaaatttt taaggtggtg 180

taccctgtgg atgatcatca ctttaagggtg attctgcact atggcacact ggtaatcgac 240

gggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc 300

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gacggcaaaa agatcactgt aaccgggacc ctgtggaacg gcaacaaaat tatcgacgag	360
cgcctgatca accccgacgg ctccctgctg ttccgcgtaa ccatcaacgg agtgaccggc	420
tggcggctgt gcgagcgcat tttggcggga agttctggtg gaggaagttc tgggtggagag	480
cctactactg agaacttgta cttccagagc gataacggaa gttctggtgg aggaagttct	540
ggtggaatgg tgtttacact cgaagatttc gtaggggact ggcggcagac agccggctac	600
aacctggacc aa	612

<210> 131
 <211> 204
 <212> PRT
 <213> Artificial Sequence

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

<400> 131
 Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val
 1 5 10 15

Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu
 20 25 30

Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp
 35 40 45

Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp
 50 55 60

Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp
 65 70 75 80

Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly
 85 90 95

Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp
 100 105 110

Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser
 115 120 125

Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys
 130 135 140

Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu
 145 150 155 160

Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly
 165 170 175

Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly

180 185 155193_1 190

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln
195 200

<210> 132
<211> 612
<212> DNA
<213> Artificial Sequence

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

<400> 132
cagggcgggtg tgtccagttt gtttcagaat ctcggggtgt ccgtaactcc gatccaaagg 60
attgtcctga gcggtgaaaa cggcctgaag atcgacatcc atgtcatcat cccgtatgaa 120
ggctctgagcg gcgatcagat gggccagatc gaaaaaattt ttaaggtggt gtaccctgtg 180
gatgatcatc actttaaggt gattctgcac tatggcacac tggtaatcga cgggggttacg 240
ccgaacatga tcgactattt cggacggccg tatgaaggca tcgccgtggt cgacggcaaa 300
aagatcactg taaccgggac cctgtggaac ggcaacaaaa ttatcgacga gcgcctgatc 360
aaccgacg gctccctgct gttccgcgta accatcaacg gagtgaccgg ctggcggctg 420
tgcgagcgca ttttgcgagg aagttctggt ggaggaagtt ctggtggaga gcctactact 480
gagaacttgt acttccagag cgataacgga agttctggtg gaggaagttc tgggtggaatg 540
gtgtttacac tcgaagatth cgtagggggac tggcggcaga cagccggcta caacctggac 600
caagtccttg ag 612

<210> 133
<211> 204
<212> PRT
<213> Artificial Sequence

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

<400> 133
Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr
1 5 10 15

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

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly
35 40 45

Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His
50 55 60

Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
65 70 75 80

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Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
85 90 95

Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn
100 105 110

Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe
115 120 125

Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile
130 135 140

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

Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser
165 170 175

Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg
180 185 190

Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu
195 200

<210> 134

<211> 612

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 134

gtgtccagtt tgtttcagaa tctcggggtg tccgtaactc cgatccaaag gattgtcctg	60
agcgggtgaaa acggcctgaa gatcgacatc catgtcatca tcccgtatga aggtctgagc	120
ggcgatcaga tgggccagat cgaaaaaatt ttttaagggtg tgtaccctgt ggatgatcat	180
cactttaagg tgattctgca ctatggcaca ctggtaatcg acgggggttac gccgaacatg	240
atcgactatt tcggacggcc gtatgaaggc atcgccgtgt tcgacggcaa aaagatcact	300
gtaaccggga ccctgtggaa cggcaacaaa attatcgacg agcgcctgat caaccccgac	360
ggctccctgc tgttccgcgt aaccatcaac ggagtgaccg gctggcggct gtgcgagcgc	420
atTTTggcgg gaagttctgg tggaggaagt tctggtggag agcctactac tgagaacttg	480
tacttccaga gcgataacgg aagttctggt ggaggaagtt ctggtggaat ggtgtttaca	540
ctcgaagatt tcgtagggga ctggcggcag acagccggct acaacctgga ccaagtcctt	600
gagcagggcg gt	612

<210> 135

155193_1

<211> 204

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 135

Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln
1 5 10 15

Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val
20 25 30

Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu
35 40 45

Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val
50 55 60

Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met
65 70 75 80

Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly
85 90 95

Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile
100 105 110

Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr
115 120 125

Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly
130 135 140

Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu
145 150 155 160

Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly
165 170 175

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
180 185 190

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly
195 200

<210> 136

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

155193_1

polynucleotide

```

<400> 136
atgctcgggg tgtccgtaac tccgatccaa aggattgtcc tgagcgggtga aaacggcctg      60
aagatcgaca tccatgtcat catcccgtat gaaggctctga gcggcgatca gatgggccag      120
atcgaaaaaa tttttaaggt ggtgtaccct gtggatgata atcactttaa ggtgattctg      180
cactatggca cactggtaat cgacgggggtt acgccgaaca tgatcgacta tttcggacgg      240
ccgtatgaag gcatcgccgt gttcgacggc aaaaagatca ctgtaaccgg gaccctgtgg      300
aacggcaaca aaattatcga cgagcgctg atcaaccccg acggctccct gctgttccgc      360
gtaaccatca acggagtga cggctggcgg ctgtgcgagc gcattttggc gggaagtctt      420
ggtggaggaa gttctggtgg agagcctact actgagaact tgtacttcca gagcgataac      480
ggaagttctg gtggaggaag ttctggtgga atggtgttta cactcgaaga tttcgtaggg      540
gactggcggc agacagccgg ctacaacctg gaccaagtcc ttgagcaggg cgggtgtgtcc      600
agtttgtttc agaat                                                    615

```

<210> 137

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 137

```

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

```

```

Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly
          20          25          30

```

```

Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val
          35          40          45

```

```

Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr
          50          55          60

```

```

Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg
65          70          75          80

```

```

Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr
          85          90          95

```

```

Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn
100         105         110

```

```

Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly
115         120         125

```

Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser
 130 135 140 155193_1

Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn
 145 150 155 160

Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu
 165 170 175

Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln
 180 185 190

Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn
 195 200 205

<210> 138
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 138
 atgccgatcc aaaggattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc 60
 atcatcccgt atgaagggtct gagcggcgat cagatgggccc agatcgaaaa aatttttaag 120
 gtggtgtacc ctgtggatga tcatcacttt aagggtgattc tgcactatgg cactactggt 180
 atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgatga aggcacgcgc 240
 gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc 300
 gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg 360
 accggctggc ggctgtgcga ggcgattttg gcgggaagtt ctggtggagg aagttctggt 420
 ggagagccta ctactgagaa cttgtacttc cagagcgata acggaagttc tgggtggagga 480
 agttctggtg gaatgggtgtt tacactcgaa gatttcgtag gggactggcg gcagacagcc 540
 ggctacaacc tggaccaagt ccttgagcag ggcggtgtgt ccagtttggt tcagaatctc 600
 ggggtgtccg taact 615

<210> 139
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 139
 Met Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile
 1 5 10 15

Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met
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155193_1

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

<210> 140
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 140 atgaggattg tcctgagcgg tgaaaacggc ctgaagatcg acatccatgt catcatcccg	60
tatgaaggtc tgagcggcga tcagatgggc cagatcga aaatttttaa ggtggtgtac	120
cctgtggatg atcatcactt taaggtgatt ctgcactatg gcacactggt aatcgacggg	180
gttacgccga acatgatcga ctatttcgga cgcccgatg aaggcatcgc cgtgttcgac	240
ggcaaaaaga tactgtaac cgggaccctg tggaacggca aaaaattat cgacgagcgc	300
ctgatcaacc ccgacggctc cctgctgttc cgcgtaacca tcaacggagt gaccggctgg	360

155193_1

cggctgtgcg agcgcatTTT ggcgggaagt tctggtggag gaagttctgg tggagagcct 420
 actactgaga acttgtactt ccagagcgat aacggaagtt ctggtggagg aagttctggt 480
 ggaatggtgt ttacactcga agatttcgta ggggactggc ggcagacagc cggctacaac 540
 ctggaccaag tccttgagca gggcggtgtg tccagtttgt ttcagaatct cggggtgtcc 600
 gtaactccga tccaa 615

<210> 141

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 141

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

Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile
20 25 30

Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys
35 40 45

Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn
50 55 60

Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp
65 70 75 80

Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile
85 90 95

Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val
100 105 110

Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
115 120 125

Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn
130 135 140

Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly
145 150 155 160

Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr
165 170 175

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

155193_1

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

<210> 142
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 142
 atgattgtcc tgagcgggtga aaacggcctg aagatcgaca tccatgtcat catcccgtat 60
 gaaggctctga gcggcgatca gatgggccag atcgaaaaaa tttttaagggt ggtgtaccct 120
 gtggatgatc atcactttaa ggtgattctg cactatggca cactggtaat cgacgggggtt 180
 acgccgaaca tgatcgacta tttcggacgg ccgtatgaag gcatcgccgt gttcgacggc 240
 aaaaagatca ctgtaaccgg gaccctgtgg aacggcaaca aaattatcga cgagcgctgt 300
 atcaaccccg acggctccct gctgttccgc gtaaccatca acggagtgc cggctggcgg 360
 ctgtgcgagc gcattttggc gggaagttct ggtggaggaa gttctggtgg agagcctact 420
 actgagaact tgtacttcca gagcgataac ggaagttctg gtggaggaag ttctggtgga 480
 atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg 540
 gaccaagtcc ttgagcaggg cggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 600
 actccgatcc aaagg 615

<210> 143
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 143
 Met Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val
 1 5 10 15
 Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu
 20 25 30
 Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val
 35 40 45
 Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met
 50 55 60
 Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly
 65 70 75 80

155193_1

Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile
85 90 95

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

Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly
115 120 125

Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu
130 135 140

Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly
145 150 155 160

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
165 170 175

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
180 185 190

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

<210> 144

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 144

atggtcctga gcggtgaaaa cggcctgaag atcgacatcc atgtcatcat cccgtatgaa	60
ggtctgagcg gcgatcagat gggccagatc gaaaaaattt ttaagggtgggt gtaccctgtg	120
gatgatcatc actttaaggt gattctgcac tatggcacac tggtaatcga cgggggttacg	180
ccgaacatga tcgactatct cggacggccg tatgaaggca tcgccgtggt cgacggcaaaa	240
aagatcactg taaccgggac cctgtggaac ggcaacaaaa ttatcgacga ggcctgatc	300
aaccccgacg gctccctgct gttccgcgta accatcaacg gaggtagccg ctggcggctg	360
tgcgagcgca ttttggcggg aagttctgggt ggaggaagtt ctggtggaga gcctactact	420
gagaacttgt acttccagag cgataacgga agttctggtg gaggaagttc tgggtggaatg	480
gtgttttacac tcgaagattt cgtaggggac tggcggcaga cagccggcta caacctggac	540
caagtccttg agcagggcgg tgtgtccagt ttgtttcaga atctcgggggt gtccgtaact	600
ccgatccaaa ggatt	615

<210> 145

<211> 205

155193_1

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 145

Met Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile
1 5 10 15

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

Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile
35 40 45

Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile
50 55 60

Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys
65 70 75 80

Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp
85 90 95

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

Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser
115 120 125

Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr
130 135 140

Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met
145 150 155 160

Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly
165 170 175

Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe
180 185 190

Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile
195 200 205

<210> 146

<211> 612

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

155193_1

<400> 146
 atgctgagcg gtgaaaacgg cctgaagatc gacatccatg tcatcatccc gtatgaaggt 60
 ctgagcggcg atcagatggg ccagatcgaa aaaattttta aggtggtgta ccctgtggat 120
 gatcatcact ttaaggtgat tctgcactat ggcacactgg taatcgacgg ggttacgccg 180
 aacatgatcg actatttcgg acggccgtat gaaggcatcg ccgtgttcga cggcaaaaag 240
 atcactgtaa ccggggaccct gtggaacggc aacaaaatta tcgacgagcg cctgatcaac 300
 cccgacggct ccctgctggt ccgcgtaacc atcaacggag tgaccggctg gcggctgtgc 360
 gagcgcattt tggcgggaag ttctggtgga ggaagtcttg gtggagagcc tactactgag 420
 aacttgact tccagagcga taacggaagt tctggtggag gaagttctgg tggaatggtg 480
 ttacactcg aagatttcgt aggggactgg cggcagacag ccggctacaa cctggaccaa 540
 gtccttgagc agggcggtgt gtccagtttg tttcagaatc tcggggtgtc cgtaactccg 600
 atccaaagga tt 612

<210> 147
 <211> 204
 <212> PRT
 <213> Artificial Sequence

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

<400> 147
 Met Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile
 1 5 10 15

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

Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu
 35 40 45

His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp
 50 55 60

Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys
 65 70 75 80

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

Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn
 100 105 110

Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser
 115 120 125

Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe
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155193_1

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

<210> 150

<211> 616

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 150

atgggtgaaa acggcctgaa gatcgacatc catgtcatca tcccgtatga aggtctgagc	60
ggcgatcaga tgggccagat cgaaaaaatt ttttaaggtgg tgtaccctgt ggatgatcat	120
cactttaagg tgattctgca ctatggcaca ctggtaatcg acgggggttac gccgaacatg	180
atcgactatt tcggacggcc gtatgaaggc atcgccgtgt tcgacggcaa aaagatcact	240
gtaaccggga ccctgtggaa cggcaacaaa attatcgacg agcgctgat caaccccgac	300
ggctccctgc tgttccgcgt aaccatcaac ggagtgaccg gctggcggct gtgcgagcgc	360

155193_1

atatttggcgg gaagttcttg tggaggaagt tctggtggag agcctactac tgagaacttg	420
tactttccaga gcgataacgg aagttctggt ggaggaagtt ctggtggaat ggtgtttaca	480
ctcgaagatt tcgtagggga ctggcggcag acagccggct acaacctgga ccaagtcctt	540
gagcagggcg gtgtgtccag tttgtttcag aatctcgggg tgccgtaac tccgatccaa	600
aggattgtcc tgagcg	616

<210> 151
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 151
 Met Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 1 5 10 15
 Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 20 25 30
 Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 35 40 45
 Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 50 55 60
 Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 65 70 75 80
 Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 85 90 95
 Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 100 105 110
 Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly
 115 120 125
 Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser
 130 135 140
 Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr
 145 150 155 160
 Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu
 165 170 175
 Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu
 180 185 190

155193_1

Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser
 195 200 205

<210> 152

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 152

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atggaaaacg gcctgaagat cgacatccat gtcatcatcc cgatatgaagg tctgagcggc      60
gatcagatgg gccagatcga aaaaattttt aagggtggtgt accctgtgga tgatcatcac      120
tttaaggtga ttctgcacta tggcacactg gtaatcgacg gggttacgcc gaacatgatc      180
gactattttcg gacggccgta tgaaggcatc gccgtgttcg acggcaaaaa gatcactgta      240
accgggaccc tgtggaacgg caacaaaatt atcgacgagc gcctgatcaa ccccgacggc      300
tccctgctgt tccgcgtaac catcaacgga gtgaccggct ggcggctgtg cgagcgcatt      360
ttggcgggaa gttctggtgg aggaagtctt ggtggagagc ctactactga gaactgtac      420
ttccagagcg ataacggaag ttctggtgga ggaagtcttg gtggaatggt gtttacctc      480
gaagatttcg taggggactg gcggcagaca gccggctaca acctggacca agtccttgag      540
cagggcggtg tgtccagttt gtttcagaat ctcggggtgt ccgtaactcc gatccaaagg      600
attgtcctga gcggt                                     615

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<210> 153

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 153

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Met Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu
1           5           10           15

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

Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly
35           40           45

Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly
50           55           60

Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val
65           70           75           80

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Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile
 85 90 95
 Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr
 100 105 110
 Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly
 115 120 125
 Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp
 130 135 140
 Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu
 145 150 155 160
 Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp
 165 170 175
 Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly
 180 185 190
 Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly
 195 200 205

<210> 154
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 154
 atgaacggcc tgaagatcga catccatgtc atcatcccgt atgaaggtct gagcggcgat 60
 cagatgggcc agatcgaaaa aatttttaag gtggtgtacc ctgtggatga tcatcacttt 120
 aaggtgattc tgcactatgg cacactggta atcgacggg ttacgccgaa catgatcgac 180
 tatttcggac ggccgtatga aggcacgcc gtgttcgacg gcaaaaagat cactgtaacc 240
 gggaccctgt ggaacggcaa caaaattatc gacgagcgcc tgatcaaccc cgacggctcc 300
 ctgctgttcc gcgtaaccat caacggagt accggctggc ggctgtgcga gcgcattttg 360
 gcgggaagtt ctggtggagg aagttctggt ggagagccta ctactgagaa cttgtacttc 420
 cagagcgata acggaagttc tgggtggagga agttctggtg gaatggtgtt tacactcgaa 480
 gatttcgtag gggactggcg gcagacagcc ggctacaacc tggaccaagt ccttgagcag 540
 ggcggtgtgt ccagtttggt tcagaatctc ggggtgtccg taactccgat ccaaaggatt 600
 gtcctgagcg gtgaa 615

<210> 155
 <211> 205
 <212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 155

Met Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly
1 5 10 15

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

Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr
35 40 45

Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg
50 55 60

Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr
65 70 75 80

Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn
85 90 95

Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly
100 105 110

Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser
115 120 125

Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn
130 135 140

Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu
145 150 155 160

Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln
165 170 175

Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val
180 185 190

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

<210> 156

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

155193_1

<400> 156
 atgggcctga agatcgacat ccatgtcatc atcccgtatg aaggtctgag cggcgatcag 60
 atgggccaga tcgaaaaaat ttttaagggtg gtgtaccctg tggatgatca tcactttaag 120
 gtgattctgc actatggcac actggtaatc gacgggggtta cgccgaacat gatcgactat 180
 ttcggacggc cgtatgaagg catcgccgtg ttcgacggca aaaagatcac tgtaaccggg 240
 accctgtgga acggcaacaa aattatcgac gagcgcctga tcaaccccga cggctccctg 300
 ctgttccgcg taaccatcaa cggagtgacc ggctggcggc tgtgcgagcg cattttggcg 360
 ggaagtcttg gtggaggaag ttctggtgga gagcctacta ctgagaactt gtacttccag 420
 agcgataacg gaagtcttg tggaggaagt tctggtggaa tgggtgtttac actcgaagat 480
 ttcgtagggg actggcggca gacagccggc tacaacctgg accaagtcct tgagcagggc 540
 ggtgtgtcca gtttgtttca gaatctcggg gtgtccgtaa ctccgatcca aaggattgtc 600
 ctgagcgggtg aaac 615

<210> 157
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 157
 Met Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu
 1 5 10 15
 Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr
 20 25 30
 Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu
 35 40 45
 Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro
 50 55 60
 Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly
 65 70 75 80
 Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro
 85 90 95
 Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp
 100 105 110
 Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser
 115 120 125
 Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly
 130 135 140

155193_1

Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp
145 150 155 160

Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val
165 170 175

Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser
180 185 190

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

<210> 158

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 158

atgctgaaga tcgacatcca tgtcatcatc ccgtatgaag gtctgagcgg cgatcagatg	60
ggccagatcg aaaaaatttt taagggtgtg taccctgtgg atgatcatca ctttaagggtg	120
attctgcact atggcacact ggtaatcgac ggggttacgc cgaacatgat cgactatttc	180
ggacggccgt atgaaggcat cgccgtgttc gacggcaaaa agatcactgt aaccgggacc	240
ctgtggaacg gcaacaaaat tatcgacgag cgcctgatca accccgacgg ctccctgctg	300
ttccgcgtaa ccatcaacgg agtgaccggc tggcggctgt gcgagcgc at tttggcggga	360
agttctggtg gaggaagttc tgggtggagag cctactactg agaacttgta cttccagagc	420
gataacggaa gttctggtgg aggaagttct ggtggaatgg tgtttacct cgaagatttc	480
gtaggggact ggcggcagac agccggctac aacctggacc aagtccttga gcagggcggt	540
gtgtccagtt tgtttcagaa tctcggggtg tccgtaactc cgatccaaag gattgtcctg	600
agcggtgaaa acggc	615

<210> 159

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 159

Met Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
1 5 10 15

Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
20 25 30

155193_1

Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
35 40 45

Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
50 55 60

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
65 70 75 80

Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
85 90 95

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
100 105 110

Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly
115 120 125

Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser
130 135 140

Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe
145 150 155 160

Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu
165 170 175

Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val
180 185 190

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

<210> 160

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 160

atgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcggcga tcagatgggc	60
cagatcgaaa aaatttttaa ggtggtgtac cctgtggatg atcatcactt taaggtgatt	120
ctgcactatg gcacactggt aatcgacggg gttacgccga acatgatcga ctatttcgga	180
cggccgatg aaggcatcgc cgtgttcgac ggcaaaaaga tactgtaac cgggaccctg	240
tggaacggca aaaaattat cgacgagcgc ctgatcaacc ccgacggctc cctgctgttc	300
cgcgtaacca tcaacggagt gaccggctgg cggctgtgag agcgcatattt ggcgggaagt	360
tctggtggag gaagttctgg tggagagcct actactgaga acttgactt ccagagcgat	420

155193_1

aacggaagtt ctggtggagg aagttctggt ggaatggtgt ttacactcga agatttcgta 480
 ggggactggc ggcagacagc cggctacaac ctggaccaag tccttgagca gggcgggtgtg 540
 tccagtttgt ttcagaatct cgggggtgtcc gtaactccga tccaaaggat tgtcctgagc 600
 ggtgaaaacg gcctg 615

<210> 161

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 161

Met Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly
 1 5 10 15

Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val
 20 25 30

Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile
 35 40 45

Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu
 50 55 60

Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu
 65 70 75 80

Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly
 85 90 95

Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu
 100 105 110

Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly
 115 120 125

Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser
 130 135 140

Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val
 145 150 155 160

Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu
 165 170 175

Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr
 180 185 190

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

155193_1

<210> 162
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 162
 atgacgaca tccatgtcat catcccgtat gaaggtctga gcggcgatca gatgggccag 60
 atcgaaaaaa tttttaaggt ggtgtaccct gtggatgatc atcactttaa ggtgattctg 120
 cactatggca cactggtaat cgacgggggtt acgccgaaca tgatcgacta tttcggacgg 180
 ccgtatgaag gcatcgccgt gttcgacggc aaaaagatca ctgtaaccgg gaccctgtgg 240
 aacggcaaca aaattatcga cgagcgctg atcaaccccg acggctccct gctgttccgc 300
 gtaaccatca acggagtgc cggctggcgg ctgtgcgagc gcattttggc ggggaagtct 360
 ggtggaggaa gttctggtgg agagcctact actgagaact tgtacttcca gagcgataac 420
 ggaagttctg gtggaggaag ttctggtgga atggtgttta cactcgaaga tttcgtaggg 480
 gactggcggc agacagccgg ctacaacctg gaccaagtcc ttgagcaggg cgggtgtgtcc 540
 agtttgtttc agaatctcgg ggtgtccgta actccgatcc aaaggattgt cctgagcggg 600
 gaaaacggcc tgaag 615

<210> 163
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 163
 Met Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp
 1 5 10 15

Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp
 20 25 30

Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp
 35 40 45

Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly
 50 55 60

Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp
 65 70 75 80

Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser

85 155193_1 95
90

Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys
100 105 110

Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu
115 120 125

Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly
130 135 140

Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
145 150 155 160

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
165 170 175

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
180 185 190

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys
195 200 205

<210> 164
<211> 615
<212> DNA
<213> Artificial Sequence

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

<400> 164
atggacatcc atgtcatcat cccgtatgaa ggtctgagcg gcgatcagat gggccagatc 60
gaaaaaattt ttaaggtggt gtaccctgtg gatgatcatc actttaaggt gattctgcac 120
tatggcacac tggtaatcga cggggttacg ccgaacatga tcgactattt cggacggccg 180
tatgaaggca tcgccgtggt cgacggcaaa aagatcactg taaccgggac cctgtggaac 240
ggcaacaaaa ttatcgacga ggcctgatc aaccccgacg gctccctgct gttccgcgta 300
accatcaacg gagtgaccgg ctggcggctg tgcgagcgca ttttggcggg aagttctggt 360
ggaggaagtt ctggtggaga gcctactact gagaacttgt acttccagag cgataacgga 420
agttctggtg gaggaagttc tgggtggaatg gtgttttacac tcgaagattt cgtaggggac 480
tggcggcaga cagccggcta caacctggac caagtccttg agcagggcgg tgtgtccagt 540
ttgtttcaga atctcggggg gtccgtaact ccgatccaaa ggattgtcct gagcggtgaa 600
aacggcctga agatc 615

<210> 165
<211> 205
<212> PRT
<213> Artificial Sequence

155193_1

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 165

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

Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp
20 25 30

His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
35 40 45

Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
50 55 60

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
65 70 75 80

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
85 90 95

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
100 105 110

Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro
115 120 125

Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly
130 135 140

Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp
145 150 155 160

Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly
165 170 175

Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile
180 185 190

Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile
195 200 205

<210> 166

<211> 614

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 166

155193_1

atgatccatg tcatcatccc gtatgaaggt ctgagcggcg atcagatggg ccagatcgaa	60
aaaattttta aggtggtgta ccctgtggat gatcatcact ttaaggtgat tctgcactat	120
ggcacactgg taatcgacgg ggttacgccg aacatgatcg actatttcgg acggccgtat	180
gaaggcatcg ccgtgttcga cggcaaaaag atcactgtaa ccgggaccct gtggaacggc	240
aacaaaatta tcgacgagcg cctgatcaac cccgacggct ccctgctggt ccgcgtaacc	300
atcaacggag tgaccggctg gcggtgtgct gagcgcattt tggcgggaag ttctggtgga	360
ggaagttctg gtggagagcc tactactgag aacttgact tccagagcga taacggaagt	420
tctggtggag gaagtcttg tggaatggtg ttacactcg aagatttcgt aggggactgg	480
cggcagacag ccggctacaa cctggaccaa gtccttgagc agggcggtgt gtccagtttg	540
tttcagaatc tcggggtgtc cgtaactccg atccaaagga ttgtcctgag cggtgaaaac	600
ggcctgaaga tcga	614

<210> 167
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 167
 Met Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met
 1 5 10 15

Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His
 20 25 30

His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val
 35 40 45

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

Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly
 65 70 75 80

Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu
 85 90 95

Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg
 100 105 110

Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr
 115 120 125

Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly
 130 135 140

155193_1

Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp
145 150 155 160

Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly
165 170 175

Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln
180 185 190

Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp
195 200 205

<210> 168

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 168

atgggtcatca tcccgatatga aggtctgagc ggcgatcaga tgggccagat cgaaaaaatt	60
tttaagggtgg tgtaccctgt ggatgatcat cactttaagg tgattctgca ctatggcaca	120
ctggtaatcg acgggggttac gccgaacatg atcgactatt tcggacggcc gtatgaaggc	180
atcgccgtgt tcgacggcaa aaagatcact gtaaccggga ccctgtggaa cggcaacaaa	240
attatcgacg agcgctgat caaccccgac ggctccctgc tgttccgctg aaccatcaac	300
ggagtgcaccg gctggcggct gtgcgagcgc attttggcgg gaagttcttg tggaggaagt	360
tctggtggag agcctactac tgagaacttg tacttccaga gcgataacgg aagttctggt	420
ggaggaagtt ctggtggaat ggtgtttaca ctcgaagatt tcgtagggga ctggcggcag	480
acagccggct acaacctgga ccaagtcctt gagcagggcg gtgtgtccag tttgtttcag	540
aatctcgggg tgtccgtaac tccgatccaa aggattgtcc tgagcgggtga aaacggcctg	600
aagatcgaca tccat	615

<210> 169

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 169

Met Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
1 5 10 15

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
20 25 30

155193_1

Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro
35 40 45

Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
50 55 60

Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys
65 70 75 80

Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg
85 90 95

Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu
100 105 110

Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu
115 120 125

Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser
130 135 140

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

Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser
165 170 175

Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile
180 185 190

Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His
195 200 205

<210> 170
<211> 615
<212> DNA
<213> Artificial Sequence

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

<400> 170
atgggtctga gcggcgatca gatgggccag atcgaaaaaa tttttaaggt ggtgtaccct 60
gtggatgatc atcactttaa ggtgattctg cactatggca cactggtaat cgacgggggt 120
acgccgaaca tgatcgacta tttcggacgg ccgatgaag gcatcgccgt gttcgacggc 180
aaaaagatca ctgtaaccgg gaccctgtgg aacggcaaca aaattatcga cgagcgcctg 240
atcaaccccg acggctccct gctgttccgc gtaaccatca acggagtgac cggctggcgg 300
ctgtgcgagc gcattttggc ggggaagtct ggtggaggaa gttctggtgg agagcctact 360
actgagaact tgtacttcca gagcgataac ggaagttctg gtggaggaag ttctggtgga 420

155193_1

atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg	480
gaccaagtcc ttgagcaggg cgggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta	540
actccgatcc aaaggattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc	600
atcatcccgt atgaa	615

<210> 171
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 171
 Met Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 1 5 10 15

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 20 25 30

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 35 40 45

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 50 55 60

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

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

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly
 100 105 110

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

Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr
 130 135 140

Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu
 145 150 155 160

Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu
 165 170 175

Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn
 180 185 190

Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu
 Page 153

195 200 155193_1 205

<210> 172
<211> 615
<212> DNA
<213> Artificial Sequence

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

<400> 172
atgggcgatc agatgggcca gatcgaaaaa atttttaagg tgggtgtaccc tgtggatgat 60
catcacttta aggtgattct gcactatggc aacttggtta tcgacggggt tacgccgaac 120
atgatcgact atttcggacg gccgtatgaa ggcacgcgcg tggtcgacgg caaaaagatc 180
actgtaaccg ggaccctgtg gaacggcaac aaaattatcg acgagcgctt gatcaacccc 240
gacggctccc tgctgttccg cgtaaccatc aacggagtga ccggctggcg gctgtgcgag 300
cgcatcttgg cggaagtctt tgggtggagga agttctggtg gagagcctac tactgagaac 360
ttgtacttcc agagcgataa cggaagtctt ggtggaggaa gttctggtgg aatggtgttt 420
aactcgaag atttcgtagg ggactggcgg cagacagccg gctacaacct ggaccaagtc 480
cttgagcagg gcggtgtgtc cagtttgttt cagaatctcg ggggtgtccgt aactccgatc 540
caaaggattg tcctgagcgg tgaacacggc ctgaagatcg acatccatgt catcatcccg 600
tatgaaggtc tgagc 615

<210> 173
<211> 205
<212> PRT
<213> Artificial Sequence

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

<400> 173
Met Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr
1 5 10 15
Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu
20 25 30
Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro
35 40 45
Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly
50 55 60
Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro
65 70 75 80
Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp
85 90 95

155193_1

Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser
100 105 110

Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly
115 120 125

Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp
130 135 140

Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val
145 150 155 160

Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser
165 170 175

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

Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
195 200 205

<210> 174

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 174

atgatgggcc agatcgaaaa aatttttaag gtggtgtacc ctgtggatga tcatcacttt	60
aaggtgattc tgcactatgg cacactggta atcgacgggg ttacgccgaa catgatcgac	120
tatttcggac ggccgtatga aggcacgcc gtgttcgacg gcaaaaagat cactgtaacc	180
gggaccctgt ggaacggcaa caaaattatc gacgagcgcc tgatcaaccc cgacgggtcc	240
ctgctgttcc gcgtaaccat caacggagtg accggctggc ggctgtgcga gcgcattttg	300
gcgggaagtt ctggtggagg aagttctggt ggagagccta ctactgagaa cttgtacttc	360
cagagcgata acggaagtcc tgggtggagga agttctggtg gaatggtggt tacactcgaa	420
gatttcgtag gggactggcg gcagacagcc ggctacaacc tggaccaagt ccttgagcag	480
ggcgggtgtg ccagtttggt tcagaatctc ggggtgtccg taactccgat ccaaaggatt	540
gtcctgagcg gtgaaaacgg cctgaagatc gacatccatg tcatcatccc gtatgaaggt	600
ctgagcggcg atcag	615

<210> 175

<211> 205

<212> PRT

<213> Artificial Sequence

155193_1

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 175

Met Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp
1 5 10 15

Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp
20 25 30

Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly
35 40 45

Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp
50 55 60

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

Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys
85 90 95

Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu
100 105 110

Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly
115 120 125

Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
130 135 140

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
145 150 155 160

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
165 170 175

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
180 185 190

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln
195 200 205

<210> 176

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 176

atgatcgaaa aaatttttaa ggtggtgtac cctgtggatg atcatcactt taagggtgatt

60

155193_1

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ctgcactatg gcacactggg aatcgacggg gttacgccga acatgatcga ctatttcgga      120
cggccgtatg aaggcatcgc cgtgttcgac ggcaaaaaga tctactgtaac cgggaccctg      180
tggaacggca acaaaattat cgacgagcgc ctgatcaacc ccgacggctc cctgctgttc      240
cgcgtaacca tcaacggagt gaccggctgg cggctgtgcg agcgcathtt ggcggaagt      300
tctggtggag gaagtcttg tggagagcct actactgaga acttgactt ccagagcgat      360
aacggaagtt ctggtggagg aagtcttggt ggaatggtgt ttactactga agatttcgta      420
ggggactggc ggagacagc cggctacaac ctggaccaag tccttgagca gggcgggtg      480
tccagtttgt ttcagaatct cggggtgtcc gtaactccga tccaaaggat tgtcctgagc      540
ggtgaaaacg gcctgaagat cgacatccat gtcatcatcc cgatgaagg tctgagcggc      600
gatcagatgg gccag                                           615

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<210> 177

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 177

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Met Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His
1           5           10           15

```

```

Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
          20           25           30

```

```

Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
          35           40           45

```

```

Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn
          50           55           60

```

```

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

```

```

Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile
          85           90           95

```

```

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

```

```

Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser
          115          120          125

```

```

Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg
          130          135          140

```

Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val
 145 150 155 160

Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg
 165 170 175

Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile
 180 185 190

Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
 195 200 205

<210> 178
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 178
 atgattttta aggtggtgta ccctgtggat gatcatcact ttaaggtgat tctgcactat 60
 ggcacactgg taatcgacgg gggttacgccg aacatgatcg actatttcgg acggccgtat 120
 gaaggcatcg ccgtgttcga cggcaaaaag atcactgtaa ccgggaccct gtggaacggc 180
 aacaaaatta tcgacgagcg cctgatcaac cccgacggct ccctgctggt ccgcgtaacc 240
 atcaacggag tgaccggctg gcggtgtgct gagcgcatctt tggcgggaag ttctggtgga 300
 ggaagtcttg gtggagagcc tactactgag aacttgact tccagagcga taacggaagt 360
 tctggtggag gaagtcttg tggaatggtg ttacactcg aagatttcgt aggggactgg 420
 cggcagacag ccggctacaa cctggaccaa gtccttgagc agggcgggtgt gtccagtttg 480
 ttccagaatc tcggggtgtc cgtaactccg atccaaagga ttgtcctgag cgggtgaaaac 540
 ggcctgaaga tcgacatcca tgtcatcatc ccgtatgaag gtctgagcgg cgatcagatg 600
 ggccagatcg aaaaa 615

<210> 179
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 179
 Met Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val
 1 5 10 15

Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met
 20 25 30

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

<210> 180
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 180	
atggtggtgt accctgtgga tgatcatcac ttttaagggtga ttctgcacta tggcacactg	60
gtaatcgacg gggttacgcc gaacatgac gactatttcg gacggccgta tgaaggcatc	120
gccgtgttcg acggcaaaaa gatcactgta accgggaccc tgtggaacgg caacaaaatt	180
atcgacgagc gcctgatcaa ccccgacggc tccctgctgt tccgcgtaac catcaacgga	240
gtgaccggct ggcggctgtg cgagcgatt ttggcgggaa gttctggtgg aggaagttct	300
ggtggagagc ctactactga gaacttgtac ttccagagcg ataacggaag ttctggtgga	360
ggaagttctg gtggaatggt gtttacctc gaagatttcg taggggactg gcggcagaca	420
gccggctaca acctggacca agtccttgag cagggcgggtg tgtccagttt gtttcagaat	480

155193_1

ctcgggggtgt ccgtaactcc gatccaaagg attgtcctga gcggtgaaaa cggcctgaag 540
 atcgacatcc atgtcatcat cccgtatgaa ggtctgagcg gcgatcagat gggccagatc 600
 gaaaaaattt ttaag 615

<210> 181
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 181
 Met Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His
 1 5 10 15

Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr
 20 25 30

Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile
 35 40 45

Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg
 50 55 60

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

Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly
 85 90 95

Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln
 100 105 110

Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe
 115 120 125

Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn
 130 135 140

Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn
 145 150 155 160

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

Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu
 180 185 190

Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 195 200 205

<210> 182
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 182
 atggtgtacc ctgtggatga tcatcacttt aaggtgattc tgcactatgg cacactggta 60
 atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgtatga aggcacgcc 120
 gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc 180
 gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg 240
 accggctggc ggctgtgcga gcgcatTTTg gcgggaagtt ctggtggagg aagttctggt 300
 ggagagccta ctactgagaa cttgtacttc cagagcgata acggaagttc tgggtggagga 360
 agttctggtg gaatggtggt tacactcgaa gatttcgtag gggactggcg gcagacagcc 420
 ggctacaacc tggaccaagt ccttgagcag ggcggtgtgt ccagtttggt tcagaatctc 480
 ggggtgtccg taactccgat ccaaaggatt gtcctgagcg gtgaaaacgg cctgaagatc 540
 gacatccatg tcatcatccc gtatgaaggt ctgagcggcg atcagatggg ccagatcgaa 600
 aaaattttta aggtg 615

<210> 183
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 183
 Met Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 1 5 10 15
 Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 20 25 30
 Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 35 40 45
 Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 50 55 60
 Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 65 70 75 80
 Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly
 85 90 95

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Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser
 100 105 110

Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr
 115 120 125

Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu
 130 135 140

Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu
 145 150 155 160

Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn
 165 170 175

Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
 180 185 190

Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val
 195 200 205

<210> 184

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 184

atgtaccctg tggatgatca tcactttaag gtgattctgc actatggcac actggtaatc	60
gacgggggta cgccgaacat gatcgactat ttcggacggc cgtatgaagg catcgccgtg	120
ttcgacggca aaaagatcac tgtaaccggg accctgtgga acggcaacaa aattatcgac	180
gagcgcctga tcaaccccgga cggctccctg ctgttccgcg taaccatcaa cggagtgacc	240
ggctggcggc tgtgcgagcg ctttttggcg ggaagtcttg gtggaggaag ttctggtgga	300
gagcctacta ctgagaactt gtacttccag agcgataacg gaagtctctg tggaggaagt	360
tctggtggaa tgggtgtttac actcgaagat ttcgtagggg actggcggca gacagccggc	420
tacaacctgg accaagtcct tgagcagggc ggtgtgtcca gtttgtttca gaatctcggg	480
gtgtccgtaa ctccgatcca aaggattgtc ctgagcggtg aaaacggcct gaagatcgac	540
atccatgtca tcatcccgtg tgaaggtctg agcggcgatc agatgggcca gatcgaaaaa	600
atttttaagg tgggtg	615

<210> 185

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

155193_1

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 185

Met Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly
1 5 10 15

Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly
20 25 30

Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val
35 40 45

Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile
50 55 60

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

Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly
85 90 95

Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp
100 105 110

Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu
115 120 125

Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp
130 135 140

Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly
145 150 155 160

Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly
165 170 175

Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly
180 185 190

Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val
195 200 205

<210> 186

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 186

atgcctgtgg atgatcatca ctttaagggtg attctgcact atggcacact ggtaatcgac

60

155193_1

gggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc	120
gacggcaaaa agatcactgt aaccgggacc ctgtggaacg gcaacaaaat tatcgacgag	180
cgcctgatca accccgacgg ctccctgctg ttccgcgtaa ccatcaacgg agtgaccggc	240
tggcggctgt gcgagcgcat tttggcggga agttctggtg gaggaagttc tgggtggagag	300
cctactactg agaacttgta cttccagagc gataacggaa gttctggtgg aggaagttct	360
ggtggaatgg tgtttacact cgaagatttc gtaggggact ggccggcagac agccggctac	420
aacctggacc aagtccttga gcagggcggg gtgtccagtt tgtttcagaa tctcggggtg	480
tccgtaactc cgatccaaag gattgtcctg agcggtgaaa acggcctgaa gatcgacatc	540
catgtcatca tcccgtatga aggtctgagc ggcgatcaga tgggccagat cgaaaaaatt	600
tttaagggtg tgtac	615

<210> 187
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 187
 Met Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr
 1 5 10 15

Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg
 20 25 30

Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr
 35 40 45

Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn
 50 55 60

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

Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser
 85 90 95

Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn
 100 105 110

Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu
 115 120 125

Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln
 130 135 140

Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val

145 150 155193_1 160

Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu
165 170 175

Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp
180 185 190

Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr
195 200 205

<210> 188
<211> 615
<212> DNA
<213> Artificial Sequence

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

<400> 188							
atggtggatg	atcatcactt	taaggtgatt	ctgcactatg	gcacactggt	aatcgacggg		60
gttacgccga	acatgatcga	ctatttcgga	cggccgtatg	aaggcatcgc	cgtgttcgac		120
ggcaaaaaga	tactgtaac	cgggaccctg	tggaacggca	acaaaattat	cgacgagcgc		180
ctgatcaacc	ccgacggctc	cctgctgttc	cgcgtaacca	tcaacggagt	gaccggctgg		240
cggctgtgcg	agcgatttt	ggcgggaagt	tctggtggag	gaagtcttgg	tggagagcct		300
actactgaga	acttgactt	ccagagcgat	aacggaagtt	ctggtggagg	aagttctggt		360
ggaatggtgt	ttacactcga	agatttcgta	ggggactggc	ggcagacagc	cggctacaac		420
ctggaccaag	tccttgagca	gggcggtgtg	tccagtttgt	ttcagaatct	cggggtgtcc		480
gtaactccga	tccaaaggat	tgtcctgagc	ggtgaaaacg	gcctgaagat	cgacatccat		540
gtcatcatcc	cgtatgaagg	tctgagcggc	gatcagatgg	gccagatcga	aaaaattttt		600
aaggtggtgt	accct						615

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<210> 189
<211> 205
<212> PRT
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 189
Met Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu
1 5 10 15

Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro
20 25 30

Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly
35 40 45

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Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro
50 55 60

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

Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser
85 90 95

Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly
100 105 110

Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp
115 120 125

Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val
130 135 140

Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser
145 150 155 160

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

Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln
180 185 190

Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
195 200 205

<210> 190

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 190

atggatgatc atcactttaa ggtgattctg cactatggca cactggtaat cgacggggtt	60
acgccgaaca tgatcgacta tttcggacgg ccgtatgaag gcatcgccgt gttcgacggc	120
aaaaagatca ctgtaaccgg gaccctgtgg aacggcaaca aaattatcga cgagcgcttg	180
atcaaccccg acggctccct gctgttccgc gtaaccatca acggagtgc cggctggcgg	240
ctgtgcgagc gcattttggc gggaagttct ggtggaggaa gttctggtgg agagcctact	300
actgagaact tgtacttcca gagcgataac ggaagttctg gtggaggaag ttctggtgga	360
atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg	420
gaccaagtcc ttgagcaggg cggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta	480

155193_1

actccgatcc aaaggattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc	540
atcatcccggt atgaagggtct gagcggcgat cagatggggcc agatcgaaaa aatttttaag	600
gtggtgtacc ctgtg	615

<210> 191
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 191
 Met Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
 1 5 10 15

Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
 20 25 30

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
 35 40 45

Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
 50 55 60

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
 65 70 75 80

Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly
 85 90 95

Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser
 100 105 110

Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe
 115 120 125

Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu
 130 135 140

Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val
 145 150 155 160

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

Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met
 180 185 190

Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val
 195 200 205

<210> 192
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 192
 atggatcatc actttaaggt gattctgcac tatggcacac tggtaatcga cggggttacg 60
 ccgaacatga tcgactatct cggacggccg tatgaaggca tcgccgtgtt cgacggcaaa 120
 aagatcactg taaccgggac cctgtggaac ggcaacaaaa ttatcgacga ggcctgatc 180
 aaccccgacg gctccctgct gttccgcgta accatcaacg gagtgaccgg ctggcggctg 240
 tgcgagcgca ttttggcggg aagttctggt ggaggaagtt ctggtggaga gcctactact 300
 gagaacttgt acttccagag cgataacgga agttctggtg gaggaagttc tgggtggaatg 360
 gtgttttacac tcgaagatct cgtaggggac tggcggcaga cagccggcta caacctggac 420
 caagtccttg agcagggcgg tgtgtccagt ttgtttcaga atctcggggg gtccgtaact 480
 ccgatccaaa ggattgtcct gagcgtgaa aacggcctga agatcgacat ccatgtcatc 540
 atcccgtatg aaggtctgag cggcgatcag atgggccaga tcgaaaaaat ttttaagggtg 600
 gtgtaccctg tggat 615

<210> 193
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 193
 Met Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile
 1 5 10 15
 Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu
 20 25 30
 Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu
 35 40 45
 Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly
 50 55 60
 Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu
 65 70 75 80
 Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly
 85 90 95

Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser
100 105 110

Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val
115 120 125

Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu
130 135 140

Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr
145 150 155 160

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

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly
180 185 190

Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp
195 200 205

<210> 194
<211> 615
<212> DNA
<213> Artificial Sequence

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

<400> 194
atgcatcact ttaaggtgat tctgcactat ggcacactgg taatcgacgg ggttacgccg 60
aacatgatcg actatttcgg acggccgtat gaaggcatcg ccgtgttcga cggcaaaaag 120
atcactgtaa ccggggaccct gtggaacggc aacaaaatta tcgacgagcg cctgatcaac 180
cccgacggct ccctgctgtt ccgcgtaacc atcaacggag tgaccggctg gcggctgtgc 240
gagcgcattt tggcggaag ttctggtgga ggaagtctg gtggagagcc tactactgag 300
aacttgact tccagagcga taacggaagt tctggtggag gaagtctg tggaatggtg 360
tttactctcg aagatttcgt aggggactgg cggcagacag ccggctacaa cctggaccaa 420
gtccttgagc agggcggtgt gtccagttt tttcagaatc tcggggtgtc cgtaactccg 480
atccaaagga ttgtcctgag cggtgaaaac ggccctgaaga tcgacatcca tgtcatcatc 540
ccgtatgaag gtctgagcgg cgatcagatg ggccagatcg aaaaaatttt taaggtggtg 600
taccctgtgg atgat 615

<210> 195
<211> 205
<212> PRT
<213> Artificial Sequence

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

155193_1

polypeptide

<400> 195

Met His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp
1 5 10 15

Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly
20 25 30

Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp
35 40 45

Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser
50 55 60

Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys
65 70 75 80

Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu
85 90 95

Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly
100 105 110

Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
115 120 125

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
130 135 140

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
145 150 155 160

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
165 170 175

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
180 185 190

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp
195 200 205

<210> 196

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 196

atgcacttta aggtgattct gcactatggc acactggtaa tcgacggggt tacgccgaac 60

atgatcgact atttcggacg gccgtatgaa ggcatacgccg tgttcgacgg caaaaagatc 120

155193_1

actgtaaccg ggaccctgtg gaacggcaac aaaattatcg acgagcgct gatcaacccc 180
gacggctccc tgctgttccg cgtaaccatc aacggagtga ccggctggcg gctgtgagag 240
cgcatttttg cggaagttc tgggtggagga agttctggtg gagagcctac tactgagaac 300
ttgtacttcc agagcgataa cggaagttct ggtggaggaa gttctggtgg aatggtgttt 360
acactcgaag atttcgtagg ggactggcgg cagacagccg gctacaacct ggaccaagtc 420
cttgagcagg gcggtgtgtc cagtttgttt cagaatctcg ggggtgtccgt aactccgatc 480
caaaggattg tcctgagcgg tgaaaacggc ctgaagatcg acatccatgt catcatcccg 540
tatgaaggtc tgagcggcga tcagatgggc cagatcga aaatttttaa ggtggtgtac 600
cctgtggatg atcat 615

<210> 197

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 197

Met His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
1 5 10 15

Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
20 25 30

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
35 40 45

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
50 55 60

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
65 70 75 80

Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro
85 90 95

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

Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp
115 120 125

Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly
130 135 140

Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile
145 150 155 160

155193_1

Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His
 165 170 175

Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile
 180 185 190

Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His
 195 200 205

<210> 198

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 198

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atgtttaagg tgattctgca ctatggcaca ctggtaatcg acgggggttac gccgaacatg      60
atcgactatt tcggacggcc gtatgaaggc atcgccgtgt tcgacggcaa aaagatcact      120
gtaaccggga ccctgtggaa cggcaacaaa attatcgacg agcgctgat caaccccgac      180
ggctccctgc tgttccgcgt aaccatcaac ggagtgaccg gctggcggct gtgcgagcgc      240
atthttggcgg gaagtctctgg tggaggaagt tctggtggag agcctactac tgagaacttg      300
tactttccaga gcgataacgg aagttctggt ggaggaagtt ctggtggaat ggtgtttaca      360
ctcgaagatt tcgtagggga ctggcggcag acagccggct acaacctgga ccaagtcctt      420
gagcagggcg gtgtgtccag ttgtttcag aatctcgggg tgtccgtaac tccgatccaa      480
aggattgtcc tgagcgggtga aaacggcctg aagatcgaca tccatgtcat catcccgat      540
gaaggtctga gcggcgatca gatgggccag atcgaaaaaa tttttaaggt ggtgtaccct      600
gtggatgatc atcac                                           615

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<210> 199

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 199

Met Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val
 1 5 10 15

Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala
 20 25 30

Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly
 35 40 45

155193_1

Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu
50 55 60

Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg
65 70 75 80

Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr
85 90 95

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

Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp
115 120 125

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

Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln
145 150 155 160

Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val
165 170 175

Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu
180 185 190

Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His
195 200 205

<210> 200

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 200

atgattctgc actatggcac actggtaatc gacgggggta cgccgaacat gatcgactat 60

ttcggacggc cgtatgaagg catcgccgtg ttcgacggca aaaagatcac tgtaaccggg 120

accctgtgga acggcaacaa aattatcgac gagcgctga tcaaccccga cggctccctg 180

ctgttccgcg taaccatcaa cggagtgacc ggctggcggc tgtgagcg cattttggcg 240

ggaagtcttg gtggaggaag ttctggtgga gagcctacta ctgagaactt gtacttccag 300

agcgataacg gaagtcttg tggaggaagt tctggtgga tgggtgttac actcgaagat 360

ttcgtagggg actggcggca gacagccggc tacaacctgg accaagtcct tgagcagggc 420

ggtgtgtcca gtttgtttca gaatctcggg gtgtccgtaa ctccgatcca aaggattgtc 480

ctgagcgggtg aaaacggcct gaagatcgac atccatgtca tcatcccgtg tgaaggctctg 540

155193_1

agcggcgatc agatgggcca gatcgaaaaa atttttaagg tgggtgtaccc tgtggatgat 600
catcacttta aggtg 615

<210> 201
<211> 205
<212> PRT
<213> Artificial Sequence

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

<400> 201
Met Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn
1 5 10 15

Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp
20 25 30

Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile
35 40 45

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

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

Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn
85 90 95

Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly
100 105 110

Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr
115 120 125

Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser
130 135 140

Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val
145 150 155 160

Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro
165 170 175

Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe
180 185 190

Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val
195 200 205

<210> 202
 <211> 616
 <212> DNA
 <213> Artificial Sequence

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

<400> 202
 atgtatggca cactggtaat cgacgggggtt acgccgaaca tgatcgacta tttcggacgg 60
 ccgtatgaag gcatcgccgt gttcgacggc aaaaagatca ctgtaaccgg gaccctgtgg 120
 aacggcaaca aaattatcga cgagcgcttg atcaaccccg acggctccct gctgttccgc 180
 gtaaccatca acggagtgac cggctggcgg ctgtgcgagc gcattttggc gggaagttct 240
 ggtggaggaa gttctggtgg agagcctact actgagaact tgtacttcca gagcgataac 300
 ggaagttctg gtggaggaag ttctggtgga atggtgttta cactcgaaga tttcgtaggg 360
 gactggcggc agacagccgg ctacaacctg gaccaagtcc ttgagcaggg cgggtgtgtcc 420
 agtttgtttc agaatctcgg ggtgtccgta actccgatcc aaaggattgt cctgagcggt 480
 gaaaacggcc tgaagatcga catccatgtc atcatcccgt atgaaggctt gagcggcgat 540
 cagatgggcc agatcgaaaa aatttttaag gtggtgtacc ctgtggatga tcatcacttt 600
 aaggtgattc tgcacg 616

<210> 203
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 203
 Met Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp
 1 5 10 15
 Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys
 20 25 30
 Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu
 35 40 45
 Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn
 50 55 60
 Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser
 65 70 75 80
 Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe
 85 90 95
 Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val

155193_1

100	105	110
Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr		
115	120	125
Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln		
130	135	140
Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly		
145	150	155
Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly		
165	170	175
Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val		
180	185	190
Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His		
195	200	205

<210> 204
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 204 atgggcacac tggtaatcga cgggggttacg ccgaacatga tcgactatatt cggacggccg	60
tatgaaggca tcgccgtggt cgacggcaaa aagatcactg taaccgggac cctgtggaac	120
ggcaacaaaa ttatcgacga ggcctgatc aaccccgacg gctccctgct gttccgcgta	180
accatcaacg gagtgaccgg ctggcggctg tgcgagcgca ttttggcggg aagttctggt	240
ggaggaagtt ctggtggaga gcctactact gagaacttgt acttccagag cgataacgga	300
agttctggtg gaggaagttc tgggtggaatg gtgttttacac tcgaagattt cgtaggggac	360
tggcggcaga cagccggcta caacctggac caagtccttg agcagggcgg tgtgtccagt	420
ttgtttcaga atctcgggggt gtccgtaact ccgatccaaa ggattgtcct gagcgggtgaa	480
aacggcctga agatcgacat ccatgtcatc atcccgtatg aaggtctgag cggcgatcag	540
atgggccaga tcgaaaaaat ttttaagggtg gtgtaccctg tggatgatca tcactttaag	600
gtgattctgc actat	615

<210> 205
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

155193_1

<400> 205

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

<210> 206

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 206

atgctggttaa tcgacggggt tacgccgaac atgatcgact atttcggacg gccgtatgaa 60

ggcatcgccg tggtcgacgg caaaaagatc actgtaaccg ggaccctgtg gaacggcaac 120

155193_1

aaaattatcg acgagcgcct gatcaacccc gacggctccc tgctgttccg cgtaaccatc	180
aacggagtga ccggctggcg gctgtgcbag cgcatttttg cgggaagttc tggaggagga	240
agttctggtg gagagcctac tactgagaac ttgtacttcc agagcgataa cggaagttct	300
ggtggaggaa gttctggtgg aatggtgttt acactcgaag atttcgtagg ggactggcgg	360
cagacagccg gctacaacct ggaccaagtc cttgagcagg gcggtgtgtc cagtttgttt	420
cagaatctcg ggggtgtccgt aactccgatac caaaggattg tcctgagcgg tgaaaacggc	480
ctgaagatcg acatccatgt catcatcccg tatgaaggta tgagcggcga tcagatgggc	540
cagatcgaaa aaatttttaa ggtggtgtac cctgtggatg atcatcactt taagggtgatt	600
ctgcactatg gcaca	615

<210> 207

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 207

Met	Leu	Val	Ile	Asp	Gly	Val	Thr	Pro	Asn	Met	Ile	Asp	Tyr	Phe	Gly
1				5					10					15	

Arg	Pro	Tyr	Glu	Gly	Ile	Ala	Val	Phe	Asp	Gly	Lys	Lys	Ile	Thr	Val
			20					25					30		

Thr	Gly	Thr	Leu	Trp	Asn	Gly	Asn	Lys	Ile	Ile	Asp	Glu	Arg	Leu	Ile
		35					40					45			

Asn	Pro	Asp	Gly	Ser	Leu	Leu	Phe	Arg	Val	Thr	Ile	Asn	Gly	Val	Thr
	50					55					60				

Gly	Trp	Arg	Leu	Cys	Glu	Arg	Ile	Leu	Ala	Gly	Ser	Ser	Gly	Gly	Gly
65					70					75					80

Ser	Ser	Gly	Gly	Glu	Pro	Thr	Thr	Glu	Asn	Leu	Tyr	Phe	Gln	Ser	Asp
				85					90					95	

Asn	Gly	Ser	Ser	Gly	Gly	Gly	Ser	Ser	Gly	Gly	Met	Val	Phe	Thr	Leu
			100					105					110		

Glu	Asp	Phe	Val	Gly	Asp	Trp	Arg	Gln	Thr	Ala	Gly	Tyr	Asn	Leu	Asp
		115					120					125			

Gln	Val	Leu	Glu	Gln	Gly	Gly	Val	Ser	Ser	Leu	Phe	Gln	Asn	Leu	Gly
	130					135					140				

Val	Ser	Val	Thr	Pro	Ile	Gln	Arg	Ile	Val	Leu	Ser	Gly	Glu	Asn	Gly
145					150					155					160

155193_1

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

Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val
 180 185 190

Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr
 195 200 205

<210> 208

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 208

atggacgggg ttacgccgaa catgatcgac tatttcggac ggccgtatga aggcacgcgc	60
gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc	120
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg	180
accggctggc ggctgtgcga gcgcatcttg gcgggaagtt ctggtggagg aagttctggt	240
ggagagccta ctactgagaa cttgtacttc cagagcgata acggaagttc tgggtggagga	300
agttctgggt gaatggtggt tacactcgaa gatttcgtag gggactggcg gcagacagcc	360
ggctacaacc tggaccaagt ccttgagcag ggcgggtgtgt ccagtttggt tcagaatctc	420
gggggtgtccg taactccgat ccaaaggatt gtcctgagcg gtgaaaacgg cctgaagatc	480
gacatccatg tcatcatccc gtatgaaggt ctgagcggcg atcagatggg ccagatcgaa	540
aaaattttta aggtggtgta ccctgtggat gatcatcact ttaaggatgat tctgcactat	600
ggcacactgg taatc	615

<210> 209

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 209

Met Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
 1 5 10 15

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
 20 25 30

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

155193_1

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
50 55 60

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

Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser
85 90 95

Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe
100 105 110

Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu
115 120 125

Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val
130 135 140

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

Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met
165 170 175

Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His
180 185 190

His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile
195 200 205

<210> 210
<211> 615
<212> DNA
<213> Artificial Sequence

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

<400> 210
atgggggtta cgccgaacat gatcgactat ttcggacggc cgatatgaagg catcgccgtg 60
ttcgacggca aaaagatcac tgtaaccggg accctgtgga acggcaacaa aattatcgac 120
gagcgcctga tcaaccccgga cggctccctg ctgttccgag taaccatcaa cggagtgacc 180
ggctggcggc tgtgagagcg ctttttggcg ggaagtcttg gtggaggaag ttctggtgga 240
gagcctacta ctgagaactt gtacttccag agcgataacg gaagtctctg tggaggaagt 300
tctggtggaa tgggtgtttac actcgaagat ttcgtagggg actggcggca gacagccggc 360
tacaacctgg accaagtcct tgagcagggc ggtgtgtcca gtttgtttca gaatctcggg 420
gtgtccgtaa ctccgatcca aaggattgtc ctgagcggtg aaaacggcct gaagatcgac 480
atccatgtca tcatcccgta tgaaggtctg agcggcgatc agatgggcca gatcgaaaaa 540

155193_1
 atttttaagg tgggtgtaccc tgtggatgat catcacttta aggtgattct gcactatggc 600
 acactggtaa tcgac 615

<210> 211
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 211
 Met Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu
 1 5 10 15

Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu
 20 25 30

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

Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu
 50 55 60

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

Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser
 85 90 95

Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val
 100 105 110

Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu
 115 120 125

Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr
 130 135 140

Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp
 145 150 155 160

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly
 165 170 175

Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His
 180 185 190

Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp
 195 200 205

<210> 212

155193_1

<211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 212
 atggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc 60
 gacggcaaaa agatcactgt aaccgggacc ctgtggaacg gcaacaaaat tatcgacgag 120
 cgcctgatca accccgacgg ctccctgctg ttccgcgtaa ccatcaacgg agtgaccggc 180
 tggcggctgt gcgagcgcat tttggcggga agttctggtg gaggaagttc tgggtggagag 240
 cctactactg agaacttgta cttccagagc gataacggaa gttctggtgg aggaagttct 300
 ggtggaatgg tgtttacact cgaagatttc gtaggggact ggccggcagac agccggctac 360
 aacctggacc aagtccttga gcagggcggt gtgtccagtt tgtttcagaa tctcggggtg 420
 tccgtaactc cgatccaaag gattgtcctg agcggtgaaa acggcctgaa gatcgacatc 480
 catgtcatca tcccgtatga aggtctgagc ggcgatcaga tgggccagat cgaaaaaatt 540
 ttttaagggtg tgtaccctgt ggatgatcat cactttaagg tgattctgca ctatggcaca 600
 ctggtaatcg acggg 615

<210> 213
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 213
 Met Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly 1 5 10 15
 Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp 20 25 30
 Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser 35 40 45
 Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys 50 55 60
 Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu 65 70 75 80
 Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly 85 90 95
 Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly 100 105 110

155193_1

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
 115 120 125

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
 130 135 140

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

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
 165 170 175

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
 180 185 190

Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
 195 200 205

<210> 214

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 214

atgacgccga acatgatcga ctatttcgga cggccgtatg aaggcatcgc cgtgttcgac	60
ggcaaaaaga tcaactgtaac cgggaccctg tggaacggca acaaaattat cgacgagcgc	120
ctgatcaacc ccgacggctc cctgctgttc cgcgtaacca tcaacggagt gaccggctgg	180
cggctgtgcg agcgcatttt ggcgggaagt tctggtggag gaagttctgg tggagagcct	240
actactgaga acttgacttt ccagagcgat aacggaagtt ctggtggagg aagttctggt	300
ggaatggtgt ttacactcga agatttcgta ggggactggc ggcagacagc cggctacaac	360
ctggaccaag tccttgagca gggcgggtgtg tccagtttgt ttcagaatct cggggtgtcc	420
gtaactccga tccaaaggat tgtcctgagc ggtgaaaacg gcctgaagat cgacatccat	480
gtcatcatcc cgtatgaagg tctgagcggc gatcagatgg gccagatcga aaaaattttt	540
aaggtggtgt accctgtgga tgatcatcac tttaaggtga ttctgcacta tggcacactg	600
gtaatcgacg gggtt	615

<210> 215

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

155193_1

<400> 215

Met Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
1 5 10 15

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
20 25 30

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

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
50 55 60

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

Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly
85 90 95

Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp
100 105 110

Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly
115 120 125

Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile
130 135 140

Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His
145 150 155 160

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

Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys
180 185 190

Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val
195 200 205

<210> 216

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 216

atgccgaaca tgatcgacta tttcggacgg ccgtatgaag gcatcgccgt gttcgacggc 60

aaaaagatca ctgtaaccgg gaccctgtgg aacggcaaca aaattatcga cgagcgctg 120

atcaaccccg acggctccct gctgttccgc gtaaccatca acggagtgac cggctggcgg 180

155193_1

```

ctgtgcgagc gcattttggc gggaagttct ggtggaggaa gttctggtgg agagcctact    240
actgagaact tgtactttcca gagcgataac ggaagttctg gtggaggaag ttctggtgga    300
atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg    360
gaccaagtcc ttgagcaggg cggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta    420
actccgatcc aaaggattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc    480
atcatcccgt atgaaggtct gagcggcgat cagatgggccc agatcgaaaa aatttttaag    540
gtggtgtacc ctgtggatga tcatcacttt aaggtgattc tgcactatgg cacactggta    600
atcgacgggg ttacg                                                    615

```

<210> 217

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 217

```

Met Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala
1           5           10           15

```

```

Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly
          20           25           30

```

```

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

```

```

Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg
          50           55           60

```

```

Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr
65           70           75           80

```

```

Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly
          85           90           95

```

```

Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp
          100          105          110

```

```

Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly
          115          120          125

```

```

Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln
          130          135          140

```

```

Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val
145          150          155          160

```

Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu
165 170 175

Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val
180 185 190

Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
195 200 205

<210> 218
<211> 612
<212> DNA
<213> Artificial Sequence

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

<400> 218
atgaacatga tcgactatatt cggacggccg tatgaaggca tcgccgtgtt cgacggcaaa 60
aagatcactg taaccgggac cctgtggaac ggcaacaaaa ttatcgacga ggcctgatc 120
aaccccgacg gctccctgct gttccgcgta accatcaacg gagtgaccgg ctggcggctg 180
tgcgagcgca ttttggcggg aagttctggt ggaggaagtt ctggtggaga gcctactact 240
gagaacttgt acttccagag cgataacgga agttctggtg gaggaagttc tgggtggaatg 300
gtgttttacac tcgaagatatt cgtaggggac tggcggcaga cagccggcta caacctggac 360
caagtccttg agcagggcggt tgtgtccagt ttgtttcaga atctcgggggt gtccgtaact 420
ccgatccaaa ggattgtcct gagcggtgaa aacggcctga agatcgacat ccatgtcatc 480
atcccgtatg aaggctctgag cggcgatcag atgggccaga tcgaaaaaat ttttaagggtg 540
gtgtaccctg tggatgatca tcactttaag gtgattctgc actatggcac actggtaatc 600
gacgggggta cg 612

<210> 219
<211> 204
<212> PRT
<213> Artificial Sequence

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

<400> 219
Met Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
1 5 10 15

Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn
20 25 30

Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe
35 40 45

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

<210> 220
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 220
 atgatgatcg actatttcgg acggccgtat gaaggcatcg ccgtgttcga cggcaaaaag 60
 atcactgtaa ccggggaccct gtggaacggc aacaaaatta tcgacgagcg cctgatcaac 120
 cccgacggct ccctgctgtt ccgcgtaacc atcaacggag tgaccggctg gcggctgtgc 180
 gagcgcatTT tggcggaag ttctggtgga ggaagtTctg gtggagagcc tactactgag 240
 aacttgtact tccagagcga taacggaagt tctggtggag gaagttctgg tggaatggtg 300
 ttacactcg aagatttcgt aggggactgg cggcagacag ccggctacaa cctggaccaa 360
 gtccttgagc agggcggtgt gtccagtttG tttcagaatc tcggggtgtc cgtaactccg 420
 atccaaagga ttgtcctgag cggtgaaaac ggcctgaaga tcgacatcca tgtcatcatc 480
 ccgtatgaag gtctgagcgg cgatcagatg ggccagatcg aaaaaatttt taaggTggtg 540
 taccctgtgg atgatcatca cttaaggtg attctgcact atggcacact ggtaatcgac 600

ggggttacgc cgaac

615

<210> 221

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 221

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

<210> 222

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 222

```

atgtatttcg gacggccgta tgaaggcatc gccgtgttcg acggcaaaaa gatcactgta      60
accgggaccc tgtggaacgg caacaaaatt atcgacgagc gcctgatcaa ccccgacggc      120
tccctgctgt tccgcgtaac catcaacgga gtgaccggct ggcggctgtg cgagcgcatt      180
ttggcgggaa gttctggtgg aggaagttct ggtggagagc ctactactga gaacttgtag      240
ttccagagcg ataacggaag ttctggtgga ggaagttctg gtggaatggt gtttactctc      300
gaagatttcg taggggactg gcggcagaca gccggctaca acctggacca agtccttgag      360
cagggcggtg tgtccagttt gtttcagaat ctcgggggtg ccgtaactcc gatccaaagg      420
attgtcctga gcggtgaaaa cggcctgaag atcgacatcc atgtcatcat cccgtatgaa      480
ggctctgagcg gcgatcagat gggccagatc gaaaaaattt ttaagggtgg gtaccctgtg      540
gatgatcatc actttaaggt gattctgcac tatggcacac tggtaatcga cgggggttacg      600
ccgaacatga tcgac                                     615

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<210> 223

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 223

```

Met Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys
1           5           10           15

Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp
                20           25           30

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

Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser
          50           55           60

Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr
65           70           75           80

Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met
          85           90           95

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

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Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe
 115 120 125

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

Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu
 145 150 155 160

Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val
 165 170 175

Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly
 180 185 190

Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp
 195 200 205

<210> 224

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 224

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atgcggccgt atgaaggcat cgccgtgttc gacggcaaaa agatcactgt aaccgggacc      60
ctgtggaacg gcaacaaaat tatcgacgag cgctgatca accccgacgg ctccctgctg      120
ttccgcgtaa ccatcaacgg agtgaccggc tggcggctgt gcgagcgcat tttggcggga      180
agttctggtg gaggaagttc tgggtggagag cctactactg agaacttgta cttccagagc      240
gataacggaa gttctggtgg aggaagttct ggtggaatgg tgtttacact cgaagatttc      300
gtaggggact ggcggcagac agccggctac aacctggacc aagtccttga gcagggcggt      360
gtgtccagtt tgtttcagaa tctcggggtg tccgtaactc cgatccaaag gattgtcctg      420
agcggtgaaa acggcctgaa gatcgacatc catgtcatca tcccgtatga aggtctgagc      480
ggcgatcaga tgggccagat cgaaaaaatt tttaaggtgg tgtaccctgt ggatgatcat      540
cactttaagg tgattctgca ctatggcaca ctggtaatcg acgggggttac gccgaacatg      600
atcgactatt tcgga                                     615

```

<210> 225

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 225

155193_1
Met Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
1 5 10 15
Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
20 25 30
Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
35 40 45
Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly
50 55 60
Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser
65 70 75 80
Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr
85 90 95
Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu
100 105 110
Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu
115 120 125
Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn
130 135 140
Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
145 150 155 160
Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
165 170 175
Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
180 185 190
Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly
195 200 205

<210> 226

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 226

atggaaggca tcgccgtgtt cgacggcaaa aagatcactg taaccgggac cctgtggaac 60

ggcaacaaaa ttatcgacga ggcctgatc aaccccgacg gctccctgct gttccgcgta 120

accatcaacg gagtgaccgg ctggcggctg tgcgagcgca ttttggcggg aagttctggt 180

155193_1

ggaggaagtt ctggtggaga gcctactact gagaacttgt acttccagag cgataacgga	240
agttctggtg gaggaagttc tgggtggaatg gtgtttacac tcgaagattt cgtaggggac	300
tggcggcaga cagccggcta caacctggac caagtccttg agcagggcgg tgtgtccagt	360
ttgtttcaga atctcgggggt gtccgtaact cccgatccaaa ggattgtcct gagcggtgaa	420
aacggcctga agatcgacat ccatgtcatc atcccgtatg aaggtctgag cggcgatcag	480
atgggccaga tcgaaaaaat ttttaagggtg gtgtaccctg tggatgatca tcactttaag	540
gtgattctgc actatggcac actggtaatc gacgggggta cgccgaacat gatcgactat	600
ttcggacggc cgtat	615

<210> 227
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 227
 Met Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly
 1 5 10 15

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

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

Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser
 50 55 60

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

Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp
 85 90 95

Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val
 100 105 110

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

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

Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln
 145 150 155 160

Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp

165 155193_1 175
170

His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
180 185 190

Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
195 200 205

<210> 228
<211> 615
<212> DNA
<213> Artificial Sequence

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

<400> 228
atgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc 60
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg 120
accggctggc ggctgtgcga gcgcatTTtg gcgggaagtt ctggtggagg aagttctggt 180
ggagagccta ctactgagaa cttgtacttc cagagcgata acggaagttc tgggtggagga 240
agttctggtg gaatggtggt tacactcgaa gatttcgtag gggactggcg gcagacagcc 300
ggctacaacc tggaccaagt ccttgagcag ggcgggtgtgt ccagtttggt tcagaatctc 360
ggggtgtccg taactccgat ccaaaggatt gtcctgagcg gtgaaaacgg cctgaagatc 420
gacatccatg tcatcatccc gtatgaaggt ctgagcggcg atcagatggg ccagatcgaa 480
aaaattttta aggtggtgta ccctgtggat gatcatcact ttaaggatgat tctgcactat 540
ggcacactgg taatcgacgg ggttacgccg aacatgatcg actatttcgg acggccgtat 600
gaaggcatcg tggcc 615

<210> 229
<211> 205
<212> PRT
<213> Artificial Sequence

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

<400> 229
Met Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly
1 5 10 15

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

Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg
35 40 45

Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr
50 55 60

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

Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp
85 90 95

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

Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln
115 120 125

Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val
130 135 140

Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu
145 150 155 160

Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val
165 170 175

Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met
180 185 190

Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Val Ala
195 200 205

<210> 230

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 230

atggacggca aaaagatcac tgtaaccggg accctgtgga acggcaacaa aattatcgac	60
gagcgcctga tcaaccccgga cggctccctg ctgttccgcg taaccatcaa cggagtgacc	120
ggctggcggc tgtgcgagcg ctttttggcg ggaagtcttg gtggaggaag ttctggtgga	180
gagcctacta ctgagaactt gtacttccag agcgataacg gaagtctctg tggaggaagt	240
tctggtgga tgggtgtttac actcgaagat ttcgtagggg actggcggca gacagccggc	300
tacaacctgg accaagtcct tgagcagggc ggtgtgtcca gtttgtttca gaatctcggg	360
gtgtccgtaa ctccgatcca aaggattgtc ctgagcgggtg aaaacggcct gaagatcgac	420
atccatgtca tcatcccgtg tgaaggtctg agcggcgatc agatgggcca gatcgaaaaa	480
atttttaagg tgggtgtacc tgtggatgat catcacttta aggtgattct gcactatggc	540
acactggtaa tcgacggggg tacgccgaac atgatcgact atttcggacg gccgtatgaa	600

ggcatcgccg tgttc

<210> 231
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 231
 Met Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn
 1 5 10 15

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

Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile
 35 40 45

Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr
 50 55 60

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

Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg
 85 90 95

Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val
 100 105 110

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

Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile
 130 135 140

Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys
 145 150 155 160

Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile
 165 170 175

Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile
 180 185 190

Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
 195 200 205

<210> 232
 <211> 615
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 232

```

atgaaaaaga tcactgtaac cgggaccctg tggaacggca acaaaattat cgacgagcgc      60
ctgatcaacc ccgacggctc cctgctgttc cgcgtaacca tcaacggagt gaccggctgg      120
cggctgtgcg agcgcatttt ggcgggaagt tctggtggag gaagttcttg tggagagcct      180
actactgaga acttgacttt ccagagcgat aacggaagtt ctggtggagg aagttctggt      240
ggaatggtgt ttacactcga agatttcgta ggggactggc ggacagacgc cggctacaac      300
ctggaccaag tccttgagca gggcggtgtg tccagtttgt ttcagaatct cggggtgtcc      360
gtaactccga tccaaaggat tgtcctgagc ggtgaaaacg gcctgaagat cgacatccat      420
gtcatcatcc cgtatgaagg tctgagcggc gatcagatgg gccagatcga aaaaattttt      480
aagggtggtgt accctgtgga tgatcatcac tttaaggtga ttctgcacta tggcacactg      540
gtaatcgacg gggttacgcc gaacatgata gactatttcg gacggccgta tgaaggcatc      600
gccgtgttcg acggc                                     615

```

<210> 233

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 233

```

Met Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile
1           5           10           15

Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val
          20           25           30

Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
          35           40           45

Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn
          50           55           60

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

Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr
          85           90           95

Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser
          100          105          110

```

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

Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro
 130 135 140

Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe
 145 150 155 160

Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His
 165 170 175

Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr
 180 185 190

Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly
 195 200 205

<210> 234
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 234
 atgaagatca ctgtaaccgg gaccctgtgg aacggcaaca aaattatcga cgagcgcctg 60
 atcaaccccg acggctccct gctgttccgc gtaaccatca acggagtgcg cggtggcg 120
 ctgtgcgagc gcattttggc gggaagttct ggtggaggaa gttctggtgg agagcctact 180
 actgagaact tgtacttcca gagcgataac ggaagttctg gtggaggaag ttctggtgga 240
 atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg 300
 gaccaagtcc ttgagcaggg cgggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 360
 actccgatcc aaaggattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc 420
 atcatcccgat atgaaggtct gagcggcgat cagatgggccc agatcgaaaa aatttttaag 480
 gtggtgtacc ctgtggatga tcatcacttt aagggtgattc tgactatgg cacttggtga 540
 atcgacgggg ttacgccgaa catgatcgac ttttcggac ggccgtatga aggcacgcgc 600
 gtgttcgacg gcaaa 615

<210> 235
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 235
 Met Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile

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

<210> 236
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 236	
atgatcactg taaccgggac cctgtggaac ggcaacaaaa ttatcgacga ggcctgatc	60
aaccccgacg gctccctgct gttccgcgta accatcaacg gagtgaccgg ctggcggctg	120
tgcgagcgca ttttggcggg aagttctggt ggaggaagtt ctggtggaga gcctactact	180
gagaacttgt acttccagag cgataacgga agttctggtg gaggaagttc tgggtggaatg	240

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```

gtgtttacac tcgaagattt cgtaggggac tggcggcaga cagccggcta caacctggac      300
caagtccttg agcagggcgg tgtgtccagt ttgtttcaga atctcggggt gtccgtaact      360
ccgatccaaa ggattgtcct gagcggtgaa aacggcctga agatcgacat ccatgtcatc      420
atcccgtatg aaggtctgag cggcgatcag atgggccaga tcgaaaaaat ttttaagggtg      480
gtgtaccctg tggatgatca tcactttaag gtgattctgc actatggcac actggtaatc      540
gacgggggta cgccgaacat gatcgactat ttcggacggc cgtatgaagg catcgccgtg      600
ttcgacggca aaaag                                         615

```

<210> 237

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 237

```

Met Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp
1           5           10           15

```

```

Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile
          20           25           30

```

```

Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser
          35           40           45

```

```

Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr
          50           55           60

```

```

Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met
65           70           75           80

```

```

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

```

```

Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe
          100          105          110

```

```

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

```

```

Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu
          130          135          140

```

```

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

```

```

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

```

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Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly
 180 185 190

Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys
 195 200 205

<210> 238

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 238

```
atggggaccc tgtggaacgg caacaaaatt atcgacgagc gcctgatcaa ccccgacggc      60
tccctgctgt tccgcgtaac catcaacgga gtgaccggct ggcggctgtg cgagcgcatt    120
ttggcgggaa gttctggtgg aggaagttct ggtggagagc ctactactga gaacttgtag    180
ttccagagcg ataacggaag ttctggtgga ggaagttctg gtggaatggt gtttactctc    240
gaagattttcg taggggactg gcggcagaca gccggctaca acctggacca agtccttgag    300
cagggcggtg tgtccagttt gtttcagaat ctcgggggtgt ccgtaactcc gatccaaagg    360
attgtcctga gcggtgaaaa cggcctgaag atcgacatcc atgtcatcat cccgtatgaa    420
ggctctgagcg gcgatcagat gggccagatc gaaaaaattt ttaagggtgg gtacctgtg      480
gatgatcatc actttaaggt gattctgcac tatggcacac tggtaatcga cgggggttacg    540
ccgaacatga tcgactattt cggacggccg tatgaaggca tcgccgtgtt cgacggcaaa    600
aagatcactg taacc                                     615
```

<210> 239

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 239

Met Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile
 1 5 10 15

Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr
 20 25 30

Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly
 35 40 45

Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp
 50 55 60

155193_1

Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu
65 70 75 80

Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp
85 90 95

Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly
100 105 110

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

Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly
130 135 140

Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val
145 150 155 160

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

Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu
180 185 190

Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr
195 200 205

<210> 240

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 240

atgaccctgt ggaacggcaa caaaattatc gacgagcgcc tgatcaaccc cgacggctcc 60

ctgctgttcc gcgtaaccat caacggagtg accggctggc ggctgtgcga gcgcattttg 120

gcgggaagtt ctggtggagg aagttctggt ggagagccta ctactgagaa cttgtacttc 180

cagagcgata acggaagttc tgggtggagga agttctggtg gaatggtggt tacactcgaa 240

gatttcgtag gggactggcg gcagacagcc ggctacaacc tggaccaagt ccttgagcag 300

ggcgggtgtgt ccagtttggt tcagaatctc ggggtgtccg taactccgat ccaaaggatt 360

gtcctgagcg gtgaaaacgg cctgaagatc gacatccatg tcatcatccc gtatgaaggt 420

ctgagcggcg atcagatggg ccagatcgaa aaaattttta aggtggtgta ccctgtggat 480

gatcatcact ttaaggtgat tctgcactat ggcacactgg taatcgacgg ggttacgccg 540

aacatgatcg actatttcgg acggccgtat gaaggcatcg ccgtgttcga cggcaaaaag 600

atcactgtaa ccggg 615

<210> 241
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 241
 Met Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn
 1 5 10 15
 Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly
 20 25 30
 Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser
 35 40 45
 Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn
 50 55 60
 Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu
 65 70 75 80
 Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln
 85 90 95
 Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val
 100 105 110
 Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu
 115 120 125
 Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp
 130 135 140
 Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp
 145 150 155 160
 Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp
 165 170 175
 Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly
 180 185 190
 Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly
 195 200 205

<210> 242
 <211> 615
 <212> DNA
 <213> Artificial Sequence

155193_1

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 242

atgctgtgga acggcaacaa aattatcgac gagcgctga tcaacccga cggctccctg	60
ctgttccgcg taaccatcaa cggagtgacc ggctggcggc tgtgcgagcg cattttggcg	120
ggaagttctg gtggaggaag ttctggtgga gagcctacta ctgagaactt gtacttccag	180
agcgataacg gaagttctgg tggaggaagt tctggtggaa tgggtgtttac actcgaagat	240
ttcgtagggg actggcggca gacagccggc tacaacctgg accaagtcct tgagcagggc	300
ggtgtgtcca gtttgtttca gaatctcggg gtgtccgtaa ctccgatcca aaggattgtc	360
ctgagcgggtg aaaacggcct gaagatcgac atccatgtca tcatcccgta tgaaggctg	420
agcggcgatc agatgggcca gatcgaaaa atttttaagg tgggtgtacc tgtggatgat	480
catcacttta aggtgattct gcactatggc aacttggtaa tcgacggggt tacgccgaac	540
atgatcgact atttcggacg gccgtatgaa ggcacgcgg tgttcgacgg caaaaagatc	600
actgtaaccg ggacc	615

<210> 243

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 243

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

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115	120	125	
Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln			
130	135	140	
Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp			
145	150	155	160
His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly			
	165	170	175
Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile			
	180	185	190
Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr			
195	200	205	

<210> 244
 <211> 616
 <212> DNA
 <213> Artificial Sequence

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

<400> 244	
atgaacggca acaaaattat cgacgagcgc ctgatcaacc ccgacggctc cctgctgttc	60
cgcgtaacca tcaacggagt gaccggctgg cggctgtgcg agcgcathtt ggcgggaagt	120
tctggtggag gaagtcttg tggagagcct actactgaga acttgactt ccagagcgat	180
aacggaagtt ctggtggagg aagttctggt ggaatggtgt ttacactcga agatttcgta	240
ggggactggc ggcagacagc cggctacaac ctggaccaag tccttgagca gggcgggtgtg	300
tccagtttgt ttcagaatct cgggggtgtcc gtaactccga tccaaaggat tgtcctgagc	360
ggtgaaaacg gcctgaagat cgacatccat gtcatcatcc cgatgaagg tctgagcggc	420
gatcagatgg gccagatcga aaaaattttt aaggtggtgt accctgtgga tgatcatcac	480
tttaaggtga ttctgcacta tggcactctg gtaatcgacg gggttacgcc gaacatgatc	540
gactatttcg gacggccgta tgaaggcatc gccgtgttcg acggcaaaaa gatcactgta	600
accgggaccc tgtggg	616

<210> 245
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 245			
Met Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly			
1	5	10	15

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Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu
20 25 30

Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly
35 40 45

Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser
50 55 60

Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val
65 70 75 80

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

Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr
100 105 110

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

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly
130 135 140

Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His
145 150 155 160

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

Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
180 185 190

Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp
195 200 205

<210> 246

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 246

atgaaaatta tcgacgagcg cctgatcaac cccgacggct ccctgctgtt ccgcgtaacc 60

atcaacggag tgaccggctg gcggtgtgct gagcgcattht tggcgggaag ttctggtgga 120

ggaagtctctg gtggagagcc tactactgag aacttgtact tccagagcga taacggaagt 180

tctggtggag gaagttctgg tggaatggtg ttacactcg aagatttcgt aggggactgg 240

155193_1

cggcagacag ccggtctacaa cctggaccaa gtccttgagc agggcgggtgt gtccagtttg	300
tttcagaatc tcgggggtgtc cgtaactccg atccaaagga ttgtcctgag cggtgaaaac	360
ggcctgaaga tcgacatcca tgtcatcatc ccgtatgaag gtctgagcgg cgatcagatg	420
ggccagatcg aaaaaatttt taagggtgtg taccctgtgg atgatcatca ctttaagggtg	480
attctgcact atggcacact ggtaatcgac ggggttacgc cgaacatgat cgactatttc	540
ggacggccgt atgaaggcat cgccgtgttc gacggcaaaa agatcactgt aaccgggacc	600
ctgtggaacg gcaac	615

<210> 247
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 247
 Met Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu
 1 5 10 15

Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg
 20 25 30

Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr
 35 40 45

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

Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp
 65 70 75 80

Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly
 85 90 95

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

Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val
 115 120 125

Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu
 130 135 140

Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val
 145 150 155 160

Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met
 165 170 175

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Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly
 180 185 190

Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn
 195 200 205

<210> 248

<211> 624

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 248

atggacgagc gcctgatcaa ccccgacggc tccctgctgt tccgcgtaac catcaacgga	60
gtgaccggct ggcggctgtg cgagcgcat tttggcggaa gttctggtgg aggaagttct	120
ggtggagagc ctactactga gaacttgta tccagagcg ataacggaag ttctggtgga	180
ggaagttctg gtggaatggt gtttacctc gaagatttcg taggggactg gcggcagaca	240
gccggctaca acctggacca agtccttgag cagggcggtg tgtccagttt gtttcagaat	300
ctcggggtgt ccgtaactcc gatcaaagg attgtcctga gcggtgaaaa cggcctgaag	360
atcgacatcc atgtcatcat cccgtatgaa ggtctgagcg gcgatcagat gggccagatc	420
gaaaaatttt ttaagggtgt gtaccctgtg gatgatcatc actttaaggt gattctgcac	480
tatggcacac tggtaatcga cggggttacg ccgaacatga tcgactatct cggacggccg	540
tatgaaggca tcgccgtgtt cgacggcaaa aagatcactg taaccgggac cctgtggaac	600
ggcaacaaaa ttatcgacga gcgc	624

<210> 249

<211> 208

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 249

Met Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val
 1 5 10 15

Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
 20 25 30

Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn
 35 40 45

Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly
 50 55 60

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

<210> 250
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 250
 atggagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg 60
 accggctggc ggctgtgcga gcgcatTTtg gcgggaagtt ctggtggagg aagttctggt 120
 ggagagccta ctactgagaa cttgtacttc cagagcgata acggaagttc tgggtggagga 180
 agttctggtg gaatggtgtt tacactcgaa gatttcgtag gggactggcg gcagacagcc 240
 ggctacaacc tggaccaagt ccttgagcag ggcggtgtgt ccagtttggt tcagaatctc 300
 ggggtgtccg taactccgat ccaaaggatt gtcctgagcg gtgaaaacgg cctgaagatc 360
 gacatccatg tcatcatccc gtatgaaggt ctgagcggcg atcagatggg ccagatcgaa 420
 aaaattttta aggtggtgta ccctgtggat gatcatcact ttaaggatgat tctgcactat 480
 ggcacactgg taatcgacgg gggttacgcc aacatgatcg actatttcgg acggccgtat 540
 gaaggcatcg ccgtgttcga cggcaaaaag atcactgtaa ccggggaccct gtggaacggc 600
 aacaaaatta tcgac 615

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<210> 251
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 251
 Met Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr
 1 5 10 15

Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly
 20 25 30

Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu
 35 40 45

Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly
 50 55 60

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 65 70 75 80

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 85 90 95

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

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 115 120 125

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 130 135 140

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 145 150 155 160

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 165 170 175

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 180 185 190

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp
 195 200 205

<210> 252
 <211> 615
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 252

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atgcgctga tcaacccga cggctccctg ctgttccg cg taaccatcaa cggagtgacc      60
ggctggcggc tgtgcgagcg ctttttgccg ggaagtcttg gtggaggaag ttctggtgga      120
gagcctacta ctgagaactt gtacttccag agcgataacg gaagtctctg tggaggaagt      180
tctggtgga tgggtgtttac actcgaagat ttcgtagggg actggcggca gacagccggc      240
tacaacctgg accaagtcct tgagcagggc ggtgtgtcca gtttgtttca gaatctcggg      300
gtgtccgtaa ctccgatcca aaggattgtc ctgagcggtg aaaacggcct gaagatcgac      360
atccatgtca tcatcccgt tgaaggcttg agcggcgatc agatgggcca gatcgaaaaa      420
atttttaagg tgggtgtacc tgtggatgat catcacttta aggtgattct gcactatggc      480
acactggtaa tcgacggggg tacgccgaac atgatcgact atttcggacg gccgtatgaa      540
ggcatcgccg tggttcgacg caaaaagatc actgtaaccg ggaccctgtg gaacggcaac      600
aaaattatcg acgag                                           615

```

<210> 253

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 253

```

Met Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile
1           5           10           15

```

```

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

```

```

Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr
          35           40           45

```

```

Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met
          50           55           60

```

```

Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly
65           70           75           80

```

```

Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe
          85           90           95

```

```

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

```

```

Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu
          115          120          125

```

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Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val
 130 135 140

Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly
 145 150 155 160

Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly
 165 170 175

Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val
 180 185 190

Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu
 195 200 205

<210> 254

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polynucleotide

<400> 254

atgctgatca accccgacgg ctccctgctg ttccgcgtaa ccatcaacgg agtgaccggc	60
tggcggctgt gcgagcgcat tttggcgga agttctggtg gaggaagttc tggaggagag	120
cctactactg agaacttgta cttccagagc gataacggaa gttctggtgg aggaagttct	180
ggtggaatgg tgtttacct cgaagatttc gtaggggact ggcggcagac agccggctac	240
aacctggacc aagtccttga gcagggcggt gtgtccagtt tgtttcagaa tctcggggtg	300
tccgtaactc cgatccaaag gattgtcctg agcgggtgaaa acggcctgaa gatcgacatc	360
catgtcatca tcccgtatga aggtctgagc ggcgatcaga tgggccagat cgaaaaaatt	420
tttaagggtg tgtaccctgt ggatgatcat cactttaagg tgattctgca ctatggcaca	480
ctggtaatcg acgggggttac gccgaacatg atcgactatt tcggacggcc gtatgaaggc	540
atcgccgtgt tcgacggcaa aaagatcact gtaaccggga ccctgtggaa cggcaacaaa	600
attatcgacg agcgc	615

<210> 255

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 255

Met Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn
 1 5 10 15

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

Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe
35 40 45

Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val
50 55 60

Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr
65 70 75 80

Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln
85 90 95

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

Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly
115 120 125

Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val
130 135 140

Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr
145 150 155 160

Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg
165 170 175

Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr
180 185 190

Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg
195 200 205

<210> 256

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 256

atgatcaacc ccgacggctc cctgctgttc cgcgtaacca tcaacggagt gaccggctgg 60

cggctgtgcg agcgcatttt ggcgggaagt tctggtggag gaagttctgg tggagagcct 120

actactgaga acttgactt ccagagcgat aacggaagtt ctggtggagg aagttctggt 180

ggaatggtgt ttactctga agatttcgta ggggactggc ggcagacagc cggctacaac 240

ctggaccaag tccttgagca gggcggtgtg tccagtttgt ttcagaatct cggggtgtcc 300

155193_1

gtaactccga tccaaaggat tgtcctgagc ggtgaaaacg gcctgaagat cgacatccat 360
gtcatcatcc cgtatgaagg tctgagcggc gatcagatgg gccagatcga aaaaattttt 420
aagggtggtgt accctgtgga tgatcatcac ttttaagggtga ttctgcacta tggcacactg 480
gtaatcgacg gggttacgcc gaacatgata gactatttcg gacggccgta tgaaggcatc 540
gccgtgttcg acggcaaaaa gatcactgta accgggaccc tgtggaacgg caacaaaatt 600
atcgacgagc gcctg 615

<210> 257

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 257

Met Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly
1 5 10 15

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

Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln
35 40 45

Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe
50 55 60

Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn
65 70 75 80

Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn
85 90 95

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

Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu
115 120 125

Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr
130 135 140

Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu
145 150 155 160

Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro
165 170 175

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Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly
 180 185 190

Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 195 200 205

<210> 258
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 258
 atgaaccccg acggctccct gctgttccgc gtaaccatca acggagtgc cggctggcgg 60
 ctgtgcgagc gcattttggc gggaagttct ggtggaggaa gttctggtgg agagcctact 120
 actgagaact tgtacttcca gagcgataac ggaagttctg gtggaggaag ttctggtgga 180
 atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg 240
 gaccaagtcc ttgagcaggg cgggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 300
 actccgatcc aaaggattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc 360
 atcatcccgat atgaaggtct gagcggcgat cagatgggccc agatcgaaaa aatttttaag 420
 gtggtgtacc ctgtggatga tcatcacttt aaggtgattc tgactatgg cacttggtga 480
 atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgtatga aggcacgcc 540
 gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc 600
 gacgagcgcc tgatc 615

<210> 259
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 259
 Met Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 1 5 10 15

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

Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser
 35 40 45

Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr
 50 55 60

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

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<210> 261
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 261
 Met Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr
 1 5 10 15

Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly
 20 25 30

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

Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu
 50 55 60

Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp
 65 70 75 80

Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly
 85 90 95

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

Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly
 115 120 125

Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val
 130 135 140

Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile
 145 150 155 160

Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu
 165 170 175

Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu
 180 185 190

Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn
 195 200 205

<210> 262
 <211> 615
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 262

```

atggacggct ccctgctgtt ccgcgtaacc atcaacggag tgaccggctg gcggctgtgc      60
gagcgcattt tggcgggaag ttctggtgga ggaagtcttg gtggagagcc tactactgag    120
aacttgtact tccagagcga taacggaagt tctggtggag gaagttctgg tggaatggtg    180
tttacactcg aagatttcgt aggggactgg cggcagacag ccggctacaa cctggaccaa    240
gtccttgagc agggcggtgt gtccagtttg tttcagaatc tcggggtgtc cgtaactccg    300
atccaaagga ttgtcctgag cggtgaaaac ggcctgaaga tcgacatcca tgtcatcatc    360
ccgtatgaag gtctgagcgg cgatcagatg ggccagatcg aaaaaatttt taagggtgtg    420
taccctgtgg atgatcatca ctttaagggtg attctgcact atggcacact ggtaatcgac    480
ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc    540
gacggcaaaa agatcactgt aaccgggacc ctgtggaacg gcaacaaaat tatcgacgag    600
cgctgatca  acccc                                     615

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<210> 263

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 263

```

Met Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly
1          5          10          15

Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser
          20          25          30

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

Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu
          50          55          60

Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln
65          70          75          80

Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val
          85          90          95

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

Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp
          115          120          125

```

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Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp
 130 135 140

Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp
 145 150 155 160

Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly
 165 170 175

Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp
 180 185 190

Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro
 195 200 205

<210> 264

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 264

atgggctccc tgctgttccg cgtaaccatc aacggagtga ccggctggcg gctgtgag	60
cgcatttttg cggaagttc tggaggagga agttctggtg gagagcctac tactgagaac	120
ttgtacttcc agagcgataa cggaagttct ggtggaggaa gttctggtg aatggtgttt	180
acactcgaag atttcgtagg ggactggcgg cagacagccg gctacaacct ggaccaagtc	240
cttgagcagg gcggtgtgtc cagtttgttt cagaatctcg ggggtgtccgt aactccgac	300
caaaggattg tcctgagcgg tgaaaacggc ctgaagatcg acatccatgt catcatccc	360
tatgaaggtc tgagcggcga tcagatgggc cagatcga aaatttttaa ggtggtgtac	420
cctgtgatg atcatcactt taagggtgatt ctgcactatg gcacactggt aatcgacggg	480
gttacgccga acatgatcga ctatttcgga cgcccgatg aaggcatcgc cgtgttcgac	540
ggcaaaaaga tcaactgtaac cgggaccctg tggaacggca acaaaattat cgacgagcgc	600
ctgatcaacc ccgac	615

<210> 265

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 265

Met Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp
 1 5 10 15

155193_1

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

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

Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp
50 55 60

Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val
65 70 75 80

Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser
85 90 95

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

Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln
115 120 125

Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp
130 135 140

His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
145 150 155 160

Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
165 170 175

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
180 185 190

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
195 200 205

<210> 266

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 266

atgtccctgc tgttccgcgt aaccatcaac ggagtgaccg gctggcggct gtgcgagcgc	60
atattggcgg gaagtcttgg tggaggaagt tctggtggag agcctactac tgagaacttg	120
tacttccaga gcgataacgg aagttctggt ggaggaagtt ctggtggaat ggtgtttaca	180
ctcgaagatt tcgtagggga ctggcggcag acagccggct acaacctgga ccaagtcctt	240
gagcagggcg gtgtgtccag tttgtttcag aatctcgggg tgtccgtaac tccgatccaa	300

155193_1

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aggattgtcc tgagcgggtga aaacggcctg aagatcgaca tccatgtcat catcccgtat      360
gaaggtctga gcggcgatca gatgggcccag atcgaaaaaa tttttaaggt ggtgtaccct      420
gtggatgatc atcactttaa ggtgattctg cactatggca cactggtaat cgacggggtt      480
acgccgaaca tgatcgacta tttcggacgg ccgtatgaag gcatcgccgt gttcgacggc      540
aaaaagatca ctgtaaccgg gaccctgtgg aacggcaaca aaattatcga cgagcgcctg      600
atcaaccccg acggc                                                         615

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<210> 267
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 267
 Met Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
 1 5 10 15

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

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

Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe
 50 55 60

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

Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val
 85 90 95

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

Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met
 115 120 125

Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His
 130 135 140

His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val
 145 150 155 160

Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala
 165 170 175

Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly

	180		185	155193_1		190	
Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly							
	195		200			205	
<210>	268						
<211>	615						
<212>	DNA						
<213>	Artificial Sequence						
<220>							
<223>	Description of Artificial Sequence:	Synthetic					
	polynucleotide						
<400>	268						
atgctgtctgt tccgcgtaac catcaacgga gtgaccggct ggcggctgtg cgagcgcatt							60
ttggcgggaa gttctggttg aggaagtctt ggtggagagc ctactactga gaacttgtac							120
ttccagagcg ataacggaag ttctggtgga ggaagtcttg gtggaatggt gtttacctc							180
gaagatttcg taggggactg gcggcagaca gccggctaca acctggacca agtccttgag							240
cagggcggtg tgtccagttt gtttcagaat ctcggggtgt ccgtaactcc gatcaaagg							300
attgtcctga gcggtgaaaa cggcctgaag atcgacatcc atgtcatcat cccgatgaa							360
ggtctgagcg gcgatcagat gggccagatc gaaaaaatTT ttaaggTggt gtaccctgtg							420
gatgatcatc actttaaggT gattctgcac tatggcacac tgGtaatcga cggggttacg							480
ccgaacatga tcgactatTT cggacggccg tatgaaggCa tcgccgtgtt cgacggcaaa							540
aagatcactg taaccgggac cctgtggaac ggcaacaaaa ttatcgacga gCgcctgatc							600
aaccccgcgc gctcc							615

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

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

Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val
50 55 60

Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu
65 70 75 80

155193_1

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

Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp
100 105 110

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly
115 120 125

Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His
130 135 140

Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
145 150 155 160

Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
165 170 175

Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn
180 185 190

Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser
195 200 205

<210> 270

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 270

atgctgttcc gcgtaaccat caacggagtg accggctggc ggctgtgcga gcgcattttg	60
gcgggaagtt ctggtggagg aagttctggt ggagagccta ctactgagaa cttgtacttc	120
cagagcgata acggaagttc tgggtggagga agttctggtg gaatggtgtt tacactcgaa	180
gatttcgtag gggactggcg gcagacagcc ggctacaacc tggaccaagt ccttgagcag	240
ggcgggtgtgt ccagtttggt tcagaatctc ggggtgtccg taactccgat ccaaaggatt	300
gtcctgagcg gtgaaaacgg cctgaagatc gacatccatg tcatcatccc gtatgaaggt	360
ctgagcggcg atcagatggg ccagatcgaa aaaattttta aggtggtgta ccctgtggat	420
gatcatcact ttaaggatgat tctgcactat ggcacactgg taatcgacgg gggttacgccg	480
aacatgatcg actatttcgg acggccgtat gaaggcatcg ccgtgttcga cggcaaaaag	540
atcactgtaa ccgggaccct gtggaacggc aacaaaatta tcgacgagcg cctgatcaac	600
cccgacggct ccctg	615

<210> 271

155193_1

<211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 271
 Met Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys
 1 5 10 15

Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu
 20 25 30

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

Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
 50 55 60

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
 65 70 75 80

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

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
 100 105 110

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
 115 120 125

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
 130 135 140

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

Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
 165 170 175

Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys
 180 185 190

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

<210> 272
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

polynucleotide

```

<400> 272
atgttccgcg taaccatcaa cggagtgacc ggctggcggc tgtgcgagcg cattttggcg      60
ggaagttctg gtggaggaag ttctggtgga gaggctacta ctgagaactt gtacttccag      120
agcgataacg gaagttctgg tggaggaagt tctggtggaa tgggtgtttac actcgaagat      180
ttcgtagggg actggcggca gacagccggc tacaacctgg accaagtcct tgagcagggc      240
ggtgtgtcca gtttgtttca gaatctcggg gtgtccgtaa ctccgatcca aaggattgtc      300
ctgagcgggtg aaaacggcct gaagatcgac atccatgtca tcatcccgta tgaaggctctg      360
agcggcgatc agatgggcca gatcgaaaaa atttttaagg tgggtgtaccc tgtggatgat      420
catcacttta aggtgattct gcactatggc aacttggtaa tcgacggggt tacgccgaac      480
atgatcgact atttcggacg gccgtatgaa ggcacgcggc tgttcgacgg caaaaagatc      540
actgtaaccg ggaccctgtg gaacggcaac aaaattatcg acgagcgcct gatcaacccc      600
gacggctccc tgctg                                     615

```

<210> 273

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 273

```

Met Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
1           5           10           15

```

```

Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro
          20           25           30

```

```

Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly
          35           40           45

```

```

Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp
          50           55           60

```

```

Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly
65           70           75           80

```

```

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

```

```

Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His
          100           105           110

```

```

Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile
          115           120           125

```


155193_1
 Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys
 130 135 140

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

Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp
 165 170 175

Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile
 180 185 190

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

<210> 274
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 274
 atgaccatca acggagtgac cggctggcgg ctgtgcgagc gcattttggc ggggaagttct 60
 ggtggaggaa gttctggtgg agagcctact actgagaact tgtacttcca gagcgataac 120
 ggaagttctg gtggaggaag ttctggtgga atggtgttta cactcgaaga tttcgtaggg 180
 gactggcggc agacagccgg ctacaacctg gaccaagtcc ttgagcaggg cgggtgtgtcc 240
 agtttgtttc agaatctcgg ggtgtccgta actccgatcc aaaggattgt cctgagcgg 300
 gaaaacggcc tgaagatcga catccatgtc atcatcccgt atgaaggctc gagcggcgat 360
 cagatgggcc agatcgaaaa aatttttaag gtggtgtacc ctgtggatga tcatcacttt 420
 aaggtgattc tgcactatgg cacactggta atcgacgggg ttacgccgaa catgatcgac 480
 tatttcggac ggccgtatga aggcacgcc gtgttcgacg gcaaaaagat cactgtaacc 540
 gggaccctgt ggaacggcaa caaaattatc gacgagcgcc tgatcaaccc cgacggctcc 600
 ctgctgttcc gcgta 615

<210> 275
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 275
 Met Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu
 1 5 10 15

Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu
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155193_1

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

<210> 276
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 276 atgaacggag tgaccggctg gcggtgtgc gagcgcattht tggcgggaag ttctggtgga	60
ggaagtctctg gtggagagcc tactactgag aacttgtact tccagagcga taacggaagt	120
tctggtggag gaagtctctg tggaatggtg ttacactcg aagatttcgt aggggactgg	180
cggcagacag ccggctacaa cctggaccaa gtccttgagc agggcgggtgt gtccagtttg	240
tttcagaatc tcggggtgtc cgtaactccg atccaaagga ttgtcctgag cggtgaaaac	300
ggcctgaaga tcgacatcca tgtcatcatc ccgtatgaag gtctgagcgg cgatcagatg	360

155193_1

```

ggccagatcg aaaaaatttt taaggtggtg taccctgtgg atgatcatca ctttaaggtg      420
attctgcact atggcacact ggtaatcgac ggggttacgc cgaacatgat cgactatttc      480
ggacggccgt atgaaggcat cgccgtgttc gacggcaaaa agatcactgt aaccggggacc      540
ctgtggaacg gcaacaaaat tatcgacgag cgcctgatca accccgacgg ctccctgctg      600
ttccgcgtaa ccatc                                                    615

```

<210> 277

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 277

```

Met Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly
1          5          10          15

```

```

Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu
          20          25          30

```

```

Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly
          35          40          45

```

```

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
          50          55          60

```

```

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

```

```

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

```

```

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
          100          105          110

```

```

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

```

```

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
          130          135          140

```

```

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
          145          150          155          160

```

```

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

```

```

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
          180          185          190

```

155193_1

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

<210> 278
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 278
 atgggagtga ccggctggcg gctgtgagcg cgcatttttg cggaagttc tggaggagga 60
 agttctgggtg gagagcctac tactgagaac ttgtacttcc agagcgataa cggaagttct 120
 ggtggaggaa gttctggtgg aatggtgttt acactcgaag atttcgtagg ggactggcgg 180
 cagacagccg gctacaacct ggaccaagtc cttgagcagg gcggtgtgtc cagtttgttt 240
 cagaatctcg ggggtgtccgt aactccgatc caaaggattg tcctgagcgg tgaacacggc 300
 ctgaagatcg acatccatgt catcatcccg tatgaaggtc tgagcggcga tcagatgggc 360
 cagatcgaaa aaatttttaa ggtggtgtac cctgtggatg atcatcactt taagggtgatt 420
 ctgcactatg gcacactggt aatcgacggg gttacgccga acatgatcga ctatttcgga 480
 cggccgtatg aaggcatcgc cgtgttcgac ggcaaaaaga tctgtgtaac cgggaccctg 540
 tggaacggca acaaaattat cgacgagcgc ctgatcaacc ccgacggctc cctgctgttc 600
 cgcgtaacca tcaac 615

<210> 279
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 279
 Met Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser
 1 5 10 15
 Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr
 20 25 30
 Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met
 35 40 45
 Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly
 50 55 60
 Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe
 65 70 75 80

155193_1

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

Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu
100 105 110

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

Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly
130 135 140

Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly
145 150 155 160

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

Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile
180 185 190

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

<210> 280

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 280

atggtgaccg gctggcggct gtgcgagcgc attttggcgg gaagttctgg tggaggaagt	60
tctggtggag agcctactac tgagaacttg tacttccaga gcgataacgg aagttctggt	120
ggaggaagtt ctggtggaat ggtgtttaca ctcgaagatt tcgtagggga ctggcggcag	180
acagccggct acaacctgga ccaagtcctt gagcagggcg gtgtgtccag tttgtttcag	240
aatctcgggg tgtccgtaac tccgatccaa aggattgtcc tgagcgggtga aaacggcctg	300
aagatcgaca tccatgtcat catcccgtat gaaggtctga gcggcgatca gatgggccag	360
atcgaaaaaa tttttaagggt ggtgtaccct gtggatgata atcactttaa ggtgattctg	420
cactatggca cactggtaat cgacgggggt acgccgaaca tgatcgacta tttcggacgg	480
ccgtatgaag gcatcgccgt gttcgacggc aaaaagatca ctgtaaccgg gaccctgtgg	540
aacggcaaca aaattatcga cgagcgctg atcaaccccg acggctccct gctgttccgc	600
gtaaccatca acgga	615

<210> 281

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 281

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

<210> 282

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

155193_1

<400> 282
 atgggctggc ggctgtgcga ggcgattttg gcgggaagtt ctggtggagg aagttctggt 60
 ggagagccta ctactgagaa cttgtacttc cagagcgata acggaagttc tgggtggagga 120
 agttctggtg gaatggtggt tacactcgaa gatttcgtag gggactggcg gcagacagcc 180
 ggctacaacc tggaccaagt ccttgagcag ggcggtgtgt ccagtttggt tcagaatctc 240
 ggggtgtccg taactccgat ccaaaggatt gtcctgagcg gtgaaaacgg cctgaagatc 300
 gacatccatg tcatcatccc gtatgaaggt ctgagcggcg atcagatggg ccagatcgaa 360
 aaaattttta agtggtgta ccctgtggat gatcatcact ttaaggatgat tctgcactat 420
 ggcacactgg taatcgacgg gggtacgccg aacatgatcg actatttcgg acggccgtat 480
 gaaggcatcg ccgtgttcga cggcaaaaag atcactgtaa ccgggaccct gtggaacggc 540
 aacaaaatta tcgacgagcg cctgatcaac cccgacggct ccctgctggt ccgcgtaacc 600
 atcaacggag tgacc 615

<210> 283
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 283
 Met Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly
 1 5 10 15

Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser
 20 25 30

Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr
 35 40 45

Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu
 50 55 60

Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu
 65 70 75 80

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

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

Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
 115 120 125

Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
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155193_1

Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp
35 40 45

Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val
50 55 60

Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser
65 70 75 80

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

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

Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp
115 120 125

His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
130 135 140

Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
145 150 155 160

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
165 170 175

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
180 185 190

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
195 200 205

<210> 286

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 286

atgcgcattt tggcggaag ttctggtgga ggaagttctg gtggagagcc tactactgag 60

aacttgact tccagagcga taacggaagt tctggtggag gaagttctgg tggaatggtg 120

tttactctg aagatttcgt aggggactgg cggcagacag ccggctacaa cctggaccaa 180

gtccttgagc agggcggtgt gtccagtttg tttcagaatc tcgggggtgc cgtaactccg 240

atccaaagga ttgtcctgag cggtgaaaac ggcctgaaga tcgacatcca tgtcatcatc 300

ccgtatgaag gtctgagcgg cgatcagatg ggccagatcg aaaaaatttt taagggtggtg 360

155193_1

taccctgtgg atgatcatca ctttaagggtg attctgcact atggcacact ggtaatcgac	420
ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc	480
gacggcaaaa agatcactgt aaccgggacc ctgtggaacg gcaacaaaat tatcgacgag	540
cgcctgatca accccgacgg ctccctgctg ttccgcgtaa ccatcaacgg agtgaccggc	600
tggcggctgt gcgag	615

<210> 287
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 287
 Met Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu
 1 5 10 15

Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly
 20 25 30

Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
 35 40 45

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
 50 55 60

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
 65 70 75 80

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

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
 100 105 110

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
 115 120 125

Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro
 130 135 140

Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
 145 150 155 160

Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys
 165 170 175

Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg
 180 185 190

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Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
 195 200 205

<210> 288

<211> 389

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 288

gagtgcaggt ggaaaccatc tccccaggag acggg'gcac cttccccaag cgcggccaga 60
 cctgcgtggt gcactacacc gggatgcttg aagatggaaa gaaatttgat tcctcccggg 120
 acagaaacaa gccctttaag tttatgctag gcaagcagga ggtgatccga ggctgggaag 180
 aagggggttc ccagatgagt gtgggtcaga gagccaaact gactatatct ccagattatg 240
 cctatggtgc cactgggcac ccaggcatca tcccaccaca tgccactctc gtcttcgatg 300
 tggagcttct aaaactggaa ggaggaggga gctccggtgg aggcagcggg ggagtgaccg 360
 gctggcggct gtgcgaacgc attctggcg 389

<210> 289

<211> 130

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 289

Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe Pro
 1 5 10 15

Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu Asp
 20 25 30

Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys Phe
 35 40 45

Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val Ala
 50 55 60

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

Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala Thr
 85 90 95

Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser Ser
 100 105 110

Gly Gly Gly Ser Gly Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile
115 120 125 155193_1

Leu Ala
130

<210> 290
<211> 795
<212> DNA
<213> Artificial Sequence

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

<400> 290
atggtcttca cactcgaaga tttcgttggg gactggcgac agacagccgg ctacaacctg 60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 120
actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc 180
atcatcccggt atgaagggtct gagcggcgac caaatgggccc agatcgaaaa aatttttaag 240
gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgcactatgg cacttggtta 300
atcgacgggg ttacgccgaa catgatcgac tttttcggac ggccgtatga aggcacgcc 360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaattatc 420
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gagtaaccat caacggagtg 480
accggaggag gtggctcagg tggaggagc tccgtggcca tcctctggca tgagatgtgg 540
catgaaggcc tggagaggc atctcgtttg tactttgggg aaaggaacgt gaaaggcatg 600
tttgaggtgc tggagccctt gcatgctatg atggaacggg gccccagac tctgaaggaa 660
acatccttta atcaggccta tggtcgagat ttaatggagg cccaagagtg gtgcaggaag 720
tacatgaaat caggaatgt caaggacctc acccaagcct gggacctcta ttatcatgtg 780
ttccgacgaa tctca 795

<210> 291
<211> 265
<212> PRT
<213> Artificial Sequence

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

<400> 291
Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
35 40 45

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Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
145 150 155 160

Thr Gly Gly Gly Gly Ser Gly Gly Gly Ser Ser Val Ala Ile Leu Trp
165 170 175

His Glu Met Trp His Glu Gly Leu Glu Glu Ala Ser Arg Leu Tyr Phe
180 185 190

Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val Leu Glu Pro Leu His
195 200 205

Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys Glu Thr Ser Phe Asn
210 215 220

Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala Gln Glu Trp Cys Arg Lys
225 230 235 240

Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Thr Gln Ala Trp Asp Leu
245 250 255

Tyr Tyr His Val Phe Arg Arg Ile Ser
260 265

<210> 292

<211> 825

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 292

ggagtgcagg tggaaaccat ctcccagga gacgggcgca ccttcccaa ggcgcgccag
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acctgcgtgg tgcactacac cgggatgctt gaagatggaa agaaatttga ttcctcccg 120
gacagaaaca agccctttaa gtttatgcta ggcaagcagg aggtgatccg aggctgggaa 180
gaaggggttg cccagatgag tgtgggtcag agagccaaac tgactatatc tccagattat 240
gcctatggtg ccactgggca cccaggcatc atcccaccac atgccactct cgtcttcgat 300
gtggagcttc taaaactgga aggaggaggg agctccggtg gaggcagcgg tatggtcttc 360
acactcgaag atttcgttgg ggactggcga cagacagccg gctacaacct ggaccaagtc 420
cttgaacagg gaggtgtgtc cagtttgttt cagaatctcg ggggtgtccgt aactccgatc 480
caaaggattg tcctgagcgg tgaatatggg ctgaagatcg acatccatgt catcatccc 540
tatgaaggtc tgagcggcga ccaaatgggc cagatcga aaatttttaa ggtggtgtac 600
cctgtggatg atcatcactt taaggatgat ctgcactatg gcacactggt aatcgacggg 660
gttacgccga acatgatcga ctatttcgga cggccgtatg aaggcatcgc cgtgttcgac 720
ggcaaaaaga tcaactgaac agggaccctg tggaacggca acaaaattat cgacgagcgc 780
ctgatcaacc ccgacggctc cctgctgttc cgagtaacca tcaac 825

```

<210> 293

<211> 275

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 293

```

Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe Pro
1           5           10           15

```

```

Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu Asp
          20           25           30

```

```

Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys Phe
          35           40           45

```

```

Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val Ala
 50           55           60

```

```

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

```

```

Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala Thr
          85           90           95

```

```

Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser Ser
          100          105          110

```

```

Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp
115           120          125

```

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Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly
130 135 140

Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile
145 150 155 160

Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His
165 170 175

Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile
180 185 190

Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys
195 200 205

Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn
210 215 220

Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp
225 230 235 240

Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile
245 250 255

Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val
260 265 270

Thr Ile Asn
275

<210> 294

<211> 354

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 294

atgggagtga ccggctggcg gctgtgcgaa cgcattctgg cgggaggagg tggctcaggt	60
ggagggagct ccgtggccat cctctggcat gagatgtggc atgaaggcct ggaagaggca	120
tctcgtttgt actttgggga aaggaacgtg aaaggcatgt ttgaggtgct ggagcccttg	180
catgctatga tggaacgggg ccccgagact ctgaaggaaa catcctttaa tcaggcctat	240
ggtcgagatt taatggaggc ccaagagtgg tgcaggaagt acatgaaatc agggaatgtc	300
aaggacctca cccaagcctg ggacctctat tatcatgtgt tccgacgaat ctca	354

<210> 295

<211> 118

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 295

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

<210> 296

<211> 554

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 296

atgggagtgc aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60

cagacctgcg tgggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120

cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180

gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat 240

tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc 300

gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtacgccg 360

aacatgatcg actatttcg acggccgtat gaaggcatcg ccgtgttcga cggcaaaaag 420

atcactgtaa cagggaccct gtggaacggc aacaaaatta tcgacgagcg cctgatcaac 480

cccgacggct ccctgctgtt ccgagtaacc atcaacggag tgaccggctg gcggctgtgc 540

gaacgcattc tggc 554

<210> 297
 <211> 184
 <212> PRT
 <213> Artificial Sequence

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

<400> 297
 Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
 35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
 50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
 65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
 85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
 100 105 110

Ser Gly Gly Gly Ser Gly Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg
 115 120 125

Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr
 130 135 140

Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn
 145 150 155 160

Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly
 165 170 175

Trp Arg Leu Cys Glu Arg Ile Leu
 180

<210> 298
 <211> 624
 <212> DNA
 <213> Artificial Sequence

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

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<400> 298
 atggtcttca cactcgaaga tttcgttggg gactggcgac agacagccgg ctacaacctg 60
 gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 120
 actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc 180
 atcatcccgat atgaaggtct gagcggcgac caaatgggccc agatcgaaaa aatttttaag 240
 gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgcactatgg cacttggtgta 300
 atcgacgggg ttggaggagg tggctcaggt ggaggagct ccgtggccat cctctggcat 360
 gagatgtggc atgaaggcct ggaagaggca tctcgtttgt actttgggga aaggaacgtg 420
 aaaggcatgt ttgaggtgct ggagcccttg catgctatga tggaacgggg cccccagact 480
 ctgaaggaaa catcctttta tcaggcctat ggtcgagatt taatggaggc ccaagagtgg 540
 tgcaggaagt acatgaaatc agggaatgtc aaggacctca cccaagcctg ggacctctat 600
 tatcatgtgt tccgacgaat ctca 624

<210> 299
 <211> 184
 <212> PRT
 <213> Artificial Sequence

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

<400> 299
 Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
 35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
 50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
 65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
 85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
 100 105 110

Ser Gly Gly Gly Ser Gly Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg
 115 120 125

Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr
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130 135 155193_1 140

Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn
 145 150 155 160

Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly
 165 170 175

Trp Arg Leu Cys Glu Arg Ile Leu
 180

<210> 300
 <211> 516
 <212> DNA
 <213> Artificial Sequence

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

<400> 300
 atgacgccga acatgatcga ctatttcgga cggccgtatg aaggcatcgc cgtgttcgac 60
 ggcaaaaaga tactgtaac agggaccctg tggaacggca aaaaattat cgacgagcgc 120
 ctgatcaacc ccgacggctc cctgctgttc cgagtaacca tcaacggagt gaccggctgg 180
 cggctgtgcg aacgcattct ggcgggagga ggtggctcag gtggagggag ctccgtggcc 240
 atcctctggc atgagatgtg gcatgaaggc ctggaagagg catctcgttt gtactttggg 300
 gaaaggaacg tgaaaggcat gtttgaggtg ctggagccct tgcattgctat gatggaacgg 360
 ggccccaga ctctgaagga aacatccttt aatcaggcct atggtcgaga tttaatggag 420
 gcccaagagt ggtgcaggaa gtacatgaaa tcagggaatg tcaaggacct cacccaagcc 480
 tgggacctct attatcatgt gttccgacga atctca 516

<210> 301
 <211> 172
 <212> PRT
 <213> Artificial Sequence

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

<400> 301
 Met Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
 1 5 10 15

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
 20 25 30

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

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
 50 55 60

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Arg Ile Leu Ala Gly Gly Gly Gly Ser Gly Gly Gly Ser Ser Val Ala
65 70 75 80

Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu Ala Ser Arg
85 90 95

Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val Leu Glu
100 105 110

Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys Glu Thr
115 120 125

Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala Gln Glu Trp
130 135 140

Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Thr Gln Ala
145 150 155 160

Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser
165 170

<210> 302

<211> 666

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 302

atgggagtgc aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc	60
cagacctgcg tggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc	120
cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg	180
gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat	240
tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc	300
gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc	360
ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa	420
gtccttgaac agggagggtgt gtccagttt tttcagaatc tcggggtgtc cgtaactccg	480
atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc	540
ccgtatgaag gtctgagcgg cgaccaaagtg ggccagatcg aaaaaatttt taagggtgtg	600
taccctgtgg atgatcatca ctttaagggtg atcctgcact atggcacact ggtaatcgac	660
gggggtt	666

<210> 303

<211> 222

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 303

Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
1 5 10 15Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
20 25 30Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
35 40 45Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
50 55 60Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
65 70 75 80Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
85 90 95Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
100 105 110Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
115 120 125Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
130 135 140Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
145 150 155 160Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
165 170 175His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
180 185 190Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
195 200 205Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val
210 215 220

<210> 304

<211> 612

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 304

```

atgggagtg c aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc      60
cagacctg c tgggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc      120
cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg      180
gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat      240
tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc      300
gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggatgatgat      360
catcacttta aggtgatcct gcactatggc aacttggtaa tcgacggggt tacgccgaac      420
atgatcgact atttcggacg gccgtatgaa ggcacgcgcg tgttcgacgg caaaaagatc      480
actgtaacag ggaccctgtg gaacggcaac aaaattatcg acgagcgcct gatcaacccc      540
gacggctccc tgctgttccg agtaaccatc aacggagtga ccggctggcg gctgtgcgaa      600
cgcatctctg cg                                         612

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<210> 305

<211> 204

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 305

```

Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
1          5          10          15

```

```

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
20          25          30

```

```

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
35          40          45

```

```

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
50          55          60

```

```

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
65          70          75          80

```

```

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
85          90          95

```

```

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
100          105          110

```

```

Ser Gly Gly Gly Ser Gly Asp Asp His His Phe Lys Val Ile Leu His
115          120          125

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Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr
130 135 140

Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile
145 150 155 160

Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg
165 170 175

Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly
180 185 190

Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
195 200

<210> 306
<211> 567
<212> DNA
<213> Artificial Sequence

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

<400> 306
atggtcttca cactcgaaga tttcgttggg gactggcgac agacagccgg ctacaacctg 60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 120
actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc 180
atcatcccgat atgaagggtct gagcggcgac caaatgggccc agatcgaaaa aatttttaag 240
gtggtgtacc ctgtgggagg aggtggctca ggtggaggga gctccgtggc catcctctgg 300
catgagatgt ggcataaagg cctggaagag gcatctcggt tgtactttgg ggaaaggaac 360
gtgaaaggca tgtttgaggt gctggagccc ttgcatgcta tgatggaacg gggccccag 420
actctgaagg aaacatcctt taatcaggcc tatggctcag atttaattga ggccaagag 480
tggtgcagga agtacatgaa atcagggaat gtcaaggacc tcaccaagc ctgggacctc 540
tattatcatg tgttccgacg aatctca 567

<210> 307
<211> 189
<212> PRT
<213> Artificial Sequence

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

<400> 307
Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
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20	25	30
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Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Gly Gly Gly Gly Ser Gly Gly Gly Ser Ser Val
 85 90 95

Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu Ala Ser
 100 105 110

Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val Leu
 115 120 125

Glu Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys Glu
 130 135 140

Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala Gln Glu
 145 150 155 160

Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Thr Gln
 165 170 175

Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser
 180 185

<210> 308
 <211> 255
 <212> DNA
 <213> Artificial Sequence

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

<400> 308	
atggtcttca cactcgaaga tttcgttggg gactggcgac agacagccgg ctacaacctg	60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta	120
actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc	180
atcatcccgat atgaagggtct gagcggcgac caaatgggccc agatcgaaaa aatttttaag	240
gtggtgtacc ctgtg	255

<210> 309
 <211> 85
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 309

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

<210> 310

<211> 261

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 310

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acgccgaaca tgatcgacta tttcggacgg ccgatgaag gcatcgccgt gttcgacggc 120

aaaaagatca ctgtaacagg gaccctgtgg aacggcaaca aaattatcga cgagcgcctg 180

atcaaccccg acggctccct gctgttccga gtaaccatca acggagtgcg cggtggcgg 240

ctgtgcgaac gcattctggc g 261

<210> 311

<211> 87

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 311

Met Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
1 5 10 15Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
20 25 30

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Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
35 40 45

Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
50 55 60

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
65 70 75 80

Leu Cys Glu Arg Ile Leu Ala
85

<210> 312

<211> 609

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 312

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cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg	180
gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat	240
tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc	300
gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc	360
ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa	420
gtccttgaac agggaggtgt gtccagttt tttcagaatc tcgggggtgc cgtaactccg	480
atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc	540
ccgtatgaag gtctgagcgg cgaccaaatt ggccagatcg aaaaaatttt taagggtgtg	600
taccctgtg	609

<210> 313

<211> 203

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 313

Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
20 25 30

155193_1

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
 35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
 50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
 65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
 85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
 100 105 110

Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
 115 120 125

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
 130 135 140

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
 145 150 155 160

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
 165 170 175

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
 180 185 190

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val
 195 200

<210> 314
 <211> 573
 <212> DNA
 <213> Artificial Sequence

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

<400> 314
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 acgccgaaca tgatcgacta tttcggacgg ccgtatgaag gcatcgccgt gttcgacggc 120
 aaaaagatca ctgtaacagg gaccctgtgg aacggcaaca aaattatcga cgagcgcctg 180
 atcaaccccg acggctccct gctgttccga gtaaccatca acggagtgc cggctggcgg 240
 ctgtgcgaac gcattctggc gggaggaggt ggctcaggtg gagggagctc cgtggccatc 300
 ctctggcatg agatgtggca tgaaggcctg gaagaggcat ctcgtttgta ctttggggaa 360
 aggaacgtga aaggcatgtt tgaggtgctg gagcccttgc atgctatgat ggaacggggc 420

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ccccagactc tgaaggaaac atcctttaat caggcctatg gtcgagattt aatggaggcc      480
caagagtggg gcaggaagta catgaaatca gggaatgtca aggacctcac ccaagcctgg      540
gacctctatt atcatgtgtt ccgacgaatc tca                                     573

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<210> 315
 <211> 191
 <212> PRT
 <213> Artificial Sequence

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

<400> 315
 Met Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
 1 5 10 15

 Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
 20 25 30

 Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
 35 40 45

 Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
 50 55 60

 Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
 65 70 75 80

 Leu Cys Glu Arg Ile Leu Ala Gly Gly Gly Gly Ser Gly Gly Gly Ser
 85 90 95

 Ser Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu
 100 105 110

 Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu
 115 120 125

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

 Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala
 145 150 155 160

 Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu
 165 170 175

 Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser
 180 185 190

<210> 316
 <211> 2838
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 316

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aacccgacct cctcctacgt gtggcgcaac atcatcccgc atgttgacc gacctatcgc	180
tgcatgtctc cagacctgat cggtatgggc aaatccgaca aaccagacct gggttatttc	240
ttcgacgacc acgtccgctt catggatgcc ttcatcgaag ccctgggtct ggaagaggtc	300
gtcctggtca ttcacgactg gggctccgct ctgggtttcc actgggcca gcgcaatcca	360
gagcgcgtca aaggtattgc atttatggag ttcatccgcc ctatcccgc ctgggacgaa	420
tggccagaat ttgcccgcga gacctccag gccttccgca ccaccgacgt cggccgcaag	480
ctgatcatcg atcagaacgt ttttatcgag ggtacgctgc cgatgggtgt cgtccgcccg	540
ctgactgaag tcgagatgga ccattaccgc gagccgttcc tgaatcctgt tgaccgcgag	600
ccactgtggc gcttcccaaa cgagctgcca atcgccggtg agccagcgaa catcgtcgcg	660
ctggtcgaag aatacatgga ctggctgcac cagtcccctg tcccgaagct gctgttctgg	720
ggcaccaccag gcgttctgat cccaccggcc gaagccgctc gcctggcca aagcctgcct	780
aactgcaagg ctgtggacat cggcccgggt ctgaatctgc tgcaagaaga caaccggac	840
ctgatcggca gcgagatcgc gcgctggctg tcgacgctc agatttccgg cgagccaacc	900
actgaggatc tgtactttca gagcgataac gcgatcgctt tcgaaggaga tagaaccatg	960
cagccagatc ccaggcctag cggggctggg gcctgctgcc gattcctgcc cctgcagtca	1020
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gtgacgccct cccagcatgg caaccgcacc ttcagctaca ccctggagga tcataccaag	1140
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cagatgcagc tgcagaagtg cgagatcctg cagtccgact cccgctgcaa ggactacctg	1860

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tgtacctgtt	acgtagtt					2838

<210> 317

<211> 5064

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 317

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aatatgaccg	ccatgttggc	attgattatt	gactagttat	taatagtaat	caattacggg	180
gtcattagtt	catagcccat	atatggagtt	ccgcgttaca	taacttacgg	taaattggccc	240
gcctggctga	ccgccaacg	acccccgcc	attgacgtca	ataatgacgt	atgttcccat	300
agtaacgcca	atagggactt	tccattgacg	tcaatgggtg	gagtatttac	ggtaaaactgc	360
ccacttggca	gtacatcaag	tgtatcatat	gccaagtccg	ccccctattg	acgtcaatga	420
cggtaaatgg	cccgcctggc	attatgccca	gtacatgacc	ttacgggact	ttcctacttg	480
gcagtacatc	tacgtattag	tcatcgctat	taccatggtg	atgcgggtttt	ggcagtacac	540
caatgggcgt	ggatagcggg	ttgactcacg	gggattttcca	agtctccacc	ccattgacgt	600
caatggggagt	ttgttttggc	acaaaaatca	acggggacttt	ccaaaatgtc	gtaataaccc	660

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aatttatcag gcgcgattgc ggcagttttt cgggtggttt gttgccattt ttacctgtct	4920
gctgccgtga tcgcgctgaa cgcgtttttag cgggtgcgtac aattaaggga ttatggtaaa	4980
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gtccggcgta gaggatcgag atct	5064

<210> 318
 <211> 513
 <212> DNA
 <213> Artificial Sequence

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

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atcatcccgt atgaaggtct gagcggcgac caaatgggcc agatcgaaaa aatttttaag	240
gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgcactatgg cacttggtta	300
atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgatga aggcacgcc	360
gtgttcgacg gcaaaaagat cactgtaact gggaccctgt ggaacggcaa caaattatc	420
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gagtaaccat caacggagt	480
accggctggc ggctgtgcga acgcattctg gcg	513

<210> 319
 <211> 513
 <212> DNA
 <213> Artificial Sequence

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

<400> 319	
atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg	60
gaccaagtcc ttgaacaggg cgggtgtgtcc agtttgtttc agaactctcg ggtgtccgta	120
actccgatcc aaaggattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc	180
atcatcccgt atgaaggtct gagcggcgat caaatgggcc agatcgaaaa aatttttaag	240
gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgcactatgg cacttggtta	300
atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgatga aggcacgcc	360
gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaattatc	420
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagt	480

accggctggc ggctgtgcga ggcattttg gcg 155193_1 513

<210> 320
<211> 636
<212> DNA
<213> Artificial Sequence

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

<400> 320
atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg 60
gaccaagtcc ttgaacaggg cgggtgtgtcc agtttgtttc agaattctcg ggtgtccgta 120
actccgatcc aaaggattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc 180
atcatcccgat atgaagggtct gagcggcgat caaatgggccc agatcgaaaa aatttttaag 240
gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgcactatgg cactctggta 300
atcgacgggg ttacgccgaa catgatcgac tttttcggac ggccgatga aggcacgcc 360
gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc 420
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagt 480
accggctggc ggctgtgcga ggcattttg gcgaattcac acggctttcc gcccgaggtt 540
gaagagcaag ccgccgttac attgcctatg tcctgcgcac aagaaagcgg tatggaccgg 600
caccagccg cttgtgcttc agctcgcatc aacgtc 636

<210> 321
<211> 597
<212> DNA
<213> Artificial Sequence

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

<400> 321
atgaactcct tctccacaag cgccttcggg ccagttgcct tctccctggg cctgctcctg 60
gtgttgccctg ctgccttccc tgcccagtg tttacactcg aagatttcgt aggggactgg 120
cggcagacag ccggctacaa cctggaccaa gtccttgaac agggcgggtg gtccagtttg 180
tttcagaatc tcgggggtgtc cgtaactccg atccaaagga ttgtcctgag cggtgaaaac 240
ggcctgaaga tcgacatcca tgtcatcatc ccgtatgaag gtctgagcgg cgatcaaatg 300
ggccagatcg aaaaaatttt taagggtgtg taccctgtgg atgatcatca ctttaagggtg 360
atcctgcact atggcacact ggtaatcgac ggggttacgc cgaacatgat cgactatttc 420
ggacggccgt atgaaggcat cgccgtgttc gacggcaaaa agatcactgt aaccgggacc 480
ctgtggaacg gcaacaaaat tatcgacgag cgcctgatca accccgacgg ctccctgctg 540
ttccgcgtaa ccatcaacgg agtgaccggc tggcggctgt gcgagcgcat tttggcg 597

<210> 322

155193_1

<211> 513
 <212> DNA
 <213> Artificial Sequence

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

<400> 322
 atggtcttca cactcgaaga tttcgttggg gactggcgac agacagccgg ctacaacctg 60
 gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 120
 actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc 180
 atcatcccgat atgaagggtct gagcggcgac caaatgggccc agatcgaaaa aatttttaag 240
 gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgcactatgg cacttggtta 300
 atcgacgggg ttacgccgaa catgatcgac ttttcggac ggccgatga aggcacgcc 360
 gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaattatc 420
 gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gagtaaccat caacggagtg 480
 accggctggc ggctgtgcga acgcattctg gcg 513

<210> 323
 <211> 636
 <212> DNA
 <213> Artificial Sequence

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

<400> 323
 atggtcttca cactcgaaga tttcgttggg gactggcgac agacagccgg ctacaacctg 60
 gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 120
 actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc 180
 atcatcccgat atgaagggtct gagcggcgac caaatgggccc agatcgaaaa aatttttaag 240
 gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgcactatgg cacttggtta 300
 atcgacgggg ttacgccgaa catgatcgac ttttcggac ggccgatga aggcacgcc 360
 gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaattatc 420
 gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gagtaaccat caacggagtg 480
 accggctggc ggctgtgcga acgcattctg gcgaattctc acggctttcc gcctgaggtt 540
 gaagagcaag ccgccgtac attgcctatg tcctgcgac aagaaagcgg tatggaccgg 600
 caccagccg cttgtgcttc agctcgatc aacgtc 636

<210> 324
 <211> 597
 <212> DNA
 <213> Artificial Sequence

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

polynucleotide

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<400> 324
atgaactcct tctccacaag cgccttcggt ccagttgcct tctccctggg cctgctcctg      60
gtgttgcttg ctgccttccc tgccccagtc ttcacactcg aagatttcgt tggggactgg      120
cgacagacag ccggctacaa cctggaccaa gtccttgaac agggaggtgt gtccagtttg      180
tttcagaatc tcgggggtgtc cgtaactccg atccaaagga ttgtcctgag cggtgaaaat      240
gggctgaaga tcgacatcca tgtcatcatc ccgtatgaag gtctgagcgg cgaccaaagt      300
ggccagatcg aaaaaatttt taagggtggtg taccctgtgg atgatcatca ctttaagggtg      360
atcctgcact atggcacact ggtaatcgac ggggttacgc cgaacatgat cgactatttc      420
ggacggccgt atgaaggcat cgccgtgttc gacggcaaaa agatcactgt aacagggacc      480
ctgtggaacg gcaacaaaat tatcgacgag cgcctgatca accccgacgg ctccctgctg      540
ttccgagtaa ccatcaacgg agtgaccggc tggcggctgt gcgaacgcat tctggcg      597

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<210> 325

<211> 513

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polynucleotide

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<400> 325
atggtcttca cactcgaaga tttcgtaggt gactggcgac agacagccgg ctacaacctg      60
gaccaagttc ttgaacaggg tgggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta      120
actccaatcc agaggatagt cctgagtggg gaaaatgggc tgaagatcga catccatgtc      180
atcatccctt atgaaggctt gagcggcgat cagatggggc agatcgaaaa aatttttaag      240
gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgcactatgg cacttggtga      300
atcgacgggtg ttacgccgaa catgatcgac tatttcggac ggccgtatga aggcacgccc      360
gtgttcgacg gcaaaaagat tactgtcact ggaaccctgt ggaatgggaa caaaattatc      420
gacgagcgcc tgatcaaccc cgacggctca ctgctgttcc gagtaaccat caatggtgtt      480
accggctggc ggctctgcga acgcattcta gca      513

```

<210> 326

<211> 636

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polynucleotide

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<400> 326
atggtcttca cactcgaaga tttcgtaggt gactggcgac agacagccgg ctacaacctg      60
gaccaagttc ttgaacaggg tgggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta      120
actccaatcc agaggatagt cctgagtggg gaaaatgggc tgaagatcga catccatgtc      180

```

155193_1

```

atcatccctt atgaaggctt gagcggcgat cagatggggc agatcgaaaa aatttttaag      240
gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgcactatgg cactactggta      300
atcgacgggtg ttacgccgaa catgatcgac tatttcggac ggccgtatga aggcacgcc      360
gtgttcgacg gcaaaaagat tactgtcact ggaaccctgt ggaatgggaa caaaattatc      420
gacgagcgcc tgatcaaccc cgacgggtca ctgctgttcc gagtaaccat caatgggtgt      480
accggctggc ggctctgcga acgcattcta gcaaatagtc acggctttcc gcctgaggtt      540
gaagagcaag ccgccgttac attgcctatg tcctgcgcac aagaaagcgg tatggaccgg      600
caccagccg cttgtgcttc agctcgcatc aacgtc                                636

```

<210> 327

<211> 573

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 327

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atgaactcct tctccacaag cgccttcggt ccagtcgcct tctccctggg cctgctcctg      60
gtgttgcccg ctgcctttcc tgcccagtc ttacactcg aagatttcgt aggtgactgg      120
cgacagacag ccggctacaa cctggaccaa gttcttgaac aggttggtgt gtccagtttg      180
tttcagaatc tcgggggtgtc cgtaactcca atccagagga tagtcctgag tggtgaaaat      240
gggctgaaga tcgacatcca tgtcatcatc cttatgaag gtctgagcgg cgatcagatg      300
gggcagatcg aaaaaatttt taagggtgtg taccctgtgg atgatcatca ctttaagggtg      360
atcctgcact atggcacact ggtaatcgac ggtgttacgc cgaacatgat cgactatttc      420
ggacggccgt atgaaggcat cgccgtgttc gacggcaaaa agattactgt cactggaacc      480
ctgtggaatg ggaacaaaat tatcgacgag cgcctgatca accccgacgg ctactgctg      540
ttccgagtaa ccatcaatgg tgttaccggc tgg                                573

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<210> 328

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 328

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Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn
1           5           10           15

```

```

Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly
20           25           30

```

Gly

<210> 329
<211> 18
<212> PRT
<213> Artificial Sequence

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

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Gly, Ser, Ala, Ile, Val, or Lys

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Any amino acid except Phe or Glu

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Phe, Tyr, or Trp

<220>
<221> MOD_RES
<222> (4)..(4)
<223> Any amino acid

<220>
<221> MOD_RES
<222> (5)..(5)
<223> Leu, Ile, Val, Met, or Phe

<220>
<221> MOD_RES
<222> (6)..(7)
<223> Any amino acid

<220>
<221> MOD_RES
<222> (8)..(8)
<223> Any amino acid except Lys

<220>
<221> MOD_RES
<222> (9)..(9)
<223> Any amino acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Asn, His, or Gly

<220>
<221> MOD_RES
<222> (11)..(11)
<223> Phe or Tyr

<220>
<221> MOD_RES
<222> (12)..(12)
<223> Asp or Glu

<220>
 <221> MOD_RES
 <222> (13)..(13)
 <223> Any amino acid

<220>
 <221> MOD_RES
 <222> (14)..(14)
 <223> Leu, Ile, Val, Met, Phe, or Tyr

<220>
 <221> MOD_RES
 <222> (15)..(15)
 <223> Leu, Ile, Val, or Met

<220>
 <221> MOD_RES
 <222> (16)..(16)
 <223> Any amino acid except Asn

<220>
 <221> MOD_RES
 <222> (17)..(17)
 <223> Any amino acid except Gly

<220>
 <221> MOD_RES
 <222> (18)..(18)
 <223> Leu, Ile, Val, Met, Ala, Lys, or Arg

<400> 329
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1 5 10 15

Xaa Xaa

<210> 330
 <211> 18
 <212> PRT
 <213> Artificial Sequence

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

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> Gly, Ser, Ala, Ile, Val, or Lys

<220>
 <221> MOD_RES
 <222> (2)..(2)
 <223> Any amino acid except Phe or Glu

<220>
 <221> MOD_RES
 <222> (3)..(3)
 <223> Phe, Tyr, or Trp

<220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> Any amino acid

<220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> Leu, Ile, Val, Met, Phe, Ser, Tyr, or Gln

<220>
 <221> MOD_RES
 <222> (6)..(7)
 <223> Any amino acid

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> Any amino acid except Lys

<220>
 <221> MOD_RES
 <222> (9)..(9)
 <223> Any amino acid

<220>
 <221> MOD_RES
 <222> (10)..(10)
 <223> Asn, His, Gly, or Lys

<220>
 <221> MOD_RES
 <222> (11)..(11)
 <223> Any amino acid

<220>
 <221> MOD_RES
 <222> (12)..(12)
 <223> Asp or Glu

<220>
 <221> MOD_RES
 <222> (13)..(13)
 <223> Any amino acid

<220>
 <221> MOD_RES
 <222> (14)..(14)
 <223> Leu, Ile, Val, Met, Phe, or Tyr

<220>
 <221> MOD_RES
 <222> (15)..(15)
 <223> Leu, Ile, Val, Met, Trp, or Phe

<220>
 <221> MOD_RES
 <222> (16)..(16)
 <223> Any amino acid

<220>
 <221> MOD_RES
 <222> (17)..(17)
 <223> Any amino acid except Gly

<220>
 <221> MOD_RES
 <222> (18)..(18)
 <223> Leu, Ile, Val, Met, Ala, Lys, Arg, or Gly

<400> 330
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa

1 5 155193_1 15
10

Xaa Xaa

<210> 331
<211> 672
<212> DNA
<213> Artificial Sequence

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

<400> 331
atgggcctga agatcgacat ccatgtcatc atcccgatg aaggtctgag cggctatcag 60
atgggccaga tcgaaaaaat ttttaagggtg gtgtaccctg tggatgatca tcactttaag 120
gtgattctgc actatggcac actggtaatc gacgggggtta cgccgaacat gatcgactat 180
ttcggacggc cgtatgaagg catcgccgtg ttcgacggca aaaagatcac tgtaaccggg 240
accctgtgga acggcaacaa aattatcgac gagcgcctga tcaaccccga cggctccctg 300
ctgttccgcg taaccatcaa cggagtgacc ggctggcggc tgtgagcg cgttttggcg 360
ggaggaggtg gctcaggtgg agggagctcc gtggccatcc tctggcatga gatgtggcat 420
gaaggcctgg aagaggcatc tcgtttgtac tttggggaaa ggaacgtgaa aggcattgtt 480
gaggtgctgg agcccttgca tgctatgatg gaacggggcc cccagactct gaaggaaaca 540
tcctttaatc aggcctatgg tcgagattta atggaggccc aagagtgggtg caggaagtac 600
atgaaatcag ggaatgtcaa ggacctcacc caagcctggg acctctatta tcatgtgttc 660
cgacgaatct ca 672

<210> 332
<211> 224
<212> PRT
<213> Artificial Sequence

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

<400> 332
Met Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu 15
1 5 10
Ser Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr 30
20 25 30
Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu 45
35 40 45
Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro 60
50 55 60

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Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly
65 70 75 80

Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro
85 90 95

Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp
100 105 110

Arg Leu Cys Glu Arg Ile Leu Ala Gly Gly Gly Gly Ser Gly Gly Gly
115 120 125

Ser Ser Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu
130 135 140

Glu Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe
145 150 155 160

Glu Val Leu Glu Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr
165 170 175

Leu Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu
180 185 190

Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp
195 200 205

Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser
210 215 220

<210> 333
<211> 468
<212> DNA
<213> Artificial Sequence

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

<400> 333
atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg 60
gaccaagtcc ttgagcaggg cggctctgtcc agtttgtttc agaaactcgg ggtgtccgta 120
acaccgatcc aaaagattgt cctgagcggg gaaaacggag gaggtggctc aggtggaggg 180
agctccgtgg ccatacctctg gcatgagatg tggcatgaag gcctggaaga ggcatactctg 240
ttgtactttg gggaaaggaa cgtgaaaggc atgtttgagg tgctggagcc cttgcatgct 300
atgatggaac ggggccccca gactctgaag gaaacatcct ttaatcaggc ctatggtcga 360
gatttaatgg aggcccaaga gtggtgcagg aagtacatga aatcagggaa tgtcaaggac 420
ctcacccaag cctgggacct ctattatcat gtgttccgac gaatctca 468

<210> 334

155193_1

<211> 156
<212> PRT
<213> Artificial Sequence

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

<400> 334
Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Leu Ser Ser Leu
20 25 30

Phe Gln Lys Leu Gly Val Ser Val Thr Pro Ile Gln Lys Ile Val Leu
35 40 45

Ser Gly Glu Asn Gly Gly Gly Gly Ser Gly Gly Gly Ser Ser Val Ala
50 55 60

Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu Ala Ser Arg
65 70 75 80

Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val Leu Glu
85 90 95

Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys Glu Thr
100 105 110

Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala Gln Glu Trp
115 120 125

Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Thr Gln Ala
130 135 140

Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser
145 150 155

<210> 335
<211> 711
<212> DNA
<213> Artificial Sequence

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

<400> 335
atgggagtgac aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
cagacctgacg tgggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc 300

155193_1

```

gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtaggcctg      360
aagatcgaca tccatgtcat catcccgtat gaaggctctga gcggctatca gatgggccag      420
atcgaaaaaa tttttaaggt ggtgtaccct gtggatgata atcactttaa ggtgattctg      480
cactatggca cactggtaat cgacgggggtt acgccgaaca tgatcgacta tttcggacgg      540
ccgtatgaag gcatcgccgt gttcgacggc aaaaagatca ctgtaaccgg gaccctgtgg      600
aacggcaaca aaattatcga cgagcgctg atcaaccccg acggctccct gctgttccgc      660
gtaaccatca acggagtgcg cggctggcgg ctgtgcgagc gcattttggc g              711

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<210> 336

<211> 237

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 336

```

Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
1          5          10          15

```

```

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
          20          25          30

```

```

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
          35          40          45

```

```

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
          50          55          60

```

```

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
          65          70          75          80

```

```

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
          85          90          95

```

```

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
          100          105          110

```

```

Ser Gly Gly Gly Ser Gly Gly Leu Lys Ile Asp Ile His Val Ile Ile
          115          120          125

```

```

Pro Tyr Glu Gly Leu Ser Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile
          130          135          140

```

```

Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu
          145          150          155          160

```

```

His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp
          165          170          175

```

155193_1

Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys
 180 185 190

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

Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn
 210 215 220

Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
 225 230 235

<210> 337

<211> 510

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 337

atgggagtg	aggtggaaac	catctcccca	ggagacgggc	gcaccttccc	caagcgcggc	60
cagacctgc	tggtgcacta	caccgggatg	cttgaagatg	gaaagaaatt	tgattcctcc	120
cgggacagaa	acaagccctt	taagtttatg	ctaggcaagc	aggaggtgat	ccgaggctgg	180
gaagaagggg	ttgccagat	gagtgtgggt	cagagagcca	aactgactat	atctccagat	240
tatgcctatg	gtgccactgg	gcaccaggc	atcatccac	catatgccac	tctcgtcttc	300
gatgtggagc	ttctaaaact	ggaaggagga	gggagctccg	gtggaggcag	cggtatgggtg	360
tttactctg	aagatttcgt	aggggactgg	cggcagacag	ccggctacaa	cctggaccaa	420
gtccttgagc	agggcggtct	gtccagtttg	tttcagaaac	tcgggggtgtc	cgtaacaccg	480
atccaaaaga	ttgtcctgag	cggtgaaaac				510

<210> 338

<211> 170

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 338

Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
 35 40 45

155193_1

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
100 105 110

Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
115 120 125

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
130 135 140

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

Ile Gln Lys Ile Val Leu Ser Gly Glu Asn
165 170

<210> 339

<211> 513

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 339

atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg	60
gaccaagtcc ttgagcaggg cgggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta	120
acaccgatcc aaaggattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc	180
atcatcccgat atgaagggtct gagcggcgat cagatgggcc agatcgaaaa aatttttaag	240
gtggtgtacc ctgtggatga tcatcacttt aagggtgattc tgcactatgg cacttggtta	300
atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgatga aggcacgcc	360
gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaattatc	420
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg	480
accggctggc ggctgtgcga gcgcattttg gcg	513

<210> 340

<211> 171

<212> PRT

<213> Artificial Sequence

<220>

155193_1

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 340

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
165 170

<210> 341

<211> 513

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 341

atggtgttta cactcgaaga tttcgtaggg gactggcggc agacagccgg ctacaacctg 60

gaccaagtcc ttgagcaggg cgggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 120

actccgatcc aaaggattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc 180

atcatcccgat atgaagggtc gaacggctat cagatggggc agatcgaaaa aatttttaag 240

gtggtgtacc ctgtggatga tcatcacttt aaggtgattc tgcactatgg cacactggta 300

155193_1

atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgtatga aggcacgcgc	360
gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc	420
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg	480
accggctggc ggctgtgcga gcgcattttg gcg	513

<210> 342
 <211> 171
 <212> PRT
 <213> Artificial Sequence

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

<400> 342
 Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Asn Gly Tyr Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
 165 170

<210> 343
 <211> 690
 <212> DNA
 <213> Artificial Sequence

155193_1

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 343

```

atggctctga gcggtgaaaa tgggctgaag atcgacatcc atgtcatcat cccgtatgaa      60
ggctctgagcg gcgaccaaatt gggccagatc gaaaaaattt ttaagggtgg gtaccctgtg      120
gatgatcatc actttaagggt gatcctgcac tatggcacac tggtaatcga cgggggttacg      180
ccgaacatga tcgactattt cggacggccg tatgaaggca tcgccgtgtt cgacggcaaa      240
aagatcactg taacagggac cctgtggaac ggcaacaaaa ttatcgacga ggcctgatc      300
aaccgacg gctccctgct gttccgagta accatcaacg gaggaccgg ctggcggctg      360
tgcaacgca ttctggcggg aggaggtggc tcagggtggag ggagctccgt ggccatcctc      420
tgccatgaga tgtggcatga aggcctggaa gaggcattctc gttgtactt tggggaaagg      480
aacgtgaaag gcatgtttga ggtgctggag ccttgcattg ctatgatgga acggggcccc      540
cagactctga aggaaacatc ctttaatcag gcctatggtc gagatttaat ggaggcccaa      600
gagtggtgca ggaagtacat gaaatcaggg aatgtcaagg acctcaccca agcctgggac      660
ctctattatc atgtgttccg acgaatctca                                     690

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<210> 344

<211> 230

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 344

```

Met Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile
1          5          10          15

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

Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile
35        40        45

Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile
50        55        60

Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys
65        70        75        80

Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp
85        90        95

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

```

Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Gly
 115 120 125

Gly Gly Ser Gly Gly Gly Ser Ser Val Ala Ile Leu Trp His Glu Met
 130 135 140

Trp His Glu Gly Leu Glu Glu Ala Ser Arg Leu Tyr Phe Gly Glu Arg
 145 150 155 160

Asn Val Lys Gly Met Phe Glu Val Leu Glu Pro Leu His Ala Met Met
 165 170 175

Glu Arg Gly Pro Gln Thr Leu Lys Glu Thr Ser Phe Asn Gln Ala Tyr
 180 185 190

Gly Arg Asp Leu Met Glu Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys
 195 200 205

Ser Gly Asn Val Lys Asp Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His
 210 215 220

Val Phe Arg Arg Ile Ser
 225 230

<210> 345
 <211> 492
 <212> DNA
 <213> Artificial Sequence

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

<400> 345
 atgggagtgc aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
 cagacctgcg tgggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
 cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
 gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
 tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc 300
 gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc 360
 ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 420
 gtccttgaac agggaggtgt gtccagtttg tttcagaatc tcggggtgtc cgtaactccg 480
 atccaaagga tt 492

<210> 346
 <211> 164
 <212> PRT
 <213> Artificial Sequence

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

155193_1

polypeptide

<400> 346

Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
100 105 110

Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
115 120 125

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
130 135 140

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
145 150 155 160

Ile Gln Arg Ile

<210> 347

<211> 687

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 347

atgctgagcg gtgaaaatgg gctgaagatc gacatccatg tcatcatccc gtatgaaggt 60

ctgagcggcg accaaatggg ccagatcgaa aaaattttta aggtggtgta ccctgtggat 120

gatcatcact ttaaggtgat cctgcactat ggcacactgg taatcgacgg gggtacgccg 180

aacatgatcg actatttcgg acggccgtat gaaggcatcg ccgtgttcga cggcaaaaag 240

atcactgtaa cagggaccct gtggaacggc aacaaaatta tcgacgagcg cctgatcaac 300

cccgacggct ccctgctgtt ccgagtaacc atcaacggag tgaccggctg gcggctgtgc 360

155193_1

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gaacgcattc tggcgggagg aggtgggtca ggtggaggga gctccgtggc catcctctgg      420
catgagatgt ggcataaagg cctggaagag gcatctcggt tgtacttttg ggaaaggaac      480
gtgaaaggca tgtttgaggt gctggagccc ttgcatgcta tgatggaacg gggcccccag      540
actctgaagg aaacatcctt taatcaggcc tatgggtcgag atttaatgga ggcccaagag      600
tggtgcagga agtacatgaa atcagggaat gtcaaggacc tcaccaagc ctgggacctc      660
tattatcatg tgttccgacg aatctca                                          687

```

<210> 348

<211> 229

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 348

```

Met Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile
1          5          10          15

```

```

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

```

```

Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu
          35          40          45

```

```

His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp
          50          55          60

```

```

Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys
65          70          75          80

```

```

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

```

```

Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn
          100          105          110

```

```

Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Gly Gly
          115          120          125

```

```

Gly Ser Gly Gly Gly Ser Ser Val Ala Ile Leu Trp His Glu Met Trp
          130          135          140

```

```

His Glu Gly Leu Glu Glu Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn
          145          150          155          160

```

```

Val Lys Gly Met Phe Glu Val Leu Glu Pro Leu His Ala Met Met Glu
          165          170          175

```

Arg Gly Pro Gln Thr Leu Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly
180 185 190

Arg Asp Leu Met Glu Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser
195 200 205

Gly Asn Val Lys Asp Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His Val
210 215 220

Phe Arg Arg Ile Ser
225

<210> 349
<211> 495
<212> DNA
<213> Artificial Sequence

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

<400> 349
atgggagtgc aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
cagacctgcg tggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
gaagaagggg ttgcccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
tatgcctatg gtgccactgg gcacccaggc atcatccac cacatgccac tctcgtcttc 300
gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc 360
ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 420
gtccttgaac agggaggtgt gtccagtttg tttcagaatc tcggggtgtc cgtaactccg 480
atccaaagga ttgtc 495

<210> 350
<211> 165
<212> PRT
<213> Artificial Sequence

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

<400> 350
Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
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50		55		60
Ala Gln Met Ser Val	Gly Gln Arg Ala Lys	Leu Thr Ile Ser Pro	Asp	
65	70	75	80	
Tyr Ala Tyr Gly	Ala Thr Gly His Pro	Gly Ile Ile Pro Pro	His Ala	
	85	90	95	
Thr Leu Val	Phe Asp Val Glu Leu	Leu Lys Leu Glu Gly	Gly Gly Ser	
	100	105	110	
Ser Gly Gly	Gly Ser Gly Met Val	Phe Thr Leu Glu	Asp Phe Val Gly	
	115	120	125	
Asp Trp Arg Gln Thr Ala	Gly Tyr Asn Leu Asp	Gln Val Leu Glu Gln		
	130	135	140	
Gly Gly Val Ser Ser	Leu Phe Gln Asn Leu	Gly Val Ser Val Thr	Pro	
145	150	155	160	
Ile Gln Arg Ile Val				
	165			

<210> 351
 <211> 525
 <212> DNA
 <213> Artificial Sequence

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

<400> 351	
atggacgggg ttacgccgaa catgatcgac tatttcggac ggccgtatga aggcacgcgc	60
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc	120
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gagtaaccat caacggagtg	180
accggctggc ggctgtgcga acgcattctg gcgggaggag gtggctcagg tggagggagc	240
tccgtggcca tcctctggca tgagatgtgg catgaaggcc tggaagaggc atctcgtttg	300
tactttgggg aaaggaacgt gaaaggcatg tttgaggtgc tggagccctt gcatgctatg	360
atggaacggg gccccagac tctgaaggaa acatccttta atcaggccta tggtcgagat	420
ttaatggagg cccaagagtg gtgcaggaag tacatgaaat cagggaatgt caaggacctc	480
accaagcct gggacctcta ttatcatgtg ttccgacgaa tctca	525

<210> 352
 <211> 175
 <212> PRT
 <213> Artificial Sequence

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

155193_1

<400> 352

Met Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
1 5 10 15

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
20 25 30

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

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
50 55 60

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

Ser Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu
85 90 95

Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu
100 105 110

Val Leu Glu Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu
115 120 125

Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala
130 135 140

Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu
145 150 155 160

Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser
165 170 175

<210> 353

<211> 657

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 353

atgggagtgc aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc	60
cagacctgcg tgggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc	120
cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg	180
gaagaagggg ttgcccagat gagtgtgggt cagagagcca aactgactat atctccagat	240
tatgcctatg gtgccactgg gcacccaggc atcatccac cacatgccac tctcgtcttc	300
gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc	360

155193_1

ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa	420
gtccttgaac agggaggtgt gtccagtttg tttcagaatc tcgggggtgtc cgtaactccg	480
atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc	540
ccgtatgaag gtctgagcgg cgaccaaatg ggccagatcg aaaaaatttt taagggtggtg	600
taccctgtgg atgatcatca ctttaaggtg atcctgcact atggcacact ggtaatc	657

<210> 354
 <211> 219
 <212> PRT
 <213> Artificial Sequence

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

<400> 354
 Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
 35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
 50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
 65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
 85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
 100 105 110

Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
 115 120 125

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
 130 135 140

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
 145 150 155 160

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
 165 170 175

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
 180 185 190

155193_1

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
 195 200 205

Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile
 210 215

<210> 355

<211> 522

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 355

atgggggtta cgccgaacat gatcgactat ttcggacggc cgtatgaagg catcgccgtg 60
 ttcgacggca aaaagatcac tgtaacaggg accctgtgga acggcaacaa aattatcgac 120
 gagcgcctga tcaaccccgga cggctccctg ctgttccgag taaccatcaa cggagtgacc 180
 ggctggcggc tgtgcgaacg cattctggcg ggaggaggtg gctcaggtgg agggagctcc 240
 gtggccatcc tctggcatga gatgtggcat gaaggcctgg aagaggcatc tcgtttgtac 300
 tttggggaaa ggaacgtgaa aggcattgtt gaggtgctgg agcccttgca tgctatgatg 360
 gaacggggcc cccagactct gaaggaaaca tcctttaatc aggcctatgg tcgagattta 420
 atggaggccc aagagtgggtg caggaagtac atgaaatcag ggaatgtcaa ggacctcacc 480
 caagcctggg acctctatta tcatgtgttc cgacgaatct ca 522

<210> 356

<211> 174

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 356

Met Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu
 1 5 10 15

Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu
 20 25 30

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

Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu
 50 55 60

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

Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu Ala
 85 90 95
 Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val
 100 105 110
 Leu Glu Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys
 115 120 125
 Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala Gln
 130 135 140
 Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Thr
 145 150 155 160
 Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser
 165 170

<210> 357
 <211> 660
 <212> DNA
 <213> Artificial Sequence

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

<400> 357
 atgggagtg c aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
 cagacctgcg tggcgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
 cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
 gaagaagggg ttgcccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
 tatgcctatg gtgccactgg gcacccaggc atcatccac cacatgccac tctcgtcttc 300
 gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggatatggtc 360
 ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 420
 gtccttgaac agggaggtgt gtccagtttg tttcagaatc tcggggtgtc cgtaactccg 480
 atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc 540
 ccgtatgaag gtctgagcgg cgaccaaagtg ggccagatcg aaaaaatttt taagggtggtg 600
 taccctgtgg atgatcatca cttaagggtg atcctgcact atggcacact ggtaatcgac 660

<210> 358
 <211> 220
 <212> PRT
 <213> Artificial Sequence

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

<400> 358
 Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
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1	5	10	15
Pro	Lys	Arg	Gly
		20	Gln
			Thr
			Cys
			Val
		25	Val
			His
			Tyr
			Thr
			Gly
		30	Met
			Leu
			Glu
Asp	Gly	Lys	Lys
	35		Phe
			Asp
			Ser
		40	Ser
			Arg
			Asp
			Arg
			Asn
		45	Lys
			Pro
			Phe
			Lys
Phe	Met	Leu	Gly
	50		Lys
			Gln
			Glu
		55	Val
			Ile
			Arg
			Gly
		60	Trp
			Glu
			Glu
			Gly
			Val
Ala	Gln	Met	Ser
			Val
			Gly
		70	Gln
			Arg
			Ala
			Lys
		75	Leu
			Thr
			Ile
			Ser
			Pro
			Asp
			80
Tyr	Ala	Tyr	Gly
			Ala
			Thr
		85	Gly
			His
			Pro
			Gly
		90	Ile
			Ile
			Pro
			Pro
			His
			Ala
			95
Thr	Leu	Val	Phe
			Asp
			Val
			Glu
			Leu
		100	Leu
			Lys
			Leu
			Glu
			Gly
			Gly
			Gly
			Ser
			110
Ser	Gly	Gly	Gly
		115	Ser
			Gly
			Met
			Val
		120	Phe
			Thr
			Leu
			Glu
			Asp
			Phe
			Val
			Gly
			125
Asp	Trp	Arg	Gln
	130		Thr
			Ala
			Gly
			Tyr
			Asn
			Leu
			Asp
			Gln
			Val
			Leu
			Glu
			Gln
			140
Gly	Gly	Val	Ser
			Ser
			Leu
			Phe
			Gln
			Asn
			Leu
			Gly
			Val
			Ser
			Val
			Thr
			Pro
			160
Ile	Gln	Arg	Ile
			Val
			Leu
			Ser
			Gly
			Glu
			Asn
			Gly
			Leu
			Lys
			Ile
			Asp
			Ile
			175
His	Val	Ile	Ile
			Pro
			Tyr
			Glu
			Gly
			Leu
			Ser
			Gly
			Asp
			Gln
			Met
			Gly
			Gln
			190
Ile	Glu	Lys	Ile
			Phe
			Lys
			Val
			Val
			Tyr
			Pro
			Val
			Asp
			Asp
			His
			His
			Phe
			205
Lys	Val	Ile	Leu
	210		His
			Tyr
			Gly
			Thr
			Leu
			Val
			Ile
			Asp
			220

<210> 359
 <211> 519
 <212> DNA
 <213> Artificial Sequence

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

<400> 359
 atggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc 60
 gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag 120
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```

cgctgatca accccgacgg ctccctgctg ttccgagtaa ccatcaacgg agtgaccggc      180
tggcggctgt gcgaacgcat tctggcggga ggaggtggct caggtggagg gagctccgtg      240
gccatcctct ggcatgagat gtggcatgaa ggcctggaag aggcattctcg tttgtacttt      300
ggggaaagga acgtgaaagg catgtttgag gtgctggagc cttgcatgc tatgatggaa      360
cggggcccc agactctgaa ggaaacatcc tttaatcagg cctatgggtcg agatttaatg      420
gaggcccaag agtgggtgcag gaagtacatg aaatcaggga atgtcaagga cctcacccaa      480
gcctgggacc tctattatca tgtgttccga cgaatctca                               519

```

<210> 360

<211> 173

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 360

```

Met Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly
1           5           10           15

```

```

Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp
                20           25           30

```

```

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

```

```

Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys
50           55           60

```

```

Glu Arg Ile Leu Ala Gly Gly Gly Gly Ser Gly Gly Gly Ser Ser Val
65           70           75           80

```

```

Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu Ala Ser
          85           90           95

```

```

Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val Leu
          100          105          110

```

```

Glu Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys Glu
115           120           125

```

```

Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala Gln Glu
130           135          140

```

```

Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Thr Gln
145           150          155          160

```

```

Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser
          165          170

```

<210> 361
 <211> 663
 <212> DNA
 <213> Artificial Sequence

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

<400> 361
 atgggagtg aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
 cagacctgcg tggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
 cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
 gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
 tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc 300
 gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc 360
 ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 420
 gtccttgaac agggaggtgt gtccagtttg tttcagaatc tcggggtgtc cgtaactccg 480
 atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc 540
 ccgtatgaag gtctgagcgg cgaccaaagtg ggccagatcg aaaaaatttt taaggtgggtg 600
 taccctgtgg atgatcatca ctttaagggtg atcctgcact atggcacact ggtaatcgac 660
 ggg 663

<210> 362
 <211> 221
 <212> PRT
 <213> Artificial Sequence

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

<400> 362
 Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
 35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
 50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
 65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
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85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
 100 105 110

Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
 115 120 125

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
 130 135 140

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
 145 150 155 160

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
 165 170 175

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
 180 185 190

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
 195 200 205

Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
 210 215 220

<210> 363
 <211> 396
 <212> DNA
 <213> Artificial Sequence

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

<400> 363
 atgatcaacc ccgacggctc cctgctgttc cgagtaacca tcaacggagt gaccggctgg 60
 cggctgtgcg aacgcattct ggcgggagga ggtggctcag gtggagggag ctccgtggcc 120
 atcctctggc atgagatgtg gcatgaaggc ctggaagagg catctcgttt gtactttggg 180
 gaaaggaacg tgaaggcat gtttgaggtg ctggagccct tgcattgctat gatggaacgg 240
 ggccccaga ctctgaagga aacatccttt aatcaggcct atggtcgaga tttaatggag 300
 gcccaagagt ggtgcaggaa gtacatgaaa tcagggaatg tcaaggacct cacccaagcc 360
 tgggacctct attatcatgt gttccgacga atctca 396

<210> 364
 <211> 132
 <212> PRT
 <213> Artificial Sequence

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

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<400> 364

Met Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly
1 5 10 15

Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Gly Gly Gly
20 25 30

Ser Gly Gly Gly Ser Ser Val Ala Ile Leu Trp His Glu Met Trp His
35 40 45

Glu Gly Leu Glu Glu Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val
50 55 60

Lys Gly Met Phe Glu Val Leu Glu Pro Leu His Ala Met Met Glu Arg
65 70 75 80

Gly Pro Gln Thr Leu Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg
85 90 95

Asp Leu Met Glu Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly
100 105 110

Asn Val Lys Asp Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe
115 120 125

Arg Arg Ile Ser
130

<210> 365

<211> 786

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 365

atgggagtg	aggtggaaac	catctcccca	ggagacgggc	gcaccttccc	caagcgcggc	60
cagacctgcg	tggtgcacta	caccgggatg	cttgaagatg	gaaagaaatt	tgattcctcc	120
cgggacagaa	acaagccctt	taagtttatg	ctaggcaagc	aggaggtgat	ccgaggctgg	180
gaagaagggg	ttgcccagat	gagtgtgggt	cagagagcca	aactgactat	atctccagat	240
tatgcctatg	gtgccactgg	gcaccaggc	atcatccac	cacatgccac	tctcgtcttc	300
gatgtggagc	ttctaaaact	ggaaggagga	gggagctccg	gtggaggcag	cggtatggtc	360
ttcacactcg	aagatttcgt	tggggactgg	cgacagacag	ccggctacaa	cctggaccaa	420
gtccttgaac	agggaggtgt	gtccagtttg	tttcagaatc	tcgggggtgtc	cgtaactccg	480
atccaaagga	ttgtcctgag	cggtgaaaat	gggctgaaga	tcgacatcca	tgtcatcatc	540
ccgtatgaag	gtctgagcgg	cgaccaaata	ggccagatcg	aaaaaatttt	taagggtggtg	600

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taccctgtgg atgatcatca ctttaagggtg atcctgcact atggcacact ggtaatcgac	660
ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc	720
gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag	780
cgccctg	786

<210> 366
 <211> 262
 <212> PRT
 <213> Artificial Sequence

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

<400> 366
 Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
 35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
 50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
 65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
 85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
 100 105 110

Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
 115 120 125

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
 130 135 140

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
 145 150 155 160

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
 165 170 175

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
 180 185 190

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe

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195 200 205

Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro
 210 215 220

Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
 225 230 235 240

Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys
 245 250 255

Ile Ile Asp Glu Arg Leu
 260

<210> 367
 <211> 390
 <212> DNA
 <213> Artificial Sequence

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

<400> 367
 atgcccgacg gctccctgct gttccgagta accatcaacg gagtgaccgg ctggcggctg 60
 tgcgaacgca ttctggcggg aggaggtggc tcagggtggag ggagctccgt ggccatcctc 120
 tggcatgaga tgtggcatga aggcctggaa gaggcattctc gtttgtactt tggggaaagg 180
 aacgtgaaag gcatgtttga ggtgctggag cccttgcatg ctatgatgga acggggcccc 240
 cagactctga aggaaacatc ctttaatcag gcctatggtc gagatttaat ggaggcccaa 300
 gagtggtgca ggaagtacat gaaatcaggg aatgtcaagg acctcaccca agcctgggac 360
 ctctattatc atgtgttccg acgaatctca 390

<210> 368
 <211> 130
 <212> PRT
 <213> Artificial Sequence

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

<400> 368
 Met Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr
 1 5 10 15

Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Gly Gly Gly Ser Gly
 20 25 30

Gly Gly Ser Ser Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly
 35 40 45

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

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Met Phe Glu Val Leu Glu Pro Leu His Ala Met Met Glu Arg Gly Pro
65 70 75 80

Gln Thr Leu Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu
85 90 95

Met Glu Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val
100 105 110

Lys Asp Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg
115 120 125

Ile Ser
130

<210> 369
<211> 792
<212> DNA
<213> Artificial Sequence

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

<400> 369
atgggagtg c aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
cagacctg c tggtgcacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc 300
gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggatggtc 360
ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 420
gtccttgaac agggagggtgt gtccagttt tttcagaatc tcgggggtgc cgtaactccg 480
atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc 540
ccgtatgaag gtctgagcgg cgaccaaagtg ggccagatcg aaaaaatttt taagggtgtg 600
taccctgtgg atgatcatca ctttaagggtg atcctgcact atggcacact ggtaatcgac 660
ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc 720
gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag 780
cgctgatca ac 792

<210> 370
<211> 264
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
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<400> 370

Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
100 105 110

Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
115 120 125

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
130 135 140

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
145 150 155 160

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
165 170 175

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
180 185 190

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
195 200 205

Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro
210 215 220

Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
225 230 235 240

Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys
245 250 255

Ile Ile Asp Glu Arg Leu Ile Asn

<210> 371
 <211> 384
 <212> DNA
 <213> Artificial Sequence

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

<400> 371
 atgggctccc tgctgttccg agtaaccatc aacggagtga ccggctggcg gctgtgcgaa 60
 cgcattctgg cgaggaggagg tggctcaggt ggaggagct ccgtggccat cctctggcat 120
 gagatgtggc atgaaggcct ggaagaggca tctcgtttgt actttgggga aaggaacgtg 180
 aaaggcatgt ttgaggtgct ggagcccttg catgctatga tggaacgggg cccccagact 240
 ctgaaggaaa catcctttaa tcaggcctat ggtcgagatt taatggaggc ccaagagtgg 300
 tgcaggaagt acatgaaatc agggaatgtc aaggacctca cccaagcctg ggacctctat 360
 tatcatgtgt tccgacgaat ctca 384

<210> 372
 <211> 128
 <212> PRT
 <213> Artificial Sequence

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

<400> 372
 Met Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp
 1 5 10 15
 Arg Leu Cys Glu Arg Ile Leu Ala Gly Gly Gly Gly Ser Gly Gly Gly
 20 25 30
 Ser Ser Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu
 35 40 45
 Glu Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe
 50 55 60
 Glu Val Leu Glu Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr
 65 70 75 80
 Leu Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu
 85 90 95
 Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp
 100 105 110
 Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser
 115 120 125

<210> 373
 <211> 798
 <212> DNA
 <213> Artificial Sequence

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

<400> 373
 atgggagtgC aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
 cagacctgcg tggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
 cgggacagaa acaagcactt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
 gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
 tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc 300
 gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc 360
 ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 420
 gtccttgaac agggaggtgt gtccagtttg tttcagaatc tcggggtgtc cgtaactccg 480
 atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc 540
 ccgtatgaag gtctgagcgg cgaccaaagtg ggccagatcg aaaaaatttt taagggtggg 600
 taccctgtgg atgatcatca ctttaagggtg atcctgcact atggcacact ggtaatcgac 660
 ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc 720
 gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag 780
 cgctgatca accccgac 798

<210> 374
 <211> 266
 <212> PRT
 <213> Artificial Sequence

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

<400> 374
 Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15
 Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30
 Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys His Phe Lys
 35 40 45
 Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
 50 55 60
 Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp

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aaggaaacat cctttaatca ggcctatggt cgagatttaa tggaggccca agagtgggtgc 300
 aggaagtaca tgaaatcagg gaatgtcaag gacctcacc aagcctggga cctctattat 360
 catgtgttcc gacgaatctc a 381

<210> 376
 <211> 127
 <212> PRT
 <213> Artificial Sequence

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

<400> 376
 Met Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
 1 5 10 15

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

Ser Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu
 35 40 45

Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu
 50 55 60

Val Leu Glu Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu
 65 70 75 80

Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala
 85 90 95

Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu
 100 105 110

Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser
 115 120 125

<210> 377
 <211> 801
 <212> DNA
 <213> Artificial Sequence

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

<400> 377
 atgggagtgc aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
 cagacctgcg tgggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
 cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
 gaagaagggg ttgcccagat gagtgtgggt cagagagcca aactgactat atctccagat 240

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tatgcctatg gtgccactgg gcacccaggc atcatcccac cacatgccac tctcgtcttc	300
gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc	360
ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa	420
gtccttgaac agggagggtgt gtccagtttg tttcagaatc tcgggggtgtc cgtaactccg	480
atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc	540
ccgtatgaag gtctgagcgg cgaccaaagt ggccagatcg aaaaaatttt taagggtggtg	600
tacctgtgg atgatcatca ctttaagggtg atcctgcact atggcacact ggtaatcgac	660
ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc	720
gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag	780
cgctgatca accccgacgg c	801

<210> 378
 <211> 267
 <212> PRT
 <213> Artificial Sequence

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

<400> 378
 Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
 35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
 50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
 65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
 85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
 100 105 110

Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
 115 120 125

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
 130 135 140

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
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								<u>155</u>									
Ile	Gln	Arg	Ile	Val 165	Leu	Ser	Gly	Glu	Asn 170	Gly	Leu	Lys	Ile	Asp 175	Ile		
His	Val	Ile	Ile 180	Pro	Tyr	Glu	Gly	Leu 185	Ser	Gly	Asp	Gln	Met 190	Gly	Gln		
Ile	Glu	Lys 195	Ile	Phe	Lys	Val	Val 200	Tyr	Pro	Val	Asp	Asp 205	His	His	Phe		
Lys	Val 210	Ile	Leu	His	Tyr	Gly 215	Thr	Leu	Val	Ile	Asp 220	Gly	Val	Thr	Pro		
Asn 225	Met	Ile	Asp	Tyr	Phe 230	Gly	Arg	Pro	Tyr	Glu 235	Gly	Ile	Ala	Val	Phe 240		
Asp	Gly	Lys	Lys	Ile 245	Thr	Val	Thr	Gly	Thr 250	Leu	Trp	Asn	Gly	Asn 255	Lys		
Ile	Ile	Asp	Glu 260	Arg	Leu	Ile	Asn	Pro 265	Asp	Gly							

Gly Gly Gly Ser Gly Gly Gly Ser Ser Val Ala Ile Leu Trp His Glu
 20 25 30
 155193_1
 Met Trp His Glu Gly Leu Glu Glu Ala Ser Arg Leu Tyr Phe Gly Glu
 35 40 45
 Arg Asn Val Lys Gly Met Phe Glu Val Leu Glu Pro Leu His Ala Met
 50 55 60
 Met Glu Arg Gly Pro Gln Thr Leu Lys Glu Thr Ser Phe Asn Gln Ala
 65 70 75 80
 Tyr Gly Arg Asp Leu Met Glu Ala Gln Glu Trp Cys Arg Lys Tyr Met
 85 90 95
 Lys Ser Gly Asn Val Lys Asp Leu Thr Gln Ala Trp Asp Leu Tyr Tyr
 100 105 110
 His Val Phe Arg Arg Ile Ser
 115

<210> 381
 <211> 825
 <212> DNA
 <213> Artificial Sequence

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

<400> 381
 atgggagtg aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
 cagacctgcg tgggtcacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
 cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
 gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
 tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc 300
 gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc 360
 ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 420
 gtccttgaac agggaggtgt gtccagttt tttcagaatc tcggggtgtc cgtaactccg 480
 atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc 540
 ccgtatgaag gtctgagcgg cgaccaaatt ggccagatcg aaaaaatttt taaggtggtg 600
 taccctgtgg atgatcatca ctttaagggtg atcctgcact atggcacact ggtaatcgac 660
 ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc 720
 gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag 780
 cgctgatca accccgacgg ctccctgctg ttccgagtaa ccac 825

<210> 382

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<211> 275

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 382

Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
100 105 110

Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
115 120 125

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
130 135 140

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
145 150 155 160

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
165 170 175

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
180 185 190

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
195 200 205

Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro
210 215 220

Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
225 230 235 240

Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys
245 250 255

Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg
260 265 270

val Thr Ile
275

```
<210> 383
<211> 351
<212> DNA
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400>	383										
atggtgaccg	gctggcggct	gtgcgaacgc	attctggcgg	gaggaggtgg	ctcaggtgga						60
gggagctccg	tggccatcct	ctggcatgag	atgtggcatg	aaggcctgga	agaggcatct						120
cgtttgtact	ttggggaaaag	gaacgtgaaa	ggcatgtttg	aggtgctgga	gcccttgcat						180
gctatgatgg	aacggggccc	ccagactctg	aaggaaacat	cctttaatca	ggcctatggg						240
cgagatttaa	tggaggccca	agagtgggtc	aggaagtaca	tgaaatcagg	gaatgtcaag						300
gacctcaccc	aagcctggga	cctctattat	catgtgttcc	gacqaatctc	a						351

<210> 384
<211> 117
<212> PRT
<213> Artificial Sequence

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

<400> 384
Met Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Gly Gly
1 5 10 15

Gly Ser Gly Gly Gly Ser Ser Val Ala Ile Leu Trp His Glu Met Trp
20 25 30

His Glu Gly Leu Glu Glu Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn
35 40 45

Val Lys Gly Met Phe Glu Val Leu Glu Pro Leu His Ala Met Met Glu
50 55 60

Arg Gly Pro Gln Thr Leu Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly
65 70 75 80

Arg Asp Leu Met Glu Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser
85 90 95

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Gly Asn Val Lys Asp Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His Val
 100 105 110

Phe Arg Arg Ile Ser
 115

<210> 385
 <211> 831
 <212> DNA
 <213> Artificial Sequence

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

<400> 385
 atgggagtg aggtggaac catctccca ggagacgggc gcaccttccc caagcgcggc 60
 cagacctgcg tgggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
 cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
 gaagaagggg ttgcccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
 tatgcctatg gtgccactgg gcacccaggc atcatccac cacatgccac tctcgtcttc 300
 gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggatatggtc 360
 ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 420
 gtccttgaac agggaggtgt gtccagtttg tttcagaatc tcggggtgtc cgtaactccg 480
 atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc 540
 ccgtatgaag gtctgagcgg cgaccaaatg ggccagatcg aaaaaatttt taaggtgggtg 600
 taccctgtgg atgatcatca ctttaagggtg atcctgcact atggcacact ggtaatcgac 660
 ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc 720
 gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag 780
 cgcctgatca accccgacgg ctccctgctg ttccgagtaa ccatcaacgg a 831

<210> 386
 <211> 277
 <212> PRT
 <213> Artificial Sequence

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

<400> 386
 Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
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<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 387

```

atgcgcattc tggcgggagg aggtgggtca ggtggaggga gctccgtggc catcctctgg      60
catgagatgt ggcataaagg cctggaagag gcatctcggt tgtactttgg ggaaaggaac      120
gtgaaaggca tgtttgaggt gctggagccc ttgcatgcta tgatggaacg gggccccag      180
actctgaagg aaacatcctt taatcaggcc tatggctcag attaatgga ggccaagag      240
tggtgcagga agtacatgaa atcagggaat gtcaaggacc tcaccaagc ctgggacctc      300
tattatcatg tgttccgacg aatctca      327

```

<210> 388

<211> 109

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 388

```

Met Arg Ile Leu Ala Gly Gly Gly Gly Ser Gly Gly Gly Ser Ser Val
1           5           10           15

```

```

Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu Ala Ser
          20           25           30

```

```

Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val Leu
          35           40           45

```

```

Glu Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys Glu
          50           55           60

```

```

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

```

```

Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Thr Gln
          85           90           95

```

```

Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser
          100          105

```

<210> 389

<211> 855

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 389

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atgggagtg c aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc      60

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155193_1

cagacctgcg tgggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc	120
cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg	180
gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat	240
tatgcctatg gtgccactgg gcacccaggc atcatccac cacatgccac tctcgtcttc	300
gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggatggtc	360
ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa	420
gtccttgaac agggaggtgt gtccagtttg tttcagaatc tcggggtgtc cgtaactccg	480
atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc	540
ccgtatgaag gtctgagcgg cgaccaaagt ggccagatcg aaaaaatttt taagggtgtg	600
taccctgtgg atgatcatca ctttaagggtg atcctgcact atggcacact ggtaatcgac	660
ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc	720
gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag	780
cgcctgatca accccgacgg ctccctgctg ttccgagtaa ccatcaacgg agtgaccggc	840
tggcggctgt gcgaa	855

<210> 390

<211> 285

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 390

Met	Gly	Val	Gln	Val	Glu	Thr	Ile	Ser	Pro	Gly	Asp	Gly	Arg	Thr	Phe
1				5				10					15		

Pro	Lys	Arg	Gly	Gln	Thr	Cys	Val	Val	His	Tyr	Thr	Gly	Met	Leu	Glu
			20					25					30		

Asp	Gly	Lys	Lys	Phe	Asp	Ser	Ser	Arg	Asp	Arg	Asn	Lys	Pro	Phe	Lys
		35					40					45			

Phe	Met	Leu	Gly	Lys	Gln	Glu	Val	Ile	Arg	Gly	Trp	Glu	Glu	Gly	Val
	50					55					60				

Ala	Gln	Met	Ser	Val	Gly	Gln	Arg	Ala	Lys	Leu	Thr	Ile	Ser	Pro	Asp
65					70					75					80

Tyr	Ala	Tyr	Gly	Ala	Thr	Gly	His	Pro	Gly	Ile	Ile	Pro	Pro	His	Ala
				85					90					95	

Thr	Leu	Val	Phe	Asp	Val	Glu	Leu	Leu	Lys	Leu	Glu	Gly	Gly	Gly	Ser
			100					105					110		

Ser	Gly	Gly	Gly	Ser	Gly	Met	Val	Phe	Thr	Leu	Glu	Asp	Phe	Val	Gly
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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115	120	125
Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln		
130	135	140
Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro		
145	150	155
Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile		
165	170	175
His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln		
180	185	190
Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe		
195	200	205
Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro		
210	215	220
Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe		
225	230	235
Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys		
245	250	255
Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg		
260	265	270
Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu		
275	280	285

<210> 391
 <211> 501
 <212> DNA
 <213> Artificial Sequence

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

<400> 391	
atgggagtg aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc	60
cagacctgcg tgggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc	120
cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg	180
gaagaagggg ttgcccagat gagtgtgggt cagagagcca aactgactat atctccagat	240
tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc	300
gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc	360
ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa	420
gtccttgaac agggaggtgt gtccagtttg tttcagaatc tcgggggtgc cgtaactccg	480

atccaaagga ttgtcctgag c

501

<210> 392

<211> 167

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 392

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

<210> 393

<211> 681

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 393

155193_1

atgggtgaaa atgggctgaa gatcgacatc catgtcatca tcccgtatga aggtctgagc	60
ggcgacccaaa tgggccagat cgaaaaaatt tttaaggtgg tgtaccctgt ggatgatcat	120
cactttaagg tgatcctgca ctatggcaca ctggtaatcg acggggttac gccgaacatg	180
atcgactatt tcggacggcc gtatgaaggc atcgccgtgt tcgacggcaa aaagatcact	240
gtaacagga ccctgtggaa cggcaacaaa attatcgacg agcgctgat caaccccgac	300
ggctccctgc tgttccgagt aaccatcaac ggagtgaccg gctggcggct gtgcgaacgc	360
attctggcgg gaggaggtgg ctgaggtgga gggagctccg tggccatcct ctggcatgag	420
atgtggcatg aaggcctgga agaggcatct cgtttgtact ttggggaaag gaacgtgaaa	480
ggcatgtttg aggtgctgga gcccttgcac gctatgatgg aacggggccc ccagactctg	540
aaggaaacat cctttaatca ggcctatggt cgagatttaa tggaggccca agagtgggtgc	600
aggaagtaca tgaaatcagg gaatgtcaag gacctcacc aagcctggga cctctattat	660
catgtgttcc gacgaatctc a	681

<210> 394
 <211> 227
 <212> PRT
 <213> Artificial Sequence

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

<400> 394
 Met Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 1 5 10 15

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

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 35 40 45

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 50 55 60

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 65 70 75 80

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 85 90 95

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 100 105 110

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Gly Gly Gly Ser
 115 120 125

Gly Gly Gly Ser Ser Val Ala Ile Leu Trp His Glu Met Trp His Glu
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130 135 155193_1 140

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

Gly Met Phe Glu Val Leu Glu Pro Leu His Ala Met Met Glu Arg Gly
 165 170 175

Pro Gln Thr Leu Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp
 180 185 190

Leu Met Glu Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn
 195 200 205

Val Lys Asp Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg
 210 215 220

Arg Ile Ser
 225

<210> 395
 <211> 507
 <212> DNA
 <213> Artificial Sequence

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

<400> 395
 atgggagtgC aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
 cagacctgcg tgggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
 cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggatgat ccgaggctgg 180
 gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
 tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc 300
 gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc 360
 ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 420
 gtccttgaac agggagggtgt gtccagtttg tttcagaatc tcgggggtgtc cgtaactccg 480
 atccaaagga ttgtcctgag cggtgaa 507

<210> 396
 <211> 169
 <212> PRT
 <213> Artificial Sequence

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

<400> 396
 Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15

155193_1

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
100 105 110

Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
115 120 125

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
130 135 140

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
145 150 155 160

Ile Gln Arg Ile Val Leu Ser Gly Glu
165

<210> 397

<211> 675

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 397

atgaatgggc tgaagatcga catccatgtc atcatcccgt atgaaggtct gagcggcgac	60
caaatgggcc agatcgaaaa aatttttaag gtggtgtacc ctgtggatga tcatcacttt	120
aaggtgatcc tgcactatgg cactctggtg atcgacgggg ttacgccgaa catgatcgac	180
tatttcggac ggccgtatga aggcacgccc gtgttcgacg gcaaaaagat cactgtaaca	240
gggaccctgt ggaacggcaa caaaattatc gacgagcgcc tgatcaaccc cgacggctcc	300
ctgctgttcc gagtaaccat caacggagtg accggctggc ggctgtgcga acgcattctg	360
gcgggaggag gtggctcagg tggaggggagc tccgtggcca tcctctggca tgagatgtgg	420
catgaaggcc tggaagaggc atctcgtttg tactttgggg aaaggaacgt gaaaggcatg	480

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tttgaggtgc tggagccctt gcatgctatg atggaacggg gccccagac tctgaaggaa	540
acatccttta atcaggccta tggtcgagat ttaatggagg cccaagagtg gtgcaggaag	600
tacatgaaat cagggaatgt caaggacctc acccaagcct gggacctcta ttatcatgtg	660
ttccgacgaa tctca	675

<210> 398
 <211> 225
 <212> PRT
 <213> Artificial Sequence

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

<400> 398
 Met Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly
 1 5 10 15

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

Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr
 35 40 45

Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg
 50 55 60

Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr
 65 70 75 80

Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn
 85 90 95

Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly
 100 105 110

Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Gly Gly Gly Ser Gly Gly
 115 120 125

Gly Ser Ser Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu
 130 135 140

Glu Glu Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met
 145 150 155 160

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

Thr Leu Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met
 180 185 190

Glu Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys
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195 200 205

Asp Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile
 210 215 220

Ser
 225

<210> 399
 <211> 606
 <212> DNA
 <213> Artificial Sequence

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

<400> 399
 atgggagtgac aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
 cagacctgacg tgggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
 cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
 gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
 tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc 300
 gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc 360
 ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 420
 gtccttgaac agggaggtgt gtccagtttg tttcagaatc tcggggtgtc cgtaactccg 480
 atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc 540
 ccgtatgaag gtctgagcgg cgaccaaatt ggccagatcg aaaaaatttt taaggtgggtg 600
 taccct 606

<210> 400
 <211> 202
 <212> PRT
 <213> Artificial Sequence

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

<400> 400
 Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
 35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
 50 55 60

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Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
100 105 110

Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
115 120 125

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
130 135 140

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
145 150 155 160

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
165 170 175

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
180 185 190

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
195 200

<210> 401

<211> 576

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 401

atggtggatg atcatcactt taaggtgatc ctgcactatg gcacactggt aatcgacggg	60
gttacgccga acatgatcga ctatttcgga cggccgatg aaggcatcgc cgtgttcgac	120
ggcaaaaaga tactgtaac agggaccctg tggaacggca aaaaattat cgacgagcgc	180
ctgatcaacc ccgacggctc cctgctgttc cgagtaacca tcaacggagt gaccggctgg	240
cggctgtgcg aacgcattct ggcgggagga ggtggctcag gtggagggag ctccgtggcc	300
atcctctggc atgagatgtg gcatgaaggc ctggaagagg catctcgttt gtactttggg	360
gaaaggaacg tgaaaggcat gtttgaggtg ctggagccct tgcattgctat gatggaacgg	420
ggccccaga ctctgaagga aacatccttt aatcaggcct atggtcgaga tttaatggag	480
gcccaagagt ggtgcaggaa gtacatgaaa tcagggaatg tcaaggacct cacccaagcc	540
tgggacctct attatcatgt gttccgacga atctca	576

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<210> 402
 <211> 192
 <212> PRT
 <213> Artificial Sequence

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

<400> 402
 Met Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu
 1 5 10 15

Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro
 20 25 30

Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly
 35 40 45

Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro
 50 55 60

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

Arg Leu Cys Glu Arg Ile Leu Ala Gly Gly Gly Gly Ser Gly Gly Gly
 85 90 95

Ser Ser Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu
 100 105 110

Glu Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe
 115 120 125

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

Leu Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu
 145 150 155 160

Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp
 165 170 175

Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser
 180 185 190

<210> 403
 <211> 612
 <212> DNA
 <213> Artificial Sequence

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

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<400> 403
atgggagtgac aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
cagacctgac tgggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
gaagaagggg ttgcccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc 300
gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc 360
ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 420
gtccttgaac agggaggtgt gtccagtttg tttcagaatc tcggggtgtc cgtaactccg 480
atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc 540
ccgtatgaag gtctgagcgg cgaccaaagc ggccagatcg aaaaaatttt taaggtggtg 600
taccctgtgg at 612

<210> 404
<211> 204
<212> PRT
<213> Artificial Sequence

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

<400> 404
Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
1 5 10 15
Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
20 25 30
Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
35 40 45
Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
50 55 60
Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
65 70 75 80
Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
85 90 95
Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
100 105 110
Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
115 120 125
Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
130 135 140

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Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
145 150 155 160

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
165 170 175

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
180 185 190

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp
195 200

<210> 405

<211> 570

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 405

atggatcatc actttaaggt gatcctgcac tatggcacac tggtaatcga cgggggttacg	60
ccgaacatga tcgactatatt cggacggccg tatgaaggca tcgccgtggt cgacggcaaaa	120
aagatcactg taacaggggac cctgtggaac ggcaacaaaa ttatcgacga ggcctgatc	180
aaccccgacg gctccctgct gttccgagta accatcaacg gaggtagccg ctggcggctg	240
tgcgaacgca ttctggcggg aggaggtggc tcaggtggag ggagctccgt ggccatcctc	300
tggcatgaga tgtggcatga aggcctggaa gaggcattct gttgtactt tggggaaagg	360
aacgtgaaag gcatgtttga ggtgctggag cccttgcatt ctatgatgga acggggcccc	420
cagactctga aggaacatc ctttaatcag gcctatggtc gagatttaat ggaggcccaa	480
gagtggtgca ggaagtacat gaaatcaggg aatgtcaagg acctcaccca agcctgggac	540
ctctattatc atgtgttccg acgaatctca	570

<210> 406

<211> 190

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 406

Met Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile
1 5 10 15

Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu
20 25 30

Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu

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

<210> 407
 <211> 726
 <212> DNA
 <213> Artificial Sequence

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

<400> 407	
atgggagtgc aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc	60
cagacctgcg tggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc	120
cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg	180
gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat	240
tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc	300
gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc	360
ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa	420
gtccttgaac agggaggtgt gtccagttt tttcagaatc tcgggggtgc cgtaactccg	480
atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc	540
ccgtatgaag gtctgagcgg cgaccaaatg ggccagatcg aaaaaatttt taaggtggtg	600

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taccctgtgg atgatcatca ctttaaggtg atcctgcact atggcacact ggtaatcgac 660
 ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc 720
 gacggc 726

<210> 408
 <211> 242
 <212> PRT
 <213> Artificial Sequence

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

<400> 408
 Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
 35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
 50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
 65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
 85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
 100 105 110

Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
 115 120 125

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
 130 135 140

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
 145 150 155 160

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
 165 170 175

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
 180 185 190

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
 195 200 205

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Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro
 210 215 220

Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
 225 230 235 240

Asp Gly

<210> 409
 <211> 456
 <212> DNA
 <213> Artificial Sequence

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

<400> 409
 atgaaaaaga tcactgtaac agggaccctg tggaacggca acaaaattat cgacgagcgc 60
 ctgatcaacc ccgacggctc cctgctgttc cgagtaacca tcaacggagt gaccggctgg 120
 cggctgtgcg aacgcattct ggcgggagga ggtggctcag gtggagggag ctccgtggcc 180
 atcctctggc atgagatgtg gcatgaaggc ctggaagagg catctcgttt gtactttggg 240
 gaaaggaacg tgaaaggcat gtttgagggtg ctggagccct tgcattgctat gatggaacgg 300
 ggccccccaga ctctgaagga aacatccttt aatcaggcct atggtcgaga tttaatggag 360
 gcccaagagt ggtgcaggaa gtacatgaaa tcagggaatg tcaaggacct cacccaagcc 420
 tgggacctct attatcatgt gttccgacga atctca 456

<210> 410
 <211> 152
 <212> PRT
 <213> Artificial Sequence

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

<400> 410
 Met Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile
 1 5 10 15

Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val
 20 25 30

Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
 35 40 45

Gly Gly Gly Gly Ser Gly Gly Gly Ser Ser Val Ala Ile Leu Trp His
 50 55 60

Glu Met Trp His Glu Gly Leu Glu Glu Ala Ser Arg Leu Tyr Phe Gly
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								<u>155193_1</u>															
65				70								75				80							
Glu	Arg	Asn	Val	Lys 85	Gly	Met	Phe	Glu	Val 90	Leu	Glu	Pro	Leu	His 95	Ala								
Met	Met	Glu	Arg 100	Gly	Pro	Gln	Thr	Leu 105	Lys	Glu	Thr	Ser	Phe 110	Asn	Gln								
Ala	Tyr	Gly 115	Arg	Asp	Leu	Met	Glu 120	Ala	Gln	Glu	Trp	Cys 125	Arg	Lys	Tyr								
Met	Lys 130	Ser	Gly	Asn	Val	Lys 135	Asp	Leu	Thr	Gln	Ala 140	Trp	Asp	Leu	Tyr								
Tyr 145	His	Val	Phe	Arg	Arg 150	Ile	Ser																

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<400> 412

Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
100 105 110

Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
115 120 125

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
130 135 140

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
145 150 155 160

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
165 170 175

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
180 185 190

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
195 200 205

Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro
210 215 220

Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
225 230 235 240

Asp Gly Lys

<210> 413

<211> 453

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 413

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atgaagatca ctgtaacagg gaccctgtgg aacggcaaca aaattatcga cgagcgctg      60
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ctgtgcgaac gcattctggc gggaggaggt ggctcaggtg gagggagctc cgtggccatc      180
ctctggcatg agatgtggca tgaaggcctg gaagaggcat ctcgtttgta ctttggggaa      240
aggaacgtga aaggcatggt tgaggtgctg gagcccttgc atgctatgat ggaacggggc      300
ccccagactc tgaaggaaac atcctttaat caggcctatg gtcgagattt aatggaggcc      360
caagagtggg gcaggaagta catgaaatca ggaatgtca aggacctcac ccaagcctgg      420
gacctctatt atcatgtggt ccgacgaatc tca                                453

```

<210> 414

<211> 151

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 414

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Met Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile
1           5           10          15

```

```

Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr
          20          25          30

```

```

Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly
          35          40          45

```

```

Gly Gly Gly Ser Gly Gly Gly Ser Ser Val Ala Ile Leu Trp His Glu
          50          55          60

```

```

Met Trp His Glu Gly Leu Glu Glu Ala Ser Arg Leu Tyr Phe Gly Glu
65          70          75          80

```

```

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

```

```

Met Glu Arg Gly Pro Gln Thr Leu Lys Glu Thr Ser Phe Asn Gln Ala
          100         105         110

```

```

Tyr Gly Arg Asp Leu Met Glu Ala Gln Glu Trp Cys Arg Lys Tyr Met
          115         120         125

```

```

Lys Ser Gly Asn Val Lys Asp Leu Thr Gln Ala Trp Asp Leu Tyr Tyr

```

130 135 155193_1 140

His Val Phe Arg Arg Ile Ser
145 150

<210> 415
<211> 864
<212> DNA
<213> Artificial Sequence

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

<400> 415
atgggagtgc aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
cagacctgcg tggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc 300
gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc 360
ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 420
gtccttgaac agggaggtgt gtccagtttg tttcagaatc tcggggtgtc cgtaactccg 480
atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc 540
ccgtatgaag gtctgagcgg cgaccaaagtg ggccagatcg aaaaaatttt taaggtggtg 600
taccctgtgg atgatcatca ctttaagggtg atcctgcact atggcacact ggtaatcgac 660
ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc 720
gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag 780
cgcctgatca accccgacgg ctccctgctg ttccgagtaa ccatcaacgg agtgaccggc 840
tggcggctgt gcgaacgcat tctg 864

<210> 416
<211> 864
<212> DNA
<213> Artificial Sequence

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

<400> 416
atgggagtgc aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
cagacctgcg tggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc 300

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gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc	360
ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa	420
gtccttgaac agggagggtgt gtccagtttg tttcagaatc tcgggggtgtc cgtaactccg	480
atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc	540
ccgtatgaag gtctgagcgg cgaccaaagt ggccagatcg aaaaaatttt taagggtggtg	600
taccctgtgg atgatcatca ctttaagggtg atcctgcact atggcacact ggtaatcgac	660
ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc	720
gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag	780
cgctgatca accccgacgg ctccctgctg ttccgagtaa ccatcaacgg agtgaccggc	840
tggcggctgt gcgaacgcat tctg	864

<210> 417
 <211> 288
 <212> PRT
 <213> Artificial Sequence

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

<400> 417
 Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
 35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
 50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
 65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
 85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
 100 105 110

Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
 115 120 125

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
 130 135 140

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

Trp His Glu Met Trp His Glu Gly Leu Glu Glu Ala Ser Arg Leu Tyr
20 25 30

Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val Leu Glu Pro Leu
35 40 45

His Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys Glu Thr Ser Phe
50 55 60

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

Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Thr Gln Ala Trp Asp
85 90 95

Leu Tyr Tyr His Val Phe Arg Arg Ile Ser
100 105

<210> 420
<211> 858
<212> DNA
<213> Artificial Sequence

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

<400> 420
atgggagtg aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
cagacctgcg tgggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc 300
gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc 360
ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 420
gtccttgaac agggaggtgt gtccagttg ttccagaatc tcggggtgtc cgtaactccg 480
atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc 540
ccgtatgaag gtctgagcgg cgaccaaatg ggccagatcg aaaaaatttt taaggtggtg 600
taccctgtgg atgatcatca ctttaagggtg atcctgcact atggcacact ggtaatcgac 660
ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc 720
gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag 780
cgctgatca accccgacgg ctccctgctg ttccgagtaa ccatcaacgg agtgaccggc 840
tggcggctgt gcgaacgc 858

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<210> 421
 <211> 286
 <212> PRT
 <213> Artificial Sequence

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

<400> 421
 Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
 35 40 45

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
 50 55 60

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
 65 70 75 80

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
 85 90 95

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
 100 105 110

Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
 115 120 125

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
 130 135 140

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
 145 150 155 160

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
 165 170 175

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
 180 185 190

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
 195 200 205

Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro
 210 215 220

Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
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225 230 155193_1 235 240

Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys
245 250 255

Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg
260 265 270

Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg
275 280 285

<210> 422
<211> 324
<212> DNA
<213> Artificial Sequence

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

<400> 422
atgattctgg cgaggaggagg tggctcaggt ggaggagct ccgtggccat cctctggcat 60
gagatgtggc atgaaggcct ggaagaggca tctcgtttgt actttgggga aaggaacgtg 120
aaaggcatgt ttgaggtgct ggagcccttg catgctatga tggaacgggg cccccagact 180
ctgaaggaaa catcctttaa tcaggcctat ggtcgagatt taatggaggc ccaagagtgg 240
tgcaggaagt acatgaaatc agggaatgtc aaggacctca cccaagcctg ggacctctat 300
tatcatgtgt tccgacgaat ctca 324

<210> 423
<211> 108
<212> PRT
<213> Artificial Sequence

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

<400> 423
Met Ile Leu Ala Gly Gly Gly Gly Ser Gly Gly Gly Ser Ser Val Ala
1 5 10 15

Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu Ala Ser Arg
20 25 30

Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val Leu Glu
35 40 45

Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys Glu Thr
50 55 60

Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu Met Glu Ala Gln Glu Trp
65 70 75 80

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 Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Thr Gln Ala
 85 90 95

Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser
 100 105

<210> 424
 <211> 852
 <212> DNA
 <213> Artificial Sequence

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

<400> 424
 atgggagtgC aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
 cagacctgCg tggTgcacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
 cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
 gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
 tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc 300
 gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc 360
 ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 420
 gtccttgaac agggaggtgt gtccagtttg tttcagaatc tcggggtgtc cgtaactccg 480
 atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc 540
 ccgtatgaag gtctgagcgg cgaccaaagtg ggccagatcg aaaaaatttt taaggTggtg 600
 taccctgtgg atgatcatca ctttaaggTg atcctgcact atggcacact ggtaatcgac 660
 ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc 720
 gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag 780
 cgcctgatca accccgacgg ctccctgctg ttccgagtaa ccatcaacgg agtgaccggc 840
 tggcggtgtg gc 852

<210> 425
 <211> 284
 <212> PRT
 <213> Artificial Sequence

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

<400> 425
 Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
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[illegible]

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<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 426

atggaacgca ttctggcggg aggaggtggc tcaggtggag ggagctccgt ggccatcctc 60

tggcatgaga tgtggcatga aggcctggaa gaggcattctc gtttgtactt tggggaaagg 120

aacgtgaaag gcatgtttga ggtgctggag cccttgcattg ctatgatgga acggggcccc 180

cagactctga aggaaacatc ctttaatcag gcctatggtc gagatttaat ggaggcccaa 240

gagtgggtgca ggaagtacat gaaatcaggg aatgtcaagg acctcaccca agcctgggac 300

ctctattatc atgtgttccg acgaatctca 330

<210> 427

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Dinoflagellate luciferase consensus sequence

<220>

<221> MOD_RES

<222> (6)..(6)

<223> Val or Ile

<220>

<221> MOD_RES

<222> (11)..(11)

<223> Ala, Val, Thr, or Lys

<220>

<221> MOD_RES

<222> (12)..(12)

<223> Ala or Glu

<220>

<221> MOD_RES

<222> (16)..(16)

<223> Glu, Lys, Thr, or Gln

<220>

<221> MOD_RES

<222> (17)..(17)

<223> Ala or Val

<220>

<221> MOD_RES

<222> (18)..(18)

<223> Val or Ile

<400> 427

Gly Arg Trp Ile Thr Xaa Ser Gly Gly Gln Xaa Xaa Phe Ile Lys Xaa
1 5 10 15

Xaa Xaa

<210> 428

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

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

<400> 428
 Met Glu Arg Ile Leu Ala Gly Gly Gly Gly Ser Gly Gly Gly Ser Ser
 1 5 10 15

Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu Glu Ala
 20 25 30

Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe Glu Val
 35 40 45

Leu Glu Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr Leu Lys
 50 55 60

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

Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp Leu Thr
 85 90 95

Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser
 100 105 110

<210> 429
 <211> 846
 <212> DNA
 <213> Artificial Sequence

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

<400> 429
 atgggagtgc aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
 cagacctgcg tgggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
 cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggatgat ccgaggctgg 180
 gaagaagggg ttgcccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
 tatgcctatg gtgccactgg gcacccaggc atcatccac cacatgccac tctcgtcttc 300
 gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggatatggtc 360
 ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 420
 gtccttgaac agggaggtgt gtccagtttg tttcagaatc tcggggtgtc cgtaactccg 480
 atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc 540
 ccgtatgaag gtctgagcgg cgaccaaagt ggccagatcg aaaaaatttt taagggtggtg 600
 taccctgtgg atgatcatca cttaagggtg atcctgcact atggcacact ggtaatcgac 660

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ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc      720
gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag      780
cgcctgatca accccgacgg ctccctgctg ttccgagtaa ccatcaacgg agtgaccggc      840
tggcgg                                           846

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<210> 430

<211> 282

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 430

```

Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
1           5           10          15

```

```

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
          20          25          30

```

```

Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
          35          40          45

```

```

Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
          50          55          60

```

```

Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
65          70          75          80

```

```

Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
          85          90          95

```

```

Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
          100          105          110

```

```

Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
          115          120          125

```

```

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
          130          135          140

```

```

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
          145          150          155          160

```

```

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
          165          170          175

```

```

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
          180          185          190

```

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
 195 200 205 155193_1
 Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro
 210 215 220
 Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
 225 230 235 240
 Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys
 245 250 255
 Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg
 260 265 270
 Val Thr Ile Asn Gly Val Thr Gly Trp Arg
 275 280

<210> 431
 <211> 336
 <212> DNA
 <213> Artificial Sequence

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

<400> 431
 atgctgtgcg aacgcattct ggcgggagga ggtggctcag gtggagggag ctccgtggcc 60
 atcctctggc atgagatgtg gcatgaaggc ctggaagagg catctcgttt gtactttggg 120
 gaaaggaacg tgaaaggcat gtttgagggtg ctggagccct tgcattgctat gatggaacgg 180
 ggccccaga ctctgaagga aacatccttt aatcaggcct atggtcgaga tttaatggag 240
 gcccaagagt ggtgcaggaa gtacatgaaa tcagggaatg tcaaggacct cacccaagcc 300
 tgggacctct attatcatgt gttccgacga atctca 336

<210> 432
 <211> 112
 <212> PRT
 <213> Artificial Sequence

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

<400> 432
 Met Leu Cys Glu Arg Ile Leu Ala Gly Gly Gly Gly Ser Gly Gly Gly
 1 5 10 15
 Ser Ser Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly Leu Glu
 20 25 30
 Glu Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly Met Phe
 35 40 45

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Glu Val Leu Glu Pro Leu His Ala Met Met Glu Arg Gly Pro Gln Thr
50 55 60

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

Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val Lys Asp
85 90 95

Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg Ile Ser
100 105 110

<210> 433

<211> 840

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 433

```

atgggagtgac aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc      60
cagacctgacg ttgtgcacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc      120
cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg      180
gaagaagggg ttgccagat  gagtgtgggt cagagagcca aactgactat atctccagat      240
tatgcctatg gtgccactgg gcacccaggc atcatccac  cacatgccac tctcgtcttc      300
gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggtatggtc      360
ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa      420
gtccttgaac agggagggtgt gtccagtttg tttcagaatc tcgggggtgtc cgtaactccg      480
atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc      540
ccgtatgaag gtctgagcgg cgaccaaagt ggccagatcg aaaaaatttt taagggtggtg      600
taccctgtgg atgatcatca ctttaagggtg atcctgcact atggcacact ggtaatcgac      660
ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc      720
gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag      780
cgctgatca  accccgacgg ctccctgctg ttccgagtaa ccatcaacgg agtgaccggc      840

```

<210> 434

<211> 280

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 434

Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
1 5 10 15

Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30
 Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
 35 40 45
 Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
 50 55 60
 Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
 65 70 75 80
 Tyr Ala Tyr Gly Ala Thr Gly His Pro Gly Ile Ile Pro Pro His Ala
 85 90 95
 Thr Leu Val Phe Asp Val Glu Leu Leu Lys Leu Glu Gly Gly Gly Ser
 100 105 110
 Ser Gly Gly Gly Ser Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly
 115 120 125
 Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
 130 135 140
 Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
 145 150 155 160
 Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
 165 170 175
 His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
 180 185 190
 Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
 195 200 205
 Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro
 210 215 220
 Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
 225 230 235 240
 Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys
 245 250 255
 Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg
 260 265 270
 Val Thr Ile Asn Gly Val Thr Gly
 275 280

<210> 435
 <211> 342
 <212> DNA
 <213> Artificial Sequence

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

<400> 435
 atgtggcggc tgtgcgaacg cattctggcg ggaggaggtg gctcaggtgg agggagctcc 60
 gtggccatcc tctggcatga gatgtggcat gaaggcctgg aagaggcatc tcgtttgtac 120
 tttggggaaa ggaacgtgaa aggcattgtt gaggtgctgg agcccttgca tgctatgatg 180
 gaacggggcc cccagactct gaaggaaaca tcctttaatc aggcctatgg tcgagattta 240
 atggaggccc aagagtgggtg caggaagtac atgaaatcag ggaatgtcaa ggacctcacc 300
 caagcctggg acctctatta tcatgtgttc cgacgaatct ca 342

<210> 436
 <211> 114
 <212> PRT
 <213> Artificial Sequence

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

<400> 436
 Met Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Gly Gly Gly Ser Gly
 1 5 10 15
 Gly Gly Ser Ser Val Ala Ile Leu Trp His Glu Met Trp His Glu Gly
 20 25 30
 Leu Glu Glu Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val Lys Gly
 35 40 45
 Met Phe Glu Val Leu Glu Pro Leu His Ala Met Met Glu Arg Gly Pro
 50 55 60
 Gln Thr Leu Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg Asp Leu
 65 70 75 80
 Met Glu Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly Asn Val
 85 90 95
 Lys Asp Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe Arg Arg
 100 105 110
 Ile Ser

<210> 437

<211> 834
 <212> DNA
 <213> Artificial Sequence

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

<400> 437
 atgggagtgc aggtggaaac catctcccca ggagacgggc gcaccttccc caagcgcggc 60
 cagacctgcg tggtgacta caccgggatg cttgaagatg gaaagaaatt tgattcctcc 120
 cgggacagaa acaagccctt taagtttatg ctaggcaagc aggaggtgat ccgaggctgg 180
 gaagaagggg ttgccagat gagtgtgggt cagagagcca aactgactat atctccagat 240
 tatgcctatg gtgccactgg gcaccaggc atcatccac cacatgccac tctcgtcttc 300
 gatgtggagc ttctaaaact ggaaggagga gggagctccg gtggaggcag cggatatggtc 360
 ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 420
 gtccttgaac agggaggtgt gtccagtttg tttcagaatc tcggggtgtc cgtaactccg 480
 atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc 540
 ccgtatgaag gtctgagcgg cgaccaaagtg ggccagatcg aaaaaatttt taagggtggtg 600
 taccctgtgg atgatcatca ctttaagggtg atcctgcact atggcacact ggtaatcgac 660
 ggggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc 720
 gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag 780
 cgcctgatca accccgacgg ctccctgctg ttccgagtaa ccatcaacgg agtg 834

<210> 438
 <211> 278
 <212> PRT
 <213> Artificial Sequence

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

<400> 438
 Met Gly Val Gln Val Glu Thr Ile Ser Pro Gly Asp Gly Arg Thr Phe
 1 5 10 15
 Pro Lys Arg Gly Gln Thr Cys Val Val His Tyr Thr Gly Met Leu Glu
 20 25 30
 Asp Gly Lys Lys Phe Asp Ser Ser Arg Asp Arg Asn Lys Pro Phe Lys
 35 40 45
 Phe Met Leu Gly Lys Gln Glu Val Ile Arg Gly Trp Glu Glu Gly Val
 50 55 60
 Ala Gln Met Ser Val Gly Gln Arg Ala Lys Leu Thr Ile Ser Pro Asp
 65 70 75 80

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

<210> 439

<211> 348

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 439

atgaccggct ggcggctgtg cgaacgcatt ctggcgggag gaggtggctc aggtggaggg 60

agctccgtgg ccatacctctg gcatgagatg tggcatgaag gcctggaaga ggcatactcgt 120

ttgtactttg gggaaaggaa cgtgaaaggc atgtttgagg tgctggagcc cttgcatgct 180

155193_1

atgatggaac ggggccccca gactctgaag gaaacatcct ttaatcaggc ctatgggtcga	240
gatttaatgg aggcccaaga gtggtgcagg aagtacatga aatcagggaa tgtcaaggac	300
ctcacccaag cctgggacct ctattatcat gtgttccgac gaattctca	348

<210> 440
 <211> 116
 <212> PRT
 <213> Artificial Sequence

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

<400> 440
 Met Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Gly Gly Gly
 1 5 10 15
 Ser Gly Gly Gly Ser Ser Val Ala Ile Leu Trp His Glu Met Trp His
 20 25 30
 Glu Gly Leu Glu Glu Ala Ser Arg Leu Tyr Phe Gly Glu Arg Asn Val
 35 40 45
 Lys Gly Met Phe Glu Val Leu Glu Pro Leu His Ala Met Met Glu Arg
 50 55 60
 Gly Pro Gln Thr Leu Lys Glu Thr Ser Phe Asn Gln Ala Tyr Gly Arg
 65 70 75 80
 Asp Leu Met Glu Ala Gln Glu Trp Cys Arg Lys Tyr Met Lys Ser Gly
 85 90 95
 Asn Val Lys Asp Leu Thr Gln Ala Trp Asp Leu Tyr Tyr His Val Phe
 100 105 110
 Arg Arg Ile Ser
 115

<210> 441
 <211> 447
 <212> DNA
 <213> Artificial Sequence

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

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ctgaaagtag tagatgtgat aggcacaaa gtatacaacg atggagaaca aatcattgct	120
cagggagatt cggtctgattc ttttttcatt attgaatctg gagaagtga aattactatg	180
aaaagaaagg gtaaatcaga agtggaagag aatggtgcag tagaaatcgc tcgatgctcg	240
cggggacagt actttggaga gcttgccctg gtaactaaca aacctcgagc agcttctgcc	300

155193_1

cacgccattg ggactgtcaa atgttttagca atggatgtgc aagcatttga aaggcttctg 360
 ggaccttgca tggaaattat gaaaaggaac atcgctacct atgaagaaca gttagttgcc 420
 ctgtatggaa cgaacatgga tattgta 447

<210> 442
 <211> 149
 <212> PRT
 <213> Artificial Sequence

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

<400> 442
 Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu Glu
 1 5 10 15

Phe Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val Tyr
 20 25 30

Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe
 35 40 45

Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly
 50 55 60

Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser
 65 70 75 80

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

Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp
 100 105 110

Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys
 115 120 125

Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr
 130 135 140

Asn Met Asp Ile Val
 145

<210> 443
 <211> 615
 <212> DNA
 <213> Artificial Sequence

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

<400> 443

155193_1

atgacagccg gctacaacct ggaccaagtc cttgagcagg gcggtgtgtc cagtttgttt	60
cagaatctcg ggggtgtccgt aactccgata caaaggattg tcctgagcgg tgaacacggc	120
ctgaagatcg acatccatgt catcatcccg tatgaaggta tgagcggcga tcagatgggc	180
cagatcgaaa aaatttttaa ggtggtgtac cctgtggatg atcatcactt taaggatgatt	240
ctgcactatg gcacactggt aatcgacggg gttacgccga acatgatcga ctatttcgga	300
cgcccgatg aaggcatcgc cgtgttcgac ggcaaaaaga tctactgtaac cgggaccctg	360
tggaacggca acaaaattat cgacgagcgc ctgatcaacc ccgacggctc cctgctgttc	420
cgcgtaacca tcaacggagt gaccggctgg cggctgtgca agcgcatattt ggcgggaagt	480
tctggtggag gaagtcttgg tggagagcct actactgaga acttgacttt ccagagcgat	540
aacggaagtt ctggtggagg aagtcttggg ggaatggtgt ttacactcga agatttcgta	600
ggggactggc ggcag	615

<210> 444
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 444
 Met Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val
 1 5 10 15

Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg
 20 25 30

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

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

Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile
 65 70 75 80

Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile
 85 90 95

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

Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp
 115 120 125

Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile
 130 135 140

155193_1

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

Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr
165 170 175

Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met
180 185 190

Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln
195 200 205

<210> 445

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 445

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acactggtaa tcgacggggt tacgccgaac atgatcgact atttcggacg gccgtatgaa	180
ggcatcgccg tggttcgacgg caaaaagatc actgtaaccg ggacctgtg gaacggcaac	240
aaaattatcg acgagcgctt gatcaacccc gacggctccc tgctgttcg cgtaaccatc	300
aacggagtga ccggctggcg gctgtgagag cgcatttttg cgggaagttc tgggtggagga	360
agttctggtg gagagcctac tactgagaac ttgtacttcc agagcgataa cggaagttct	420
ggtggaggaa gttctggtgg aatggtgttt acactcgaag atttcgtagg ggactggcgg	480
cagacagccg gctacaacct ggaccaagtc cttgagcagg gcggtgtgtc cagtttgttt	540
cagaatctcg ggggtgccgt aactccgatc caaaggattg tcctgagcgg tgaaaacggc	600
ctgaagatcg acatc	615

<210> 446

<211> 205

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 446

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

Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His
20 25 30

Phe Lys Val Ile Leu His Tyr Gly Thr ^{155193_1} Leu Val Ile Asp Gly Val Thr
 35 40 45
 Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
 50 55 60
 Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn
 65 70 75 80
 Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe
 85 90 95
 Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile
 100 105 110
 Leu Ala Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Glu Pro Thr Thr
 115 120 125
 Glu Asn Leu Tyr Phe Gln Ser Asp Asn Gly Ser Ser Gly Gly Gly Ser
 130 135 140
 Ser Gly Gly Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg
 145 150 155 160
 Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val
 165 170 175
 Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg
 180 185 190
 Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
 195 200 205

<210> 447

<211> 615

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 447

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atcgccgtgt tcgacggcaa aaagatcact gtaaccggga ccctgtggaa cggcaacaaa	120
attatcgacg agcgctgat caaccccgac ggctccctgc tgttcccggt aaccatcaac	180
ggagtgaccg gctggcggct gtgcgagcgc attttggcgg gaagttctgg tggagggaagt	240
tctggtggag agcctactac tgagaacttg tacttccaga gcgataacgg aagttctggt	300
ggaggaagtt ctggtggaat ggtgtttaca ctcgaagatt tcgtagggga ctggcggcag	360
acagccggct acaacctgga ccaagtcctt gagcagggcg gtgtgtccag tttgtttcag	420

155193_1

aatctcgggg	tgtccgtaac	tccgatccaa	aggattgtcc	tgagcgggtga	aaacggcctg	480
aagatcgaca	tccatgtcat	catcccgtat	gaaggtctga	gcggcgatca	gatgggccag	540
atcgaaaaaa	tttttaaggt	ggtgtaccct	gtggatgatc	atcactttaa	ggtgattctg	600
cactatggca	cactg					615

<210> 448
 <211> 205
 <212> PRT
 <213> Artificial Sequence

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

<400> 448
 Met Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg
 1 5 10 15

Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr
 20 25 30

Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn
 35 40 45

Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly
 50 55 60

Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly Gly Ser
 65 70 75 80

Ser Gly Gly Glu Pro Thr Thr Glu Asn Leu Tyr Phe Gln Ser Asp Asn
 85 90 95

Gly Ser Ser Gly Gly Gly Ser Ser Gly Gly Met Val Phe Thr Leu Glu
 100 105 110

Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln
 115 120 125

Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val
 130 135 140

Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu
 145 150 155 160

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

Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp
 180 185 190

Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu
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<210> 449
<211> 2019
<212> DNA
<213> Homo sapiens

<400> 449
atggctgacg ttttcccggg caacgactcc acggcgtctc aggacgtggc caaccgcttc 60
gcccgcaaag gggcgctgag gcagaagaac gtgcacgagg tgaaggacca caaatcatc 120
gcgcgcttct tcaagcagcc caccttctgc agccactgca ccgacttcat ctgggggttt 180
gggaaacaag gcttccagtg ccaagtttgc tgttttgtgg tccacaagag gtgccatgaa 240
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aagcacaagt tcaaaatcca cacttacgga agccccacct tctgcgatca ctgtgggtca 360
ctgctctatg gacttatcca tcaagggatg aaatgtgaca cctgcgatat gaacgttcac 420
aagcaatgcg tcatcaatgt cccagcctc tgcggaatgg atcacactga gaagaggggg 480
cggatttacc taaaggctga ggttgctgat gaaaagctcc atgtcacagt acgagatgca 540
aaaaatctaa tccctatgga tccaaacggg ctttcagatc cttatgtgaa gctgaaactt 600
attcctgatc ccaagaatga aagcaagcaa aaaacaaaaa ccatccgctc cactactaat 660
ccgcagtgga atgagtcctt tacattcaaa ttgaaacctt cagacaaaga ccgacgactg 720
tctgtagaaa tctgggactg ggatcgaaca acaaggaatg acttcatggg atccctttcc 780
tttggagttt cggagctgat gaagatgccg gccagtggat ggtacaagtt gcttaaccaa 840
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acagaagaac tgtatgcaat caaatcctg aagaaggatg tggtgattca ggatgatgac 1140
gtggagtgca ccatggtaga aaagcgagtc ttggccctgc ttgacaaacc cccgttcttg 1200
acgcagctgc actcctgctt ccagacagtg gatcggctgt acttcgtcat ggaatatgtc 1260
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gtattctatg cggcagagat ttccatcgga ttgttctttc ttcataaaag aggaatcatt 1380
tatagggatc tgaagttaga taacgtcatg ttggattcag aaggacatat caaaattgct 1440
gactttggga tgtgcaagga acacatgatg gatggagtca cgaccaggac cttctgtggg 1500
actccagatt atatcgcccc agagataatc gcttatcagc cgatggaaa atctgtggac 1560
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gaagatgaag acgagctatt tcagtctatc atggagcaca acgtttccta tccaaaatcc 1680
ttgtccaagg aggctgtttc tatctgcaaa ggactgatga ccaaacaccc agccaagcgg 1740
ctgggctgtg ggcctgaggg ggagagggac gtgagagagc atgccttctt ccggaggatc 1800

155193_1

gactgggaaa aactggagaa caggagatc cagccaccat tcaagcccaa agtgtgtggc 1860
aaaggagcag agaactttga caagttcttc acacgaggac agcccgtctt aacaccacct 1920
gatcagctgg ttattgctaa catagaccag tctgattttg aagggttctc gtatgtcaac 1980
ccccagtttg tgcaccccat cttacagagt gcagtagtt 2019

<210> 450
<211> 673
<212> PRT
<213> Homo sapiens

<400> 450
Met Ala Asp Val Phe Pro Gly Asn Asp Ser Thr Ala Ser Gln Asp Val
1 5 10 15

Ala Asn Arg Phe Ala Arg Lys Gly Ala Leu Arg Gln Lys Asn Val His
20 25 30

Glu Val Lys Asp His Lys Phe Ile Ala Arg Phe Phe Lys Gln Pro Thr
35 40 45

Phe Cys Ser His Cys Thr Asp Phe Ile Trp Gly Phe Gly Lys Gln Gly
50 55 60

Phe Gln Cys Gln Val Cys Cys Phe Val Val His Lys Arg Cys His Glu
65 70 75 80

Phe Val Thr Phe Ser Cys Pro Gly Ala Asp Lys Gly Pro Asp Thr Asp
85 90 95

Asp Pro Arg Ser Lys His Lys Phe Lys Ile His Thr Tyr Gly Ser Pro
100 105 110

Thr Phe Cys Asp His Cys Gly Ser Leu Leu Tyr Gly Leu Ile His Gln
115 120 125

Gly Met Lys Cys Asp Thr Cys Asp Met Asn Val His Lys Gln Cys Val
130 135 140

Ile Asn Val Pro Ser Leu Cys Gly Met Asp His Thr Glu Lys Arg Gly
145 150 155 160

Arg Ile Tyr Leu Lys Ala Glu Val Ala Asp Glu Lys Leu His Val Thr
165 170 175

Val Arg Asp Ala Lys Asn Leu Ile Pro Met Asp Pro Asn Gly Leu Ser
180 185 190

Asp Pro Tyr Val Lys Leu Lys Leu Ile Pro Asp Pro Lys Asn Glu Ser
195 200 205

155193_1
 Lys Gln Lys Thr Lys Thr Ile Arg Ser Thr Leu Asn Pro Gln Trp Asn
 210 215 220
 Glu Ser Phe Thr Phe Lys Leu Lys Pro Ser Asp Lys Asp Arg Arg Leu
 225 230 235 240
 Ser Val Glu Ile Trp Asp Trp Asp Arg Thr Thr Arg Asn Asp Phe Met
 245 250 255
 Gly Ser Leu Ser Phe Gly Val Ser Glu Leu Met Lys Met Pro Ala Ser
 260 265 270
 Gly Trp Tyr Lys Leu Leu Asn Gln Glu Glu Gly Glu Tyr Tyr Asn Val
 275 280 285
 Pro Ile Pro Glu Gly Asp Glu Glu Gly Asn Met Glu Leu Arg Gln Lys
 290 295 300
 Phe Glu Lys Ala Lys Leu Gly Pro Ala Gly Asn Lys Val Ile Ser Pro
 305 310 315 320
 Ser Glu Asp Arg Lys Gln Pro Ser Asn Asn Leu Asp Arg Val Lys Leu
 325 330 335
 Thr Asp Phe Asn Phe Leu Met Val Leu Gly Lys Gly Ser Phe Gly Lys
 340 345 350
 Val Met Leu Ala Asp Arg Lys Gly Thr Glu Glu Leu Tyr Ala Ile Lys
 355 360 365
 Ile Leu Lys Lys Asp Val Val Ile Gln Asp Asp Asp Val Glu Cys Thr
 370 375 380
 Met Val Glu Lys Arg Val Leu Ala Leu Leu Asp Lys Pro Pro Phe Leu
 385 390 395 400
 Thr Gln Leu His Ser Cys Phe Gln Thr Val Asp Arg Leu Tyr Phe Val
 405 410 415
 Met Glu Tyr Val Asn Gly Gly Asp Leu Met Tyr His Ile Gln Gln Val
 420 425 430
 Gly Lys Phe Lys Glu Pro Gln Ala Val Phe Tyr Ala Ala Glu Ile Ser
 435 440 445
 Ile Gly Leu Phe Phe Leu His Lys Arg Gly Ile Ile Tyr Arg Asp Leu
 450 455 460
 Lys Leu Asp Asn Val Met Leu Asp Ser Glu Gly His Ile Lys Ile Ala
 465 470 475 480

Asp Phe Gly Met Cys Lys Glu His Met Met Asp Gly Val Thr Thr Arg
 485 490 495
 Thr Phe Cys Gly Thr Pro Asp Tyr Ile Ala Pro Glu Ile Ile Ala Tyr
 500 505 510
 Gln Pro Tyr Gly Lys Ser Val Asp Trp Trp Ala Tyr Gly Val Leu Leu
 515 520 525
 Tyr Glu Met Leu Ala Gly Gln Pro Pro Phe Asp Gly Glu Asp Glu Asp
 530 535 540
 Glu Leu Phe Gln Ser Ile Met Glu His Asn Val Ser Tyr Pro Lys Ser
 545 550 555 560
 Leu Ser Lys Glu Ala Val Ser Ile Cys Lys Gly Leu Met Thr Lys His
 565 570 575
 Pro Ala Lys Arg Leu Gly Cys Gly Pro Glu Gly Glu Arg Asp Val Arg
 580 585 590
 Glu His Ala Phe Phe Arg Arg Ile Asp Trp Glu Lys Leu Glu Asn Arg
 595 600 605
 Glu Ile Gln Pro Pro Phe Lys Pro Lys Val Cys Gly Lys Gly Ala Glu
 610 615 620
 Asn Phe Asp Lys Phe Phe Thr Arg Gly Gln Pro Val Leu Thr Pro Pro
 625 630 635 640
 Asp Gln Leu Val Ile Ala Asn Ile Asp Gln Ser Asp Phe Glu Gly Phe
 645 650 655
 Ser Tyr Val Asn Pro Gln Phe Val His Pro Ile Leu Gln Ser Ala Val
 660 665 670

val

<210> 451
 <211> 2334
 <212> DNA
 <213> Homo sapiens

<400> 451
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 caggagaggg gagatgtgat ggacttctat aaaaccctaa gaggaggagc tactgtgaag 120
 gtttctgcgt cttcaccctc actggctgtc gcttctcaat cagactccaa gcagcgaaga 180
 cttttggttg attttccaaa aggctcagta agcaatgcmc agcagccaga tctgtccaaa 240
 gcagtttcac tctcaatggg actgtatatg ggagagacag aaacaaaagt gatgggaaat 300

155193_1

gacctgggat	tcccacagca	gggccaaatc	agcctttcct	cgggggaaac	agacttaaag	360
cttttgaag	aaagcattgc	aaacctcaat	aggctgacca	gtgttccaga	gaaccccaag	420
agttcagcat	ccactgctgt	gtctgctgcc	cccacagaga	aggagtttcc	aaaaactcac	480
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tcgaatgagg	actgcaagcc	tctcatttta	ccggacacta	aacccaaaat	taaggataat	780
ggagatctgg	ttttgtcaag	ccccagtaat	gtaacactgc	ccaagtga	aacagaaaaa	840
gaagatttca	tcgaactctg	caccctggg	gtaattaagc	aagagaaact	gggcacagtt	900
tactgtcagg	caagctttcc	tggagcaa	ataattggta	ataaaatgtc	tgccatttct	960
gttcatggtg	tgagtacctc	tggaggacag	atgtaccact	atgacatgaa	tacagcatcc	1020
ctttctcaac	agcaggatca	gaagcctatt	tttaatgtca	ttccaccaat	tcccgttgg	1080
tccgaaaatt	ggaatagggtg	ccaaggatct	ggagatgaca	acttgacttc	tctggggact	1140
ctgaacttcc	ctgggtcgaa	agttttttct	aatggctatt	caagccccag	catgagacca	1200
gatgtaagct	ctcctccatc	cagctcctca	acagcaacaa	caggaccacc	tcccaaactc	1260
tgcttgggtg	gctctgatga	agcttcagga	tgtcattatg	gagtcttaac	ttgtggaagc	1320
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cagcaggcca	ctacaggagt	ctcacaagaa	acctctgaaa	atcctggtaa	caaaacaata	1560
gttcctgcaa	cgttaccaca	actcaccct	accctgggtg	cactgttgga	ggttattgaa	1620
cctgaagtgt	tatatgcagg	atatgatagc	tctgttccag	actcaacttg	gaggatcatg	1680
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atgtttctta	tggcatttgc	tctgggggtg	agatcatata	gacaatcaag	tgcaaacctg	1860
ctgtgttttg	ctcctgatct	gattattaat	gagcagagaa	tgactctacc	ctgcatgtac	1920
gaccaatgta	aacacatgct	gtatgtttcc	tctgagttac	acaggcttca	ggtatcttat	1980
gaagagtatc	tctgtatgaa	aaccttactg	cttctctctt	cagttcctaa	ggacggtctg	2040
aagagccaag	agctatttga	tgaaattaga	atgacctaca	tcaaagagct	aggaaaagcc	2100
attgtcaaga	gggaaggaaa	ctccagccag	aactggcagc	ggttttatca	actgacaaaa	2160
ctcttggtt	ctatgcatga	agtgggtgaa	aatctcctta	actattgctt	ccaaacattt	2220
ttggataaga	ccatgagtat	tgaattcccc	gagatgttag	ctgaaatcat	caccaatcag	2280
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155193_1

<210> 452

<211> 778

<212> PRT

<213> Homo sapiens

<400> 452

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

Leu Arg Gly Gly Ala Thr Val Lys Val Ser Ala Ser Ser Pro Ser Leu
35 40 45

Ala Val Ala Ser Gln Ser Asp Ser Lys Gln Arg Arg Leu Leu Val Asp
50 55 60

Phe Pro Lys Gly Ser Val Ser Asn Ala Gln Gln Pro Asp Leu Ser Lys
65 70 75 80

Ala Val Ser Leu Ser Met Gly Leu Tyr Met Gly Glu Thr Glu Thr Lys
85 90 95

Val Met Gly Asn Asp Leu Gly Phe Pro Gln Gln Gly Gln Ile Ser Leu
100 105 110

Ser Ser Gly Glu Thr Asp Leu Lys Leu Leu Glu Glu Ser Ile Ala Asn
115 120 125

Leu Asn Arg Ser Thr Ser Val Pro Glu Asn Pro Lys Ser Ser Ala Ser
130 135 140

Thr Ala Val Ser Ala Ala Pro Thr Glu Lys Glu Phe Pro Lys Thr His
145 150 155 160

Ser Asp Val Ser Ser Glu Gln Gln His Leu Lys Gly Gln Thr Gly Thr
165 170 175

Asn Gly Gly Asn Val Lys Leu Tyr Thr Thr Asp Gln Ser Thr Phe Asp
180 185 190

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

Asn Glu Ser Pro Trp Arg Ser Asp Leu Leu Ile Asp Glu Asn Cys Leu
210 215 220

Leu Ser Pro Leu Ala Gly Glu Asp Asp Ser Phe Leu Leu Glu Gly Asn
225 230 235 240

Ser Asn Glu Asp Cys Lys Pro Leu Ile Leu Pro Asp Thr Lys Pro Lys
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				245					155193_1					250					255
Ile	Lys	Asp	Asn 260	Gly	Asp	Leu	Val	Leu 265	Ser	Ser	Pro	Ser	Asn 270	Val	Thr				
Leu	Pro	Gln 275	Val	Lys	Thr	Glu	Lys 280	Glu	Asp	Phe	Ile	Glu 285	Leu	Cys	Thr				
Pro	Gly 290	Val	Ile	Lys	Gln	Glu 295	Lys	Leu	Gly	Thr	Val 300	Tyr	Cys	Gln	Ala				
Ser 305	Phe	Pro	Gly	Ala	Asn 310	Ile	Ile	Gly	Asn	Lys 315	Met	Ser	Ala	Ile	Ser 320				
Val	His	Gly	Val	Ser 325	Thr	Ser	Gly	Gly	Gln 330	Met	Tyr	His	Tyr	Asp 335	Met				
Asn	Thr	Ala	Ser 340	Leu	Ser	Gln	Gln	Gln 345	Asp	Gln	Lys	Pro	Ile 350	Phe	Asn				
Val	Ile	Pro 355	Pro	Ile	Pro	Val	Gly 360	Ser	Glu	Asn	Trp	Asn 365	Arg	Cys	Gln				
Gly	Ser 370	Gly	Asp	Asp	Asn	Leu 375	Thr	Ser	Leu	Gly	Thr 380	Leu	Asn	Phe	Pro				
Gly 385	Arg	Thr	Val	Phe	Ser 390	Asn	Gly	Tyr	Ser	Ser 395	Pro	Ser	Met	Arg	Pro 400				
Asp	Val	Ser	Ser	Pro 405	Pro	Ser	Ser	Ser	Ser 410	Thr	Ala	Thr	Thr	Gly 415	Pro				
Pro	Pro	Lys	Leu 420	Cys	Leu	Val	Cys	Ser 425	Asp	Glu	Ala	Ser	Gly 430	Cys	His				
Tyr	Gly	Val 435	Leu	Thr	Cys	Gly	Ser 440	Cys	Lys	Val	Phe	Phe 445	Lys	Arg	Ala				
Val	Glu 450	Gly	Gln	His	Asn	Tyr 455	Leu	Cys	Ala	Gly	Arg 460	Asn	Asp	Cys	Ile				
Ile 465	Asp	Lys	Ile	Arg	Arg 470	Lys	Asn	Cys	Pro	Ala 475	Cys	Arg	Tyr	Arg	Lys 480				
Cys	Leu	Gln	Ala	Gly 485	Met	Asn	Leu	Glu	Ala 490	Arg	Lys	Thr	Lys	Lys 495	Lys				
Ile	Lys	Gly	Ile 500	Gln	Gln	Ala	Thr	Thr 505	Gly	Val	Ser	Gln	Glu 510	Thr	Ser				
Glu	Asn	Pro	Gly	Asn	Lys	Thr	Ile	Val	Pro	Ala	Thr	Leu	Pro	Gln	Leu				

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515		520		525											
Thr	Pro	Thr	Leu	Val	Ser	Leu	Leu	Glu	Val	Ile	Glu	Pro	Glu	Val	Leu
	530					535					540				
Tyr	Ala	Gly	Tyr	Asp	Ser	Ser	Val	Pro	Asp	Ser	Thr	Trp	Arg	Ile	Met
545					550					555					560
Thr	Thr	Leu	Asn	Met	Leu	Gly	Gly	Arg	Gln	Val	Ile	Ala	Ala	Val	Lys
				565					570					575	
Trp	Ala	Lys	Ala	Ile	Pro	Gly	Phe	Arg	Asn	Leu	His	Leu	Asp	Asp	Gln
			580					585					590		
Met	Thr	Leu	Leu	Gln	Tyr	Ser	Trp	Met	Phe	Leu	Met	Ala	Phe	Ala	Leu
		595					600					605			
Gly	Trp	Arg	Ser	Tyr	Arg	Gln	Ser	Ser	Ala	Asn	Leu	Leu	Cys	Phe	Ala
	610					615					620				
Pro	Asp	Leu	Ile	Ile	Asn	Glu	Gln	Arg	Met	Thr	Leu	Pro	Cys	Met	Tyr
625					630					635					640
Asp	Gln	Cys	Lys	His	Met	Leu	Tyr	Val	Ser	Ser	Glu	Leu	His	Arg	Leu
				645					650					655	
Gln	Val	Ser	Tyr	Glu	Glu	Tyr	Leu	Cys	Met	Lys	Thr	Leu	Leu	Leu	Leu
			660					665					670		
Ser	Ser	Val	Pro	Lys	Asp	Gly	Leu	Lys	Ser	Gln	Glu	Leu	Phe	Asp	Glu
		675					680					685			
Ile	Arg	Met	Thr	Tyr	Ile	Lys	Glu	Leu	Gly	Lys	Ala	Ile	Val	Lys	Arg
	690					695					700				
Glu	Gly	Asn	Ser	Ser	Gln	Asn	Trp	Gln	Arg	Phe	Tyr	Gln	Leu	Thr	Lys
705					710					715					720
Leu	Leu	Asp	Ser	Met	His	Glu	Val	Val	Glu	Asn	Leu	Leu	Asn	Tyr	Cys
				725					730					735	
Phe	Gln	Thr	Phe	Leu	Asp	Lys	Thr	Met	Ser	Ile	Glu	Phe	Pro	Glu	Met
			740					745					750		
Leu	Ala	Glu	Ile	Ile	Thr	Asn	Gln	Ile	Pro	Lys	Tyr	Ser	Asn	Gly	Asn
		755					760					765			
Ile	Lys	Lys	Leu	Leu	Phe	His	Gln	Lys	Val						
	770					775									

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

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

<400> 453
 ggtggttcag gtggtggcgg gagcgggtga gggagcagcg gtggagcgat cgcc

54

<210> 454
 <211> 18
 <212> PRT
 <213> Artificial Sequence

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

<400> 454
 Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ser Gly Gly Ala
 1 5 10 15

Ile Ala

<210> 455
 <211> 51
 <212> DNA
 <213> Artificial Sequence

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

<400> 455
 tctctcgggt gttcaggtgg tggcgggagc ggtggaggga gcagcgggtg a

51

<210> 456
 <211> 17
 <212> PRT
 <213> Artificial Sequence

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

<400> 456
 Ser Leu Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ser Gly
 1 5 10 15

Gly

<210> 457
 <211> 11
 <212> DNA
 <213> Artificial Sequence

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

oligonucleotide

<400> 457
gctcgagcgg a

11

<210> 458
<211> 4
<212> PRT
<213> Artificial Sequence

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

<400> 458
Gly Ser Ser Gly
1

<210> 459
<211> 1080
<212> DNA
<213> Homo sapiens

<400> 459	
atgattctca actcttctac tgaagatggt attaaaagaa tccaagatga ttgtcccaaa	60
gctggaaggc ataattacat atttgtcatg attcctactt tatacagtat catctttgtg	120
gtgggaatat ttggaaacag cttggtggtg atagtcattt acttttataat gaagctgaag	180
actgtggcca gtgtttttct tttgaattta gcactggctg acttatgctt tttactgact	240
ttgccactat gggctgtcta cacagctatg gaataccgct ggcccttttg caattaccta	300
tgtaagattg cttcagccag cgtcagtttc aacctgtacg ctagtgtgtt tctactcacg	360
tgtctcagca ttgatcgata cctggctatt gttcacccaa tgaagtcccg ccttcgacgc	420
acaatgcttg tagccaaagt cacctgcac atcatttggc tgctggcagg cttggccagt	480
ttgccagcta taatccatcg aaatgtattt ttcattgaga acaccaatat tacagtttgt	540
gctttccatt atgagtccca aaattcaacc cttccgatag ggctgggcct gacaaaaaat	600
atactgggtt tcctgtttcc ttttctgac attcttaca gttatactct tatttggaag	660
gccctaaaga aggcttatga aattcagaag aacaaaccaa gaaatgatga tatttttaag	720
ataattatgg caattgtgct tttctttttc ttttcctgga ttccccacca aatattcact	780
tttctggatg tattgattca actaggcatc atacgtgact gtagaattgc agatattgtg	840
gacacggcca tgcctatcac catttgtata gcttatttta acaattgcct gaatcctctt	900
ttttatggct ttctggggaa aaaatttaaa agatattttc tccagcttct aaaatatatt	960
ccccaaaag ccaaattcca ctcaaacctt tcaacaaaaa tgagcacgct ttcctaccgc	1020
ccctcagata atgtaagctc atccaccaag aagcctgcac catgttttga gggtgagtga	1080

<210> 460
<211> 359
<212> PRT
<213> Homo sapiens

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<400> 460

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

Asp Cys Pro Lys Ala Gly Arg His Asn Tyr Ile Phe Val Met Ile Pro
20 25 30

Thr Leu Tyr Ser Ile Ile Phe Val Val Gly Ile Phe Gly Asn Ser Leu
35 40 45

Val Val Ile Val Ile Tyr Phe Tyr Met Lys Leu Lys Thr Val Ala Ser
50 55 60

Val Phe Leu Leu Asn Leu Ala Leu Ala Asp Leu Cys Phe Leu Leu Thr
65 70 75 80

Leu Pro Leu Trp Ala Val Tyr Thr Ala Met Glu Tyr Arg Trp Pro Phe
85 90 95

Gly Asn Tyr Leu Cys Lys Ile Ala Ser Ala Ser Val Ser Phe Asn Leu
100 105 110

Tyr Ala Ser Val Phe Leu Leu Thr Cys Leu Ser Ile Asp Arg Tyr Leu
115 120 125

Ala Ile Val His Pro Met Lys Ser Arg Leu Arg Arg Thr Met Leu Val
130 135 140

Ala Lys Val Thr Cys Ile Ile Ile Trp Leu Leu Ala Gly Leu Ala Ser
145 150 155 160

Leu Pro Ala Ile Ile His Arg Asn Val Phe Phe Ile Glu Asn Thr Asn
165 170 175

Ile Thr Val Cys Ala Phe His Tyr Glu Ser Gln Asn Ser Thr Leu Pro
180 185 190

Ile Gly Leu Gly Leu Thr Lys Asn Ile Leu Gly Phe Leu Phe Pro Phe
195 200 205

Leu Ile Ile Leu Thr Ser Tyr Thr Leu Ile Trp Lys Ala Leu Lys Lys
210 215 220

Ala Tyr Glu Ile Gln Lys Asn Lys Pro Arg Asn Asp Asp Ile Phe Lys
225 230 235 240

Ile Ile Met Ala Ile Val Leu Phe Phe Phe Phe Ser Trp Ile Pro His
245 250 255

Gln Ile Phe Thr Phe Leu Asp Val Leu Ile Gln Leu Gly Ile Ile Arg
260 265 270

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Asp Cys Arg Ile Ala Asp Ile Val Asp Thr Ala Met Pro Ile Thr Ile
275 280 285

Cys Ile Ala Tyr Phe Asn Asn Cys Leu Asn Pro Leu Phe Tyr Gly Phe
290 295 300

Leu Gly Lys Lys Phe Lys Arg Tyr Phe Leu Gln Leu Leu Lys Tyr Ile
305 310 315 320

Pro Pro Lys Ala Lys Ser His Ser Asn Leu Ser Thr Lys Met Ser Thr
325 330 335

Leu Ser Tyr Arg Pro Ser Asp Asn Val Ser Ser Ser Thr Lys Lys Pro
340 345 350

Ala Pro Cys Phe Glu Val Glu
355

<210> 461
<211> 87
<212> DNA
<213> Homo sapiens

<400> 461
atgaactcct tctccacaag cgccttcggt ccagttgcct tctccctggg gctgctcctg 60
gtgttgctg ctgccttccc tgcccca 87

<210> 462
<211> 29
<212> PRT
<213> Homo sapiens

<400> 462
Met Asn Ser Phe Ser Thr Ser Ala Phe Gly Pro Val Ala Phe Ser Leu
1 5 10 15

Gly Leu Leu Leu Val Leu Pro Ala Ala Phe Pro Ala Pro
20 25

<210> 463
<211> 597
<212> DNA
<213> Artificial Sequence

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

<400> 463
atgaactcct tctccacaag cgccttcggt ccagttgcct tctccctggg gctgctcctg 60
gtgttgctg ctgccttccc tgcccaagtg ttacactcg aagatttcgt aggggactgg 120
cggcagacag ccggctacaa cctggaccaa gtccttgagc agggcgggtgt gtccagtttg 180
tttcagaatc tcgggggtgtc cgtaactccg atccaaagga ttgtcctgag cggtgaaaac 240

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ggcctgaaga tcgacatcca tgtcatcatc ccgtatgaag gtctgagcgg cgatcagatg      300
ggccagatcg aaaaaatttt taagggtgtg taccctgtgg atgatcatca ctttaagggtg      360
attctgcact atggcacact ggtaatcgac ggggttacgc cgaacatgat cgactatttc      420
ggacggccgt atgaaggcat cgccgtgttc gacggcaaaa agatcactgt aaccgggacc      480
ctgtggaacg gcaacaaaat tatcgacgag cgcctgatca accccgacgg ctccctgctg      540
ttccgcgtaa ccatcaacgg agtgaccggc tggcggctgt gcgagcgcac tttggcg      597

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<210> 464
 <211> 199
 <212> PRT
 <213> Artificial Sequence

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

<400> 464
 Met Asn Ser Phe Ser Thr Ser Ala Phe Gly Pro Val Ala Phe Ser Leu
 1 5 10 15

Gly Leu Leu Leu Val Leu Pro Ala Ala Phe Pro Ala Pro Val Phe Thr
 20 25 30

Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu
 35 40 45

Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu
 50 55 60

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

Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
 85 90 95

Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
 100 105 110

Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
 115 120 125

Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
 130 135 140

Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
 145 150 155 160

Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
 165 170 175

Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
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180 185 155193_1 190

Leu Cys Glu Arg Ile Leu Ala
195

<210> 465
<211> 591
<212> DNA
<213> Artificial Sequence

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

<400> 465
atggcttact ccacactggt catcattgct ctcacagccg tcgtaacaca agcctcctcc 60
acacagaaaa gcaacctgac agtggtttaca ctcgaagatt tcgtagggga ctggcggcag 120
acagccggct acaacctgga ccaagtcctt gagcagggcg gtgtgtccag tttgtttcag 180
aatctcgggg tgtccgtaac tccgatccaa aggattgtcc tgagcgggtga aaacggcctg 240
aagatcgaca tccatgtcat catcccgtat gaaggtctga gcggcgatca gatgggccag 300
atcgaaaaaa tttttaaggt ggtgtaccct gtggatgatc atcactttaa ggtgattctg 360
cactatggca cactggtaat cgacgggggt acgccgaaca tgatcgacta tttcggacgg 420
ccgtatgaag gcatcgccgt gttcgacggc aaaaagatca ctgtaaccgg gaccctgtgg 480
aacggcaaca aaattatcga cgagcgctg atcaaccccg acggctccct gctgttccgc 540
gtaaccatca acggagtgc cggtggcg ctgtgcgagc gcattttggc g 591

<210> 466
<211> 197
<212> PRT
<213> Artificial Sequence

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

<400> 466
Met Ala Tyr Ser Thr Leu Phe Ile Ile Ala Leu Thr Ala Val Val Thr
1 5 10 15
Gln Ala Ser Ser Thr Gln Lys Ser Asn Leu Thr Val Phe Thr Leu Glu
20 25 30
Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln
35 40 45
Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val
50 55 60
Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu
65 70 75 80

Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp
 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160
 Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp
 Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp
 Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly
 130 135 140 145 150 155 160 165 170 175 180 185 190 195
 Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp
 Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser
 Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys
 Glu Arg Ile Leu Ala
 195

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ggagagcttg ccctggtaac taacaaacct cgagcagctt ctgcccacgc cattgggact      840
gtcaaattgt tagcaatgga tgtgcaagca tttgaaaggc ttctgggacc ttgcatggaa      900
attatgaaaa ggaacatcgc tacctatgaa gaacagttag ttgccctgta tggaacgaac      960
atggatattg tagggtcagg tggatctgga ggtagctctt ctatggtctt cacactcgaa    1020
gat                                                                    1023

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<210> 468
 <211> 341
 <212> PRT
 <213> Artificial Sequence

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

<400> 468
 Met Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln
 1 5 10 15

 Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val
 20 25 30

 Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu
 35 40 45

 Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp
 50 55 60

 Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp
 65 70 75 80

 Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp
 85 90 95

 Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly
 100 105 110

 Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp
 115 120 125

 Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser
 130 135 140

 Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys
 145 150 155 160

 Glu Arg Ile Leu Ala Ser Ser Ser Gly Gly Ser Gly Gly Ser Gly Met
 165 170 175

 Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu Glu Phe
 180 185 190

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Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val Tyr Asn
195 200 205

Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe
210 215 220

Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly Lys
225 230 235 240

Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser Arg
245 250 255

Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro Arg Ala
260 265 270

Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp Val
275 280 285

Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys Arg
290 295 300

Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn
305 310 315 320

Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser Met Val
325 330 335

Phe Thr Leu Glu Asp
340

<210> 469
<211> 1023
<212> DNA
<213> Artificial Sequence

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

<400> 469
atgcagacag ccggctacaa cctggaccaa gtccttgaac agggaggtgt gtccagtttg 60
tttcagaatc tcggggtgtc cgtaactccg atccaaagga ttgtcctgag cggtgaaaat 120
gggctgaaga tcgacatcca tgtcatcatc ccgtatgaag gtctgagcgg cgaccaaagt 180
ggccagatcg aaaaaatttt taaggtggtg taccctgtgg atgatcatca ctttaagggtg 240
atcctgcact atggcacact ggtaatcgac ggggttacgc cgaacatgat cgactatttc 300
ggacggccgt atgaaggcat cgccgtgttc gacggcaaaa agatcactgt aacagggacc 360
ctgtggaacg gcaacaaaat tatcgacgag cgcctgatca accccgacgg ctccctgctg 420
ttccgagtaa ccatcaacgg agtgaccggc tggcggctgt gcgaacgcat tctggctagc 480
tcaagcggag gttcaggcgg ttccggaatg tatgaaagct ttattgagtc actgccattc 540

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cttaaattctt tggagttttc tgcacgcctg aaagtagtag atgtgatagg caccaaagta 600
 tacaacgatg gagaacaaat cattgctcag ggagattcgg ctgattcttt ttccattatt 660
 gaatctggag aagtgaaaat tactatgaaa agaaagggta aatcagaagt ggaagagaat 720
 ggtgcagtag aaatcgctcg atgctcgcg ggacagtact ttggagagct tgccctggta 780
 actaacaac ctcgagcagc ttctgcccac gccattggga ctgtcaaatg tttagcaatg 840
 gatgtgcaag catttgaaag gcttctggga ccttgcattg aaattatgaa aaggaacatc 900
 gctacctatg aagaacagtt agttgccctg tatggaacga acatggatat ttaggggtca 960
 ggtggatctg gaggtagctc ttctatggtc ttcacactcg aagatttcgt tggggactgg 1020
 cga 1023

<210> 470

<211> 341

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 470

Met Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly
 1 5 10 15

Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln
 20 25 30

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

Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu
 50 55 60

Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val
 65 70 75 80

Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met
 85 90 95

Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly
 100 105 110

Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile
 115 120 125

Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr
 130 135 140

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

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Ser Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu
165 170 175

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

Val Asp Val Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile
195 200 205

Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu
210 215 220

Val Lys Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn
225 230 235 240

Gly Ala Val Glu Ile Ala Arg Cys Ser Arg Gly Gln Tyr Phe Gly Glu
245 250 255

Leu Ala Leu Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile
260 265 270

Gly Thr Val Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu
275 280 285

Leu Gly Pro Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu
290 295 300

Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn Met Asp Ile Val Gly Ser
305 310 315 320

Gly Gly Ser Gly Gly Ser Ser Ser Met Val Phe Thr Leu Glu Asp Phe
325 330 335

Val Gly Asp Trp Arg
340

<210> 471

<211> 1023

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 471

atgggtgaaa atgggctgaa gatcgacatc catgtcatca tcccgtatga aggtctgagc 60

ggcgaccaa tgggccagat cgaaaaaatt ttttaaggtg tgtaccctgt ggatgatcat 120

cactttaagg tgatcctgca ctatggcaca ctggtaatcg acgggggttac gccgaacatg 180

atcgactatt tcggacggcc gatatgaaggc atcgccgtgt tcgacggcaa aaagatcact 240

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gtaacagggg	ccctgtggaa	cggcaacaaa	attatcgacg	agcgccctgat	caacccccgac	300
ggctccctgc	tggtccgagt	aaccatcaac	ggagtgaccg	gctggcggct	gtgcgaacgc	360
attctggcta	gctcaagcgg	aggttcaggc	ggttccggaa	tgtatgaaag	ctttattgag	420
tcactgccat	tccttaaata	tttgagttt	tctgcacgcc	tgaaagtagt	agatgtgata	480
ggcaccaaag	tatacaacga	tggagaacaa	atcattgctc	agggagattc	ggctgattct	540
tttttcatta	ttgaatctgg	agaagtgaag	attactatga	aaagaaaggg	taaatacagaa	600
gtggaagaga	atgggtgcagt	agaaatcgct	cgatgctcgc	ggggacagta	ctttggagag	660
cttgccctgg	taactaacia	acctcgagca	gcttctgccc	acgccattgg	gactgtcaaa	720
tgtttagcaa	tggatgtgca	agcatttgaa	aggcttctgg	gaccttgcac	ggaaattatg	780
aaaaggaaca	tcgctaccta	tgaagaacag	ttagttgccc	tgtatggaac	gaacatggat	840
attgtagggg	caggtggatc	tggaggtagc	tcttctatgg	tcttcacact	cgaagatttc	900
gttggggact	ggcgacagac	agccggctac	aacctggacc	aagtccttga	acaggagggt	960
gtgtccagtt	tgtttcagaa	tctcgggggtg	tccgtaactc	cgatccaaag	gattgtcctg	1020
agc						1023

<210> 472

<211> 341

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 472

Met	Gly	Glu	Asn	Gly	Leu	Lys	Ile	Asp	Ile	His	Val	Ile	Ile	Pro	Tyr
1				5				10						15	

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

Val	Val	Tyr	Pro	Val	Asp	Asp	His	His	Phe	Lys	Val	Ile	Leu	His	Tyr
		35					40					45			

Gly	Thr	Leu	Val	Ile	Asp	Gly	Val	Thr	Pro	Asn	Met	Ile	Asp	Tyr	Phe
	50					55					60				

Gly	Arg	Pro	Tyr	Glu	Gly	Ile	Ala	Val	Phe	Asp	Gly	Lys	Lys	Ile	Thr
65					70					75				80	

Val	Thr	Gly	Thr	Leu	Trp	Asn	Gly	Asn	Lys	Ile	Ile	Asp	Glu	Arg	Leu
				85					90					95	

Ile	Asn	Pro	Asp	Gly	Ser	Leu	Leu	Phe	Arg	Val	Thr	Ile	Asn	Gly	Val
			100					105					110		

Thr	Gly	Trp	Arg	Leu	Cys	Glu	Arg	Ile	Leu	Ala	Ser	Ser	Ser	Gly	Gly
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

115 120 155193_1 125

Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe
130 135 140

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

Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp
165 170 175

Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr
180 185 190

Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu
195 200 205

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

Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys
225 230 235 240

Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys
245 250 255

Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val
260 265 270

Ala Leu Tyr Gly Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly
275 280 285

Gly Ser Ser Ser Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp
290 295 300

Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly
305 310 315 320

Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln
325 330 335

Arg Ile Val Leu Ser
340

<210> 473

<211> 1023

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

155193_1

<400> 473
 atgctgaaga tcgacatcca tgtcatcatc ccgtatgaag gtctgagcgg cgaccaaagt 60
 ggccagatcg aaaaaatttt taagggtggtg taccctgtgg atgatcatca ctttaagggtg 120
 atcctgcact atggcacact ggtaatcgac ggggttacgc cgaacatgat cgactatttc 180
 ggacggccgt atgaaggcat cgccgtgttc gacggcaaaa agatcactgt aacagggacc 240
 ctgtggaacg gcaacaaaat tatcgacgag cgccctgatca accccgacgg ctccctgctg 300
 ttccgagtaa ccatcaacgg agtgaccggc tggcggctgt gcgaacgcat tctggctagc 360
 tcaagcggag gttcaggcgg ttccggaatg tatgaaagct ttattgagtc actgccattc 420
 cttaaattctt tggagttttc tgcacgcctg aaagtagtag atgtgatagg caccaaagta 480
 tacaacgatg gagaacaaat cattgctcag ggagattcgg ctgattcttt ttccattatt 540
 gaatctggag aagtgaaaat tactatgaaa agaaagggta aatcagaagt ggaagagaat 600
 ggtgcagtag aaatcgctcg atgctcgagg ggacagtact ttggagagct tgccctggta 660
 actaacaac ctcgagcagc ttctgccac gccattggga ctgtcaaatg tttagcaatg 720
 gatgtgcaag catttgaaag gcttctggga ccttgcatgg aaattatgaa aaggaacatc 780
 gctacctatg aagaacagtt agttgccctg tatggaacga acatggatat tgtagggtca 840
 ggtggatctg gaggtagctc ttctatggtc ttcacactcg aagatttcgt tggggactgg 900
 cgacagacag ccggctacaa cctggaccaa gtccttgaac agggaggtgt gtccagtttg 960
 ttccagaatc tcggggtgtc cgtaactccg atccaaagga ttgtcctgag cgggtgaaaat 1020
 ggg 1023

<210> 474
 <211> 341
 <212> PRT
 <213> Artificial Sequence

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

<400> 474
 Met Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
 1 5 10 15
 Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
 20 25 30
 Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
 35 40 45
 Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
 50 55 60
 Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
 65 70 75 80

155193_1
 Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
 85 90 95
 Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
 100 105 110
 Leu Cys Glu Arg Ile Leu Ala Ser Ser Ser Gly Gly Ser Gly Gly Ser
 115 120 125
 Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu
 130 135 140
 Glu Phe Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val
 145 150 155 160
 Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser
 165 170 175
 Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys
 180 185 190
 Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys
 195 200 205
 Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro
 210 215 220
 Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met
 225 230 235 240
 Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met
 245 250 255
 Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly
 260 265 270
 Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser
 275 280 285
 Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 290 295 300
 Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 305 310 315 320
 Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
 325 330 335
 Ser Gly Glu Asn Gly
 340

155193_1

<210> 475
 <211> 1023
 <212> DNA
 <213> Artificial Sequence

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

<400> 475
 atggacatcc atgtcatcat cccgtatgaa ggtctgagcg gcgaccaa at gggccagatc 60
 gaaaaaattt ttaagggtgt gtaccctgtg gatgatcatc actttaaggt gatcctgcac 120
 tatggcacac tggtaatcga cgggggttacg ccgaacatga tcgactatct cggacggccg 180
 tatgaaggca tcgccgtgtt cgacggcaaa aagatcactg taacagggac cctgtggaac 240
 ggcaacaaaa ttatcgacga gcgcctgatc aaccccgcg gctccctgct gttccgagta 300
 accatcaacg gagtgaccgg ctggcggtcg tgcgaacgca ttctggctag ctcaagcgga 360
 gggttcaggcg gttccggaat gtatgaaagc tttattgagt cactgccatt ctttaaactc 420
 ttggagtttt ctgcacgcct gaaagtagta gatgtgatag gcaccaaagt atacaacgat 480
 ggagaacaaa tcattgctca gggagattcg gctgattctt ttttcattat tgaatctgga 540
 gaagtgaaaa ttactatgaa aagaaagggg aaatcagaag tggaagagaa tgggtgcagta 600
 gaaatcgctc gatgctcgcg gggacagtac tttggagagc ttgccctggt aactaacaaa 660
 cctcgagcag cttctgcccc cgccattggg actgtcaa at gtttagcaat ggatgtgcaa 720
 gcatttgaaa ggcttctggg accttgcatg gaaattatga aaaggaacat cgctacctat 780
 gaagaacagt tagttgccct gtatggaacg aacatggata ttgtagggtc aggtggatct 840
 ggaggtagct cttctatggt cttcacactc gaagatttcg ttggggactg gcgacagaca 900
 gccggctaca acctggacca agtccttgaa cagggagggtg tgtccagttt gtttcagaat 960
 ctcgggggtgt ccgtaactcc gatccaaagg attgtcctga gcggtgaaaa tgggctgaag 1020
 atc 1023

<210> 476
 <211> 341
 <212> PRT
 <213> Artificial Sequence

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

<400> 476
 Met Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln
 1 5 10 15
 Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp
 20 25 30
 His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
 35 40 45

155193_1

Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
 50 55 60
 Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
 65 70 75 80
 Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
 85 90 95
 Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
 100 105 110
 Arg Ile Leu Ala Ser Ser Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr
 115 120 125
 Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu Glu Phe Ser
 130 135 140
 Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val Tyr Asn Asp
 145 150 155 160
 Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile
 165 170 175
 Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly Lys Ser
 180 185 190
 Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser Arg Gly
 195 200 205
 Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro Arg Ala Ala
 210 215 220
 Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp Val Gln
 225 230 235 240
 Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys Arg Asn
 245 250 255
 Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn Met
 260 265 270
 Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser Met Val Phe
 275 280 285
 Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn
 290 295 300
 Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn
 305 310 315 320

Leu Gly val ser val Thr Pro Ile Gln Arg Ile val Leu Ser Gly Glu
325 330 335

<210> 477
<211> 1023
<212> DNA
<213> Artificial Sequence

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

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<210> 478
<211> 341
<212> PRT
<213> Artificial Sequence
```

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

<400> 478
Met Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu
1 5 10 15

155193_1

Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro
 20 25 30
 Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly
 35 40 45
 Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro
 50 55 60
 Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp
 65 70 75 80
 Arg Leu Cys Glu Arg Ile Leu Ala Ser Ser Ser Gly Gly Ser Gly Gly
 85 90 95
 Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser
 100 105 110
 Leu Glu Phe Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys
 115 120 125
 Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp
 130 135 140
 Ser Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg
 145 150 155 160
 Lys Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg
 165 170 175
 Cys Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys
 180 185 190
 Pro Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala
 195 200 205
 Met Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile
 210 215 220
 Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr
 225 230 235 240
 Gly Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser
 245 250 255
 Ser Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr
 260 265 270
 Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser
 275 280 285

155193_1

Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val
290 295 300

Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro
305 310 315 320

Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe
325 330 335

Lys Val Val Tyr Pro
340

<210> 479

<211> 1023

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 479

atggatgac atcactttaa ggtgatcctg cactatggca cactggtaat cgacgggggtt	60
acgccgaaca tgatcgacta tttcggacgg ccgatgaag gcatcgccgt gttcgacggc	120
aaaaagatca ctgtaacagg gaccctgtgg aacggcaaca aaattatcga cgagcgcctg	180
atcaaccccc acggctccct gctgttccga gtaaccatca acggagtgc cggctggcgg	240
ctgtgcgaac gcattctggc tagctcaagc ggaggttcag gcggttccgg aatgtatgaa	300
agctttattg agtcaactgcc attccttaaa tctttggagt tttctgcacg cctgaaagta	360
gtagatgtga taggcaccaa agtatacaac gatggagaac aaatcattgc tcaggagat	420
tcggctgatt cttttttcat tattgaatct ggagaagtga aaattactat gaaaagaaag	480
ggtaaatacag aagtgaaga gaatggtgca gtagaaatcg ctcgatgctc gcggggacag	540
tactttggag agcttgccct ggtaactaac aaacctcgag cagcttctgc ccacgccatt	600
gggactgtca aatgttttagc aatggatgtg caagcatttg aaaggcttct gggaccttgc	660
atggaaatta tgaaaaggaa catcgctacc tatgaagaac agttagtgc cctgtatgga	720
acgaacatgg atattgtagg gtcagggtgga tctggaggta gctcttctat ggtcttcaca	780
ctcgaagatt tcgttgggga ctggcgacag acagccggct acaacctgga ccaagtcctt	840
gaacagggag gtgtgtccag tttgtttcag aatctcgggg tgtccgtaac tccgatccaa	900
aggattgtcc tgagcgggtga aaatgggctg aagatcgaca tccatgtcat catcccgat	960
gaaggtctga gcggcgacca aatgggcccag atcgaaaaaa tttttaagggt ggtgtaccct	1020
gtg	1023

<210> 480

<211> 341

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 480

Met Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
1 5 10 15Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
20 25 30Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr
35 40 45Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp
50 55 60Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
65 70 75 80Leu Cys Glu Arg Ile Leu Ala Ser Ser Ser Gly Gly Ser Gly Gly Ser
85 90 95Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu
100 105 110Glu Phe Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val
115 120 125Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser
130 135 140Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys
145 150 155 160Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys
165 170 175Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro
180 185 190Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met
195 200 205Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met
210 215 220Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly
225 230 235 240Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser
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155193_1															
245								250				255			
Met	Val	Phe	Thr 260	Leu	Glu	Asp	Phe	Val 265	Gly	Asp	Trp	Arg	Gln 270	Thr	Ala
Gly	Tyr	Asn 275	Leu	Asp	Gln	Val	Leu 280	Glu	Gln	Gly	Gly	Val 285	Ser	Ser	Leu
Phe	Gln 290	Asn	Leu	Gly	Val	Ser 295	Val	Thr	Pro	Ile	Gln 300	Arg	Ile	Val	Leu
Ser 305	Gly	Glu	Asn	Gly	Leu 310	Lys	Ile	Asp	Ile	His 315	Val	Ile	Ile	Pro	Tyr 320
Glu	Gly	Leu	Ser	Gly 325	Asp	Gln	Met	Gly	Gln 330	Ile	Glu	Lys	Ile	Phe 335	Lys
Val	Val	Tyr	Pro 340	Val											

155193_1

cctgtggatg atcatcactt taaggatgatc ctgcactatg gcacactggt aatcgacggg 1020
gtt 1023

<210> 482
<211> 341
<212> PRT
<213> Artificial Sequence

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

<400> 482
Met Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
1 5 10 15

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
20 25 30

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

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
50 55 60

Arg Ile Leu Ala Ser Ser Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr
65 70 75 80

Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu Glu Phe Ser
85 90 95

Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val Tyr Asn Asp
100 105 110

Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile
115 120 125

Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly Lys Ser
130 135 140

Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser Arg Gly
145 150 155 160

Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro Arg Ala Ala
165 170 175

Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp Val Gln
180 185 190

Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys Arg Asn
195 200 205

155193_1

Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn Met
 210 215 220

Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser Met Val Phe
 225 230 235 240

Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn
 245 250 255

Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn
 260 265 270

Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu
 275 280 285

Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu
 290 295 300

Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr
 305 310 315 320

Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu
 325 330 335

Val Ile Asp Gly Val
 340

<210> 483
 <211> 1023
 <212> DNA
 <213> Artificial Sequence

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

<400> 483
 atgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc 60
 gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gagtaaccat caacggagtg 120
 accggctggc ggctgtgcga acgcattctg gctagctcaa gcggagggtc aggcggttcc 180
 ggaatgtatg aaagctttat tgagtcactg ccattcctta aatctttgga gttttctgca 240
 cgcttgaag tagtagatgt gataggcacc aaagtataca acgatggaga acaaattcatt 300
 gctcaggag attcggctga ttcttttttc attattgaat ctggagaagt gaaaattact 360
 atgaaaagaa agggtaaadc agaagtggaa gagaatggtg cagtagaaat cgctcgatgc 420
 tcgcggggac agtacttttg agagcttgcc ctggtaacta acaaacctg agcagcttct 480
 gccacgcca ttgggactgt caaatgttta gcaatggatg tgcaagcatt tgaaaggctt 540
 ctgggacctt gcatggaaat tatgaaaagg aacatcgcta cctatgaaga acagttagtt 600
 gccctgtatg gaacgaacat ggatattgta gggtcagggtg gatctggagg tagctcttct 660

155193_1

atggtcttca cactcgaaga tttcgttggg gactggcgac agacagccgg ctacaacctg	720
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta	780
actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc	840
atcatcccgat atgaagggtct gagcggcgac caaatgggcc agatcgaaaa aatttttaag	900
gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgcactatgg cacactggta	960
atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgtatga aggcacgcgc	1020
gtg	1023

<210> 484
 <211> 341
 <212> PRT
 <213> Artificial Sequence

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

<400> 484
 Met Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly
 1 5 10 15

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

Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg
 35 40 45

Ile Leu Ala Ser Ser Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu
 50 55 60

Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu Glu Phe Ser Ala
 65 70 75 80

Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val Tyr Asn Asp Gly
 85 90 95

Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile
 100 105 110

Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly Lys Ser Glu
 115 120 125

Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser Arg Gly Gln
 130 135 140

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

Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp Val Gln Ala
 165 170 175

155193_1

Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys Arg Asn Ile
180 185 190

Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn Met Asp
195 200 205

Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser Met Val Phe Thr
210 215 220

Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu
225 230 235 240

Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu
245 250 255

Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn
260 265 270

Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser
275 280 285

Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro
290 295 300

Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val
305 310 315 320

Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr
325 330 335

Glu Gly Ile Ala Val
340

<210> 485

<211> 1023

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 485

atgaaaaaga tcaactgtaac agggaccctg tggaacggca acaaaattat cgacgagcgc 60

ctgatcaacc cgcacggctc cctgctgttc cgagtaacca tcaacggagt gaccggctgg 120

cggctgtgcg aacgcattct ggctagctca agcggagggt caggcgggtc cggaatgtat 180

gaaagcttta ttgagtcact gccattcctt aaatctttgg agttttctgc acgcctgaaa 240

gtagtagatg tgataggcac caaagtatac aacgatggag aacaaatcat tgctcagggg 300

gattcggctg attctttttt cattattgaa tctggagaag tgaaaattac tatgaaaaga 360

aagggtaaat cagaagtgga agagaatggt gcagtagaaa tcgctcgatg ctcgcgggga 420

155193_1

cagtactttg gagagcttgc cctggtaact aacaaacctc gagcagcttc tgcccacgcc 480
 attgggactg tcaaattgtt agcaatggat gtgcaagcat ttgaaaggct tctgggacct 540
 tgcattgaaa ttatgaaaag gaacatcgct acctatgaag aacagttagt tgccctgtat 600
 ggaacgaaca tggatattgt agggtcaggt ggatctggag gtagctcttc tatggtcttc 660
 acactcgaag atttcgttgg ggactggcga cagacagccg gctacaacct ggaccaagtc 720
 cttgaacagg gaggtgtgtc cagtttgttt cagaatctcg ggggtgtccgt aactccgac 780
 caaaggattg tcctgagcgg tgaaaatggg ctgaagatcg acatccatgt catcatccc 840
 tatgaaggct tgagcggcga ccaaattggc cagatcga aaatttttaa ggtggtgtac 900
 cctgtggatg atcatcactt taaggatgac ctgcactatg gcacactggt aatcgacggg 960
 gttacgccga acatgatcga ctatttcgga cggccgtatg aaggcatcgc cgtgttcgac 1020
 ggc 1023

<210> 486

<211> 341

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 486

Met Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile
 1 5 10 15

Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val
 20 25 30

Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala
 35 40 45

Ser Ser Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile
 50 55 60

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

Val Val Asp Val Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile
 85 90 95

Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly
 100 105 110

Glu Val Lys Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu
 115 120 125

Asn Gly Ala Val Glu Ile Ala Arg Cys Ser Arg Gly Gln Tyr Phe Gly
 130 135 140

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Glu Leu Ala Leu Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala
145 150 155 160

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

Leu Leu Gly Pro Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr
180 185 190

Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn Met Asp Ile Val Gly
195 200 205

Ser Gly Gly Ser Gly Gly Ser Ser Ser Met Val Phe Thr Leu Glu Asp
210 215 220

Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val
225 230 235 240

Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser
245 250 255

Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys
260 265 270

Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln
275 280 285

Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp
290 295 300

His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
305 310 315 320

Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
325 330 335

Ala Val Phe Asp Gly
340

<210> 487

<211> 1023

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 487

atgaagatca ctgtaacagg gaccctgtgg aacggcaaca aaattatcga cgagcgcctg 60

atcaaccccc acggctccct gctgttccga gtaaccatca acggagtgac cggctggcgg 120

155193_1

ctgtgcgaac gcattctggc tagctcaagc ggagggttcag gcggttccgg aatgtatgaa	180
agctttattg agtcactgcc attccttaaa tctttggagt tttctgcacg cctgaaagta	240
gtagatgtga taggcaccaa agtatacaac gatggagaac aaatcattgc tcagggagat	300
tcggctgatt cttttttcat tattgaatct ggagaagtga aaattactat gaaaagaaag	360
ggtaaatacag aagtgaaga gaatggtgca gtagaaatcg ctcgatgctc gcggggacag	420
tactttggag agcttgccct ggtaactaac aaacctcgag cagcttctgc ccacgccatt	480
gggactgtca aatgttttagc aatggatgtg caagcatttg aaaggcttct gggaccttgc	540
atggaaatta tgaagaggaa catcgctacc tatgaagaac agttagttgc cctgtatgga	600
acgaacatgg atattgtagg gtcaggtgga tctggaggta gctcttctat ggtcttcaca	660
ctcgaagatt tcgttgggga ctggcgacag acagccggct acaacctgga ccaagtcctt	720
gaacagggag gtgtgtccag tttgtttcag aatctcgggg tgtccgtaac tccgatccaa	780
aggattgtcc tgagcgggtga aaatgggctg aagatcgaca tccatgtcat catcccgtat	840
gaaggtctga gcggcgacca aatgggccag atcgaaaaaa tttttaaggt ggtgtaccct	900
gtggatgatc atcactttaa ggtgatcctg cactatggca cactggtaat cgacggggtt	960
acgccgaaca tgatcgacta tttcggacgg ccgtatgaag gcatcgccgt gttcgacggc	1020
aaa	1023

<210> 488
 <211> 341
 <212> PRT
 <213> Artificial Sequence

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

<400> 488
 Met Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile
 1 5 10 15

Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr
 20 25 30

Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Ser
 35 40 45

Ser Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu
 50 55 60

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

Val Asp Val Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile
 85 90 95

Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu
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100	105	110
Val Lys Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn		
115	120	125
Gly Ala Val Glu Ile Ala Arg Cys Ser Arg Gly Gln Tyr Phe Gly Glu		
130	135	140
Leu Ala Leu Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile		
145	150	155
Gly Thr Val Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu		
165	170	175
Leu Gly Pro Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu		
180	185	190
Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn Met Asp Ile Val Gly Ser		
195	200	205
Gly Gly Ser Gly Gly Ser Ser Ser Met Val Phe Thr Leu Glu Asp Phe		
210	215	220
Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu		
225	230	235
Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val		
245	250	255
Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile		
260	265	270
Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met		
275	280	285
Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His		
290	295	300
His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val		
305	310	315
Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala		
325	330	335
Val Phe Asp Gly Lys		
340		

<210> 489
 <211> 1023
 <212> DNA
 <213> Artificial Sequence

155193_1

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 489

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atgatcactg taacagggac cctgtggaac ggcaacaaaa ttatcgacga ggcctgatc      60
aaccccgacg gctccctgct gttccgagta accatcaacg gagtgaccgg ctggcggctg      120
tgcgaacgca ttctggctag ctcaagcggg ggttcaggcg gttccggaat gtatgaaagc      180
tttattgagt cactgccatt ccttaaactt ttggagtttt ctgcacgcct gaaagtagta      240
gatgtgatag gcaccaaagt atacaacgat ggagaacaaa tcattgctca gggagattcg      300
gctgattcct ttttcattat tgaatctgga gaagtgaaaa ttactatgaa aagaaagggg      360
aaatcagaag tggaagagaa tgggtgcagta gaaatcgctc gatgctcgcg gggacagtac      420
tttgagagagc ttgccctggt aactaacaaa cctcgagcag cttctgcca cgccattggg      480
actgtcaaat gtttagcaat ggatgtgcaa gcatttgaaa ggcttctggg accttgcattg      540
gaaattatga aaaggaacat cgctacctat gaagaacagt tagttgccct gtatggaacg      600
aacatggata ttgtaggggtc aggtggatct ggaggtagct cttctatggt cttcacactc      660
gaagatttcg ttggggactg gcgacagaca gccggctaca acctggacca agtccttgaa      720
cagggaggtg tgtccagttt gtttcagaat ctcgggggtgt ccgtaactcc gatccaaagg      780
attgtcctga gcggtgaaaa tgggctgaag atcgacatcc atgtcatcat cccgtatgaa      840
ggctctgagcg gcgaccaaata gggccagatc gaaaaaattt ttaagggtgt gtaccctgtg      900
gatgatcatc actttaaggt gatcctgcac tatggcacac tggtaatcga cgggggttacg      960
ccgaacatga tcgactatct cggacggccg tatgaaggca tcgccgtgtt cgacggcaaaa     1020
aag                                           1023

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<210> 490

<211> 341

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 490

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Met Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp
1           5           10           15

Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile
20           25           30

Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Ser Ser
35           40           45

Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser
50           55           60

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155193_1
 Leu Pro Phe Leu Lys Ser Leu Glu Phe Ser Ala Arg Leu Lys Val Val
 65 70 75 80
 Asp Val Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala
 85 90 95
 Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu Val
 100 105 110
 Lys Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn Gly
 115 120 125
 Ala Val Glu Ile Ala Arg Cys Ser Arg Gly Gln Tyr Phe Gly Glu Leu
 130 135 140
 Ala Leu Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly
 145 150 155 160
 Thr Val Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu
 165 170 175
 Gly Pro Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu
 180 185 190
 Gln Leu Val Ala Leu Tyr Gly Thr Asn Met Asp Ile Val Gly Ser Gly
 195 200 205
 Gly Ser Gly Gly Ser Ser Ser Met Val Phe Thr Leu Glu Asp Phe Val
 210 215 220
 Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu
 225 230 235 240
 Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr
 245 250 255
 Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp
 260 265 270
 Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly
 275 280 285
 Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His
 290 295 300
 Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
 305 310 315 320
 Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
 325 330 335

Phe Asp Gly Lys Lys
340

<210> 491
<211> 1023
<212> DNA
<213> Artificial Sequence

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

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<400> 491
atgaccctgt ggaacggcaa caaaattatc gacgagcgcc tgatcaaccc cgacggctcc      60
ctgctgtttcc gagtaaccat caacggagtg accggctggc ggctgtgcga acgcattctg      120
gctagctcaa gcggagggttc aggcgggttcc ggaatgtatg aaagctttat tgagtcactg      180
ccattcctta aatcttttga gttttctgca cgcctgaaag tagtagatgt gataggcacc      240
aaagtataca acgatggaga acaaatcatt gctcagggag attcggctga ttcttttttc      300
attattgaat ctggagaagt gaaaattact atgaaaagaa agggtaaadc agaagtggaa      360
gagaatggtg cagtagaaat cgctcgatgc tcgcggggac agtacttttg agagcttgcc      420
ctggtaacta acaaacctcg agcagcttct gcccacgcca ttgggactgt caaatgttta      480
gcaatggatg tgcaagcatt tgaaaggctt ctgggacctt gcatggaaat tatgaaaagg      540
aacatcgcta cctatgaaga acagttagtt gccctgtatg gaacgaacat ggatattgta      600
gggtcagggt gatctggagg tagctcttct atggtcttca cactcgaaga tttcgttggg      660
gactggcgac agacagccgg ctacaacctg gaccaagtcc ttgaacaggg aggtgtgtcc      720
agtttgtttc agaatctcgg ggtgtccgta actccgatcc aaaggattgt cctgagcggg      780
gaaaatgggc tgaagatcga catccatgtc atcatcccgt atgaaggctc gagcggcgac      840
caaatgggcc agatcgaaaa aatttttaag gtggtgtacc ctgtggatga tcatcacttt      900
aagggtgatcc tgcactatgg cacactggta atcgacgggg ttacgccgaa catgatcgac      960
tatttcggac ggccgtatga aggcacgcc gtgttcgacg gcaaaaagat cactgtaaca     1020
ggg                                                                1023

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<210> 492
<211> 341
<212> PRT
<213> Artificial Sequence

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

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<400> 492
Met Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn
1           5           10          15

```

```

Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly
          20          25          30

```

155193_1

Trp Arg Leu Cys Glu Arg Ile Leu Ala Ser Ser Ser Gly Gly Ser Gly
 35 40 45
 Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys
 50 55 60
 Ser Leu Glu Phe Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr
 65 70 75 80
 Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala
 85 90
 Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys
 100 105 110
 Arg Lys Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala
 115 120 125
 Arg Cys Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn
 130 135 140
 Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu
 145 150 155 160
 Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu
 165 170 175
 Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu
 180 185 190
 Tyr Gly Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser
 195 200 205
 Ser Ser Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln
 210 215 220
 Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser
 225 230 235 240
 Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile
 245 250 255
 Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile
 260 265 270
 Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile
 275 280 285
 Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu
 290 295 300

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His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp
305 310 315 320

Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys
325 330 335

Ile Thr Val Thr Gly
340

<210> 493
<211> 1023
<212> DNA
<213> Artificial Sequence

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

<400> 493
atgcccgcag gctccctgct gttccgagta accatcaacg gagtgaccgg ctggcggctg 60
tgcgaacgca ttctggctag ctcaagcggg gggttcaggcg gttccggaat gtatgaaagc 120
tttattgagt cactgccatt ccttaaactt ttggagtttt ctgcacgcct gaaagtagta 180
gatgtgatag gcaccaaagt atacaacgat ggagaacaaa tcattgctca gggagattcg 240
gctgattctt ttttcattat tgaatctgga gaagtgaaaa ttactatgaa aagaaaggg 300
aaatcagaag tggaagagaa tgggtgcagta gaaatcgctc gatgctcgcg gggacagtac 360
tttgagagagc ttgccctggt aactaacaaa cctcgagcag cttctgcca cgccattggg 420
actgtcaaat gtttagcaat ggatgtgcaa gcatttgaaa ggcttctggg accttgcatg 480
gaaattatga aaaggaacat cgctacctat gaagaacagt tagttgccct gtatggaacg 540
aacatggata ttgtagggtc aggtggatct ggaggtagct cttctatggt cttcacactc 600
gaagatttcg ttggggactg gcgacagaca gccggctaca acctggacca agtccttgaa 660
cagggaggtg tgtccagttt gtttcagaat ctcgggggtgt ccgtaactcc gatccaaagg 720
attgtcctga gcggtgaaaa tgggctgaag atcgacatcc atgtcatcat cccgtatgaa 780
ggctctgagcg gcgaccaaatt gggccagatc gaaaaaattt ttaagggtgg gtaccctgtg 840
gatgatcatc actttaagggt gatcctgcac tatggcacac tggtaatcga cgggggttacg 900
ccgaacatga tcgactatct cggacggccg tatgaaggca tcgccgtgtt cgacggcaaaa 960
aagatcactg taacagggac cctgtggaac ggcaacaaaa ttatcgacga gcgcctgatc 1020
aac 1023

<210> 494
<211> 341
<212> PRT
<213> Artificial Sequence

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

155193_1

<400> 494

Met Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr
1 5 10 15Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Ser Ser Ser Gly Gly Ser
20 25 30Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu
35 40 45Lys Ser Leu Glu Phe Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly
50 55 60Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser
65 70 75 80Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met
85 90 95Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile
100 105 110Ala Arg Cys Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr
115 120 125Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys
130 135 140Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met
145 150 155 160Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala
165 170 175Leu Tyr Gly Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly
180 185 190Ser Ser Ser Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg
195 200 205Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val
210 215 220Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg
225 230 235 240Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile
245 250 255Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys
260 265 270

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Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile
275 280 285

Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile
290 295 300

Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys
305 310 315 320

Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp
325 330 335

Glu Arg Leu Ile Asn
340

<210> 495

<211> 1023

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 495

atgtccctgc tgttccgagt aaccatcaac ggagtgaccg gctggcggct gtgcgaacgc	60
attctggcta gctcaagcgg aggttcaggc ggttccggaa tgtatgaaag ctttattgag	120
tacttgccat tccttaaadc tttggagttt tctgcacgcc tgaaagtagt agatgtgata	180
ggcaccaaag tataacaaga tggagaacaa atcattgctc agggagattc ggctgattct	240
tttttcatta ttgaatctgg agaagtgaag attactatga aaagaaaggg taaatcagaa	300
gtggaagaga atgggtgcagt agaaatcgct cgatgctcgc ggggacagta ctttggagag	360
cttgccctgg taactaaca acctcgagca gcttctgccc acgccattgg gactgtcaaa	420
tgtttagcaa tggatgtgca agcatttgaa aggttctgag gacattgcat ggaaattatg	480
aaaaggaaca tcgctaccta tgaagaacag ttagttgccc tgtatggaac gaacatggat	540
attgtagggg caggtggatc tggaggtagc tcttctatgg tcttcacact cgaagatttc	600
gttggggact ggcgacagac agccggctac aacctggacc aagtccttga acaggagggt	660
gtgtccagtt tgtttcagaa tctcggggtg tccgtaactc cgatccaaag gattgtcctg	720
agcggtgaaa atgggctgaa gatcgacatc catgtcatca tcccgtatga aggtctgagc	780
ggcgacaaa tgggccagat cgaaaaaatt ttaaggtgg tgtaccctgt ggatgatcat	840
cactttaagg tgatcctgca ctatggcaca ctggtaatcg acgggggttac gccgaacatg	900
atcgactatt tcggacggcc gtatgaaggc atcgccgtgt tcgacggcaa aaagatcact	960
gtaacagga ccctgtggaa cggcaacaaa attatcgacg agcgccctgat caaccccgc	1020
ggc	1023

<210> 496

<211> 341

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 496

Met Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg
1 5 10 15Leu Cys Glu Arg Ile Leu Ala Ser Ser Ser Gly Gly Ser Gly Gly Ser
20 25 30Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu
35 40 45Glu Phe Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val
50 55 60Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser
65 70 75 80Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys
85 90 95Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys
100 105 110Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro
115 120 125Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met
130 135 140Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met
145 150 155 160Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly
165 170 175Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser
180 185 190Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
195 200 205Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
210 215 220Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
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225 230 155193_1 235 240

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
245 250 255

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

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
275 280 285

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
290 295 300

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
305 310 315 320

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
325 330 335

Ile Asn Pro Asp Gly
340

<210> 497
<211> 1023
<212> DNA
<213> Artificial Sequence

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

<400> 497
atgggagtga ccggctggcg gctgtgcgaa cgcattcttg ctagctcaag cggaggttca 60
ggcggttccg gaatgtatga aagctttatt gagtcaactgc cattccttaa atctttggag 120
ttttctgcac gcctgaaagt agtagatgtg ataggcacca aagtatacaa cgatggagaa 180
caaatcattg ctcagggaga ttcggctgat tcttttttca ttattgaatc tggagaagtg 240
aaaattacta tgaaaagaaa gggtaaatca gaagtggaag agaatggtgc agtagaaatc 300
gctcgatgct cgcggggaca gtactttgga gagcttgccc tggtactaa caaacctcga 360
gcagcttctg ccacacccat tgggactgtc aaatgttttag caatggatgt gcaagcattt 420
gaaaggcttc tgggaccttg catggaaatt atgaaaagga acatcgctac ctatgaagaa 480
cagttagttg ccctgtatgg aacgaacatg gatattgtag ggtcaggtgg atctggaggt 540
agctcttcta tggctttcac actcgaagat ttcgttgggg actggcgaca gacagccggc 600
tacaacctgg accaagtcct tgaacaggga ggtgtgtcca gtttgtttca gaatctcggg 660
gtgtccgtaa ctccgatcca aaggattgtc ctgagcggtg aaaatgggct gaagatcgac 720
atccatgtca tcatcccgtg tgaaggctct agcggcgacc aaatgggcca gatcgaaaaa 780
atttttaagg tgggtgtacc tgtggatgat catcacttta aggtgatcct gcactatggc 840

155193_1

acactggtaa tcgacggggt tacgccgaac atgatcgact atttcggacg gccgtatgaa 900
 ggcacgcgcg tggtcgacgg caaaaagatc actgtaacag ggaccctgtg gaacggcaac 960
 aaaattatcg acgagcgcct gatcaacccc gacggctccc tgctgttccg agtaaccatc 1020
 aac 1023

<210> 498

<211> 341

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 498

Met Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Ser Ser
 1 5 10 15

Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser
 20 25 30

Leu Pro Phe Leu Lys Ser Leu Glu Phe Ser Ala Arg Leu Lys Val Val
 35 40 45

Asp Val Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala
 50 55 60

Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu Val
 65 70 75 80

Lys Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn Gly
 85 90 95

Ala Val Glu Ile Ala Arg Cys Ser Arg Gly Gln Tyr Phe Gly Glu Leu
 100 105 110

Ala Leu Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly
 115 120 125

Thr Val Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu
 130 135 140

Gly Pro Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu
 145 150 155 160

Gln Leu Val Ala Leu Tyr Gly Thr Asn Met Asp Ile Val Gly Ser Gly
 165 170 175

Gly Ser Gly Gly Ser Ser Ser Met Val Phe Thr Leu Glu Asp Phe Val
 180 185 190

155193_1

Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu
195 200 205

Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr
210 215 220

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

Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly
245 250 255

Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His
260 265 270

Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr
275 280 285

Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val
290 295 300

Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn
305 310 315 320

Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe
325 330 335

Arg Val Thr Ile Asn
340

<210> 499
<211> 1020
<212> DNA
<213> Artificial Sequence

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

<400> 499
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agcttttattg agtcactgcc attccttaaa tctttggagt tttctgcacg cctgaaagta 120
gtagatgtga taggcaccaa agtatacaac gatggagaac aaatcattgc tcaggagat 180
tcggctgatt cttttttcat tattgaatct ggagaagtga aaattactat gaaaagaaag 240
ggtaaatacag aagtgaaga gaatggtgca gtagaaatcg ctcgatgctc gcggggacag 300
tactttggag agcttgccct ggtaactaac aaacctcgag cagcttctgc ccacgccatt 360
gggactgtca aatgttttagc aatggatgtg caagcatttg aaaggcttct gggaccttgc 420
atggaaatta tgaaaaggaa catcgctacc tatgaagaac agttagttgc cctgtatgga 480
acgaacatgg atattgtagg gtcagggtgga tctggaggta gctcttcttt cgttggggac 540

155193_1

tggcgacaga cagccggcta caacctggac caagtccttg aacagggagg tgtgtccagt	600
ttgtttcaga atctcgggggt gtccgtaact ccgatccaaa ggattgtcct gagcgggtgaa	660
aatgggctga agatcgacat ccatgtcatc atcccgtatg aaggtctgag cggcgaccaa	720
atggggcaga tcgaaaaaat ttttaagggtg gtgtaccctg tggatgatca tcactttaag	780
gtgatcctgc actatggcac actggtaatc gacgggggta cgccgaacat gatcgactat	840
ttcggacggc cgtatgaagg catcgccgtg ttcgacggca aaaagatcac tgtaacaggg	900
accctgtgga acggcaacaa aattatcgac gagcgcctga tcaaccccga cggctccctg	960
ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct	1020

<210> 500
 <211> 340
 <212> PRT
 <213> Artificial Sequence

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

<400> 500
 Met Val Phe Thr Leu Glu Asp Ser Ala Ser Gly Gly Ser Gly Gly Ser
 1 5 10 15

Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu
 20 25 30

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

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

Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys
 65 70 75 80

Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys
 85 90 95

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

Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met
 115 120 125

Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met
 130 135 140

Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly
 145 150 155 160

Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser
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155193_1

gcttctgccc acgccattgg gactgtcaaa tgttttagcaa tggatgtgca agcatttgaa 420
 aggcttctgg gaccttgcac ggaaattatg aaaaggaaca tcgctaccta tgaagaacag 480
 ttagttgccc tgtatggaac gaacatggat attgtagggt caggtggatc tggaggtagc 540
 tcttctcaga cagccggcta caacctggac caagtccttg aacagggagg tgtgtccagt 600
 ttgtttcaga atctcgggggt gtccgtaact ccgatccaaa ggattgtcct gagcggtgaa 660
 aatgggctga agatcgacat ccatgtcatc atcccgtatg aaggctctgag cggcgaccaa 720
 atgggcccaga tcgaaaaaat ttttaagggtg gtgtaccctg tggatgatca tcactttaag 780
 gtgatcctgc actatggcac actggtaatc gacgggggta cgccgaacat gatcgactat 840
 ttcggacggc cgtatgaagg catcgccgtg ttcgacggca aaaagatcac tgtaacaggg 900
 accctgtgga acggcaacaa aattatcgac gagcgcctga tcaaccccga cggctccctg 960
 ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct 1020

<210> 502

<211> 340

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 502

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

Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu
 20 25 30

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

Val Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln
 50 55 60

Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu Val Lys
 65 70 75 80

Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn Gly Ala
 85 90 95

Val Glu Ile Ala Arg Cys Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala
 100 105 110

Leu Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly Thr
 115 120 125

Val Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu Gly
 130 135 140

155193_1

Pro Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln
145 150 155 160

Leu Val Ala Leu Tyr Gly Thr Asn Met Asp Ile Val Gly Ser Gly Gly
165 170 175

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

Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser
195 200 205

Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys
210 215 220

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

Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp
245 250 255

His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
260 265 270

Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
275 280 285

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
290 295 300

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
305 310 315 320

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
325 330 335

Arg Ile Leu Ala
340

<210> 503

<211> 1020

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 503

atggtcttca cactcgaaga tttcgttggg gactggcgac agacagccgg ctacaacctg 60

gaccaagtcc ttgaacaggg aagcgctagc ggaggttcag gcggttccgg aatgtatgaa 120

155193_1

Ile Ala Arg Cys Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val
115 120 125

Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys
130 135 140

Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys
145 150 155 160

Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val
165 170 175

Ala Leu Tyr Gly Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly
180 185 190

Gly Ser Ser Ser Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser
195 200 205

Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys
210 215 220

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

Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp
245 250 255

His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
260 265 270

Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
275 280 285

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
290 295 300

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
305 310 315 320

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
325 330 335

Arg Ile Leu Ala
340

<210> 505

<211> 1020

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

polynucleotide

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<400> 505
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gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaattctcg ggtgtccgta      120
actccgatcc aaaggattag cgctagcggg ggttcaggcg gttccggaat gtatgaaagc      180
tttattgagt cactgccatt ccttaaactt ttggagtttt ctgcacgcct gaaagtagta      240
gatgtgatag gcaccaaagt atacaacgat ggagaacaaa tcattgctca gggagattcg      300
gctgattctt ttttcattat tgaatctgga gaagtgaaaa ttactatgaa aagaaagggt      360
aaatcagaag tggaagagaa tgggtgcagta gaaatcgctc gatgctcgcg gggacagtac      420
tttgagagag ttgccctggg aactaacaaa cctcgagcag cttctgcca cgccattggg      480
actgtcaaat gtttagcaat ggatgtgcaa gcatttgaaa ggcttctggg accttgcatg      540
gaaattatga aaaggaacat cgctacctat gaagaacagt tagttgccct gtatggaacg      600
aacatggata ttgtagggtc aggtggatct ggaggtagct cttctgtcct gagcggtgaa      660
aatgggctga agatcgacat ccatgtcatc atcccgtatg aaggctctgag cggcgaccaa      720
atgggccaga tcgaaaaaat ttttaagggt gtgtaccctg tggatgatca tcactttaag      780
gtgatcctgc actatggcac actggaatc gacgggggta cgccgaacat gatcgactat      840
ttcggacggc cgtatgaagg catcgccgtg ttcgacggca aaaagatcac tgtaacaggg      900
accctgtgga acggcaacaa aattatcgac gagcgcctga tcaaccccga cggctccctg      960
ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct     1020

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<210> 506

<211> 340

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 506

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Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1           5           10           15

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Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
          20           25           30

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

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```

Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser
          50           55           60

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

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155193_1

155193_1

<210> 507
<211> 1020
<212> DNA
<213> Artificial Sequence

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

<400> 507
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gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 120
actccgatcc aaaggattgt cctgagcagc gctagcggag gttcaggcgg ttccggaatg 180
tatgaaagct ttattgagtc actgccattc cttaaacttt tggagttttc tgcacgcctg 240
aaagtagtag atgtgatagg caccaaagta tacaacgatg gagaacaaat cattgctcag 300
ggagattcgg ctgattcttt tttcattatt gaatctggag aagtgaaaat tactatgaaa 360
agaaagggta aatcagaagt ggaagagaat ggtgcagtag aaatcgctcg atgctcgcgg 420
ggacagtact ttggagagct tgccctggta actaacaac ctcgagcagc ttctgcccac 480
gccattggga ctgtcaaag tttagcaatg gatgtgcaag catttgaaag gcttctggga 540
ccttgcatgg aaattatgaa aaggaacatc gctacctatg aagaacagtt agttgccctg 600
tatggaacga acatggatat tgtagggcca ggtggatctg gaggtagctc ttctgggtgaa 660
aatgggctga agatcgacat ccatgtcatc atcccgtatg aaggtctgag cggcgaccaa 720
atggggcaga tcgaaaaaat ttttaagggtg gtgtaccctg tggatgatca tcactttaag 780
gtgatcctgc actatggcac actggaatc gacgggggta cgccgaacat gatcgactat 840
ttcggacggc cgtatgaagg catcgccgtg ttcgacggca aaaagatcac tgtaacaggg 900
accctgtgga acggcaacaa aattatcgac gagcgctga tcaaccccga cggctccctg 960
ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct 1020

<210> 508
<211> 340
<212> PRT
<213> Artificial Sequence

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

<400> 508
Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
35 40 45

Ser Ser Ala Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe
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155193_1
 50 55 60
 Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu Glu Phe Ser Ala Arg Leu
 65 70 75 80
 Lys Val Val Asp Val Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln
 85 90 95
 Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser
 100 105 110
 Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu
 115 120 125
 Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser Arg Gly Gln Tyr Phe
 130 135 140
 Gly Glu Leu Ala Leu Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His
 145 150 155 160
 Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu
 165 170 175
 Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr
 180 185 190
 Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn Met Asp Ile Val
 195 200 205
 Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser Gly Glu Asn Gly Leu Lys
 210 215 220
 Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln
 225 230 235 240
 Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp
 245 250 255
 His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
 260 265 270
 Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
 275 280 285
 Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
 290 295 300
 Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
 305 310 315 320
 Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu

Arg Ile Leu Ala
340

<210> 509
<211> 1020
<212> DNA
<213> Artificial Sequence

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

<400> 509
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gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 120
actccgatcc aaaggattgt cctgagcggg gaaaatggga gcgctagcgg aggttcaggc 180
ggttccggaa tgtatgaaag ctttattgag tctactgccat tccttaaatc tttggagttt 240
tctgcacgcc tgaaagtagt agatgtgata ggcaccaaag tatacaacga tggagaacaa 300
atcattgctc agggagattc ggctgattct tttttcatta ttgaatctgg agaagtgaaa 360
attactatga aaagaaaggg taaatcagaa gtggaagaga atggtgcagt agaaatcgct 420
cgatgctcgc ggggacagta ctttgagagag cttgccctgg taactaacia acctcgagca 480
gcttctgccc acgccattgg gactgtcaaa tgttttagcaa tggatgtgca agcatttgaa 540
aggcttctgg gaccttgcac ggaaattatg aaaaggaaca tcgctaccta tgaagaacag 600
ttagtgtccc tgtatggaac gaacatggat attgtagggt cagggtgatc tggaggtagc 660
tcttctctga agatcgacat ccatgtcatc atcccgtatg aaggctctgag cggcgaccaa 720
atgggcccaga tcgaaaaaat ttttaagggtg gtgtaccctg tggatgatca tcactttaag 780
gtgatcctgc actatggcac actggtaatc gacgggggta cgccgaacat gatcgactat 840
ttcggacggc cgtatgaagg catcgccgtg ttcgacggca aaaagatcac tgtaacaggg 900
accctgtgga acggcaacia aattatcgac gagcgcctga tcaaccccga cggctccctg 960
ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct 1020

<210> 510
<211> 340
<212> PRT
<213> Artificial Sequence

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

<400> 510
Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

155193_1

Phe Gln Asn₃₅ Leu Gly Val Ser Val₄₀ Thr Pro Ile Gln Arg₄₅ Ile Val Leu
 Ser Gly₅₀ Glu Asn Gly Ser Ala₅₅ Ser Gly Gly Ser Gly₆₀ Gly Ser Gly Met
 Tyr Glu Ser Phe Ile Glu₇₀ Ser Leu Pro Phe Leu₇₅ Lys Ser Leu Glu Phe₈₀
 Ser Ala Arg Leu Lys₈₅ Val Val Asp Val Ile₉₀ Gly Thr Lys Val Tyr₉₅ Asn
 Asp Gly Glu Gln₁₀₀ Ile Ile Ala Gln Gly₁₀₅ Asp Ser Ala Asp Ser₁₁₀ Phe Phe
 Ile Ile Glu₁₁₅ Ser Gly Glu Val Lys₁₂₀ Ile Thr Met Lys Arg₁₂₅ Lys Gly Lys
 Ser Glu₁₃₀ Val Glu Glu Asn Gly₁₃₅ Ala Val Glu Ile Ala₁₄₀ Arg Cys Ser Arg
 Gly Gln Tyr Phe Gly Glu₁₅₀ Leu Ala Leu Val Thr₁₅₅ Asn Lys Pro Arg Ala₁₆₀
 Ala Ser Ala His Ala₁₆₅ Ile Gly Thr Val Lys₁₇₀ Cys Leu Ala Met Asp₁₇₅ Val
 Gln Ala Phe Glu₁₈₀ Arg Leu Leu Gly Pro₁₈₅ Cys Met Glu Ile Met₁₉₀ Lys Arg
 Asn Ile Ala₁₉₅ Thr Tyr Glu Glu Gln₂₀₀ Leu Val Ala Leu Tyr₂₀₅ Gly Thr Asn
 Met Asp₂₁₀ Ile Val Gly Ser Gly₂₁₅ Gly Ser Gly Gly Ser₂₂₀ Ser Ser Leu Lys
 Ile Asp Ile His Val Ile₂₃₀ Ile Pro Tyr Glu Gly₂₃₅ Leu Ser Gly Asp Gln₂₄₀
 Met Gly Gln Ile Glu₂₄₅ Lys Ile Phe Lys Val₂₅₀ Val Tyr Pro Val Asp₂₅₅ Asp
 His His Phe Lys₂₆₀ Val Ile Leu His Tyr₂₆₅ Gly Thr Leu Val Ile₂₇₀ Asp Gly
 Val Thr Pro₂₇₅ Asn Met Ile Asp Tyr₂₈₀ Phe Gly Arg Pro Tyr₂₈₅ Glu Gly Ile
 Ala Val₂₉₀ Phe Asp Gly Lys Lys₂₉₅ Ile Thr Val Thr Gly₃₀₀ Thr Leu Trp Asn

155193_1

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
 305 310 315 320

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
 325 330 335

Arg Ile Leu Ala
 340

<210> 511
 <211> 1020
 <212> DNA
 <213> Artificial Sequence

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

<400> 511
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 gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 120
 actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcag cgctagcgga 180
 ggttcaggcg gttccggaat gtatgaaagc tttattgagt cactgccatt ccttaaactct 240
 ttggagtttt ctgcacgcct gaaagtagta gatgtgatag gcaccaaagt atacaacgat 300
 ggagaacaaa tcattgctca gggagattcg gctgattctt ttttcattat tgaatctgga 360
 gaagtgaaaa ttactatgaa aagaaagggg aaatcagaag tggaagagaa tgggtgcagta 420
 gaaatcgctc gatgctcgcg gggacagtac tttggagagc ttgccctggg aactaacaaa 480
 cctcgagcag cttctgcccc cgccattggg actgtcaaat gtttagcaat ggatgtgcaa 540
 gcatttgaaa ggcttctggg accttgcatg gaaattatga aaaggaacat cgctacctat 600
 gaagaacagt tagttgccct gtatggaacg aacatggata ttgtagggtc aggtggatct 660
 ggaggtagct cttctgacat ccatgtcatc atcccgtatg aaggctctgag cggcgaccaa 720
 atgggccaga tcgaaaaaat ttttaagggt gtgtaccctg tggatgatca tcactttaag 780
 gtgatcctgc actatggcac actggtaatc gacgggggta cgccgaacat gatcgactat 840
 ttcggacggc cgtatgaagg catcgccgtg ttcgacggca aaaagatcac tgtaacaggg 900
 accctgtgga acggcaacaa aattatcgac gagcgcctga tcaaccccga cggctccctg 960
 ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct 1020

<210> 512
 <211> 340
 <212> PRT
 <213> Artificial Sequence

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

155193_1

<400> 512

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Ser Ala Ser Gly Gly Ser Gly Gly
50 55 60

Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser
65 70 75 80

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

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

Ser Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg
115 120 125

Lys Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg
130 135 140

Cys Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys
145 150 155 160

Pro Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala
165 170 175

Met Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile
180 185 190

Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr
195 200 205

Gly Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser
210 215 220

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

Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp
245 250 255

His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
260 265 270

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Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
 275 280 285

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
 290 295 300

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
 305 310 315 320

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
 325 330 335

Arg Ile Leu Ala
 340

<210> 513

<211> 1020

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 513

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actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc	180
atcatcccgat atgaagggtct gagcggcgac caaatgggccc agatcgaaaa aatttttaag	240
gtggtgtacc ctagcgctag cggaggttca ggcggttccg gaatgtatga aagctttatt	300
gagtcactgc cattccttaa atctttggag ttttctgcac gcctgaaagt agtagatgtg	360
ataggcacca aagtatacaa cgatggagaa caaatcattg ctcagggaga ttcggctgat	420
tcttttttca ttattgaatc tggagaagtg aaaattacta tgaaaagaaa gggtaaatca	480
gaagtggaag agaatggtgc agtagaaatc gctcgatgct cgcggggaca gtactttgga	540
gagcttgccc tggtactaa caaacctcga gcagcttctg cccacgccat tgggactgtc	600
aaatgttttag caatggatgt gcaagcattt gaaaggcttc tgggaccttg catggaaatt	660
atgaaaagga acatcgctac ctatgaagaa cagtttagttg ccctgtatgg aacgaacatg	720
gatattgtag ggtcaggtgg atctggaggt agctcttctg tggatgatca tcactttaag	780
gtgatcctgc actatggcac actggtaatc gacgggggta cgccgaacat gatcgactat	840
ttcggacggc cgtatgaagg catcgccgtg ttcgacggca aaaagatcac tgtaacaggg	900
accctgtgga acggcaacaa aattatcgac gagcgcctga tcaaccccga cggctccctg	960
ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct	1020

<210> 514

<211> 340

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 514

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1 5 10 15Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
35 40 45Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65 70 75 80Val Val Tyr Pro Ser Ala Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr
85 90 95Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu Glu Phe Ser
100 105 110Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val Tyr Asn Asp
115 120 125Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile
130 135 140Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly Lys Ser
145 150 155 160Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser Arg Gly
165 170 175Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro Arg Ala Ala
180 185 190Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp Val Gln
195 200 205Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys Arg Asn
210 215 220Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn Met
225 230 235 240

Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Val Asp Asp
 245 250 255

His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
 260 265 270

Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
 275 280 285

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
 290 295 300

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
 305 310 315 320

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
 325 330 335

Arg Ile Leu Ala
 340

<210> 515
 <211> 1020
 <212> DNA
 <213> Artificial Sequence

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

<400> 515
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 actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc 180
 atcatcccgat atgaaggtct gagcggcgac caaatgggccc agatcgaaaa aatttttaag 240
 gtggtgtacc ctgtgagcgc tagcggaggt tcaggcgggt ccggaatgta tgaaagcttt 300
 attgagtcac tgccattcct taaatctttg gagttttctg cacgcctgaa agtagtagat 360
 gtgataggca ccaaagtata caacgatgga gaacaaatca ttgctcaggg agattcggct 420
 gattctttttt tcattattga atctggagaa gtgaaaatta ctatgaaaag aaagggtaaa 480
 tcagaagtgg aagagaatgg tgcagtagaa atcgctcgat gctcgcgggg acagtacttt 540
 ggagagcttg ccctggtaac taacaaacct cgagcagctt ctgcccacgc cattgggact 600
 gtcaaagtgt tagcaatgga tgtgcaagca tttgaaaggc ttctgggacc ttgcatggaa 660
 attatgaaaa ggaacatcgc tacctatgaa gaacagttag ttgccctgta tggaacgaac 720
 atggatattg tagggtcagg tggatctgga ggtagctctt ctgatgatca tcactttaag 780
 gtgatcctgc actatggcac actggtaatc gacgggggta cgccgaacat gatcgactat 840
 ttcggacggc cgtatgaagg catcgccgtg ttcgacggca aaaagatcac tgtaacaggg 900

155193_1
accctgtgga acggcaacaa aattatcgac gagcgctga tcaaccccga cggctccctg 960
ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct 1020

<210> 516
<211> 340
<212> PRT
<213> Artificial Sequence

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

<400> 516
Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65 70 75 80

Val Val Tyr Pro Val Ser Ala Ser Gly Gly Ser Gly Gly Ser Gly Met
85 90 95

Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu Glu Phe
100 105 110

Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val Tyr Asn
115 120 125

Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe
130 135 140

Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly Lys
145 150 155 160

Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser Arg
165 170 175

Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro Arg Ala
180 185 190

Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp Val
195 200 205

Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys Arg
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210		215		220
Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn				
225		230	235	240
Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser Asp Asp				
	245		250	255
His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly				
	260		265	270
Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile				
	275		280	285
Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn				
	290		295	300
Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu				
305		310	315	320
Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu				
	325		330	335
Arg Ile Leu Ala				
	340			

<210> 517
 <211> 1020
 <212> DNA
 <213> Artificial Sequence

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

<400> 517	
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actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc	180
atcatcccgat atgaagggtct gagcggcgac caaatgggccc agatcgaaaa aatttttaag	240
gtggtgtacc ctgtggatag cgctagcggg ggttcaggcg gttccggaat gtatgaaagc	300
tttattgagt cactgccatt ccttaaattct ttggagtttt ctgcacgcct gaaagtagta	360
gatgtgatag gcaccaaagt atacaacgat ggagaacaaa tcattgctca gggagattcg	420
gctgattctt ttttcattat tgaatctgga gaagtgaaaa ttactatgaa aagaaagggt	480
aaatcagaag tggaagagaa tgggtgcagta gaaatcgctc gatgctcgcg gggacagtac	540
tttgagagac ttgccctggg aactaacaaa cctcgagcag cttctgcccc cgccattggg	600
actgtcaaat gtttagcaat ggatgtgcaa gcatttgaaa ggcttctggg accttgcatg	660
gaaattatga aaaggaacat cgctacctat gaagaacagt tagttgccct gtatggaacg	720

155193_1

aacatggata ttgtaggggtc aggtggatct ggaggtagct cttctgatca tcactttaag 780
 gtgacacctgc actatggcac actggtaatc gacgggggta cgccgaacat gatcgactat 840
 ttcggacggc cgtatgaagg catcgccgtg ttcgacggca aaaagatcac tgtaacaggg 900
 accctgtgga acggcaacaa aattatcgac gagcgcctga tcaaccccga cggctccctg 960
 ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct 1020

<210> 518

<211> 340

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 518

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Ser Ala Ser Gly Gly Ser Gly Gly Ser Gly
 85 90 95

Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu Glu
 100 105 110

Phe Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val Tyr
 115 120 125

Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe
 130 135 140

Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly
 145 150 155 160

Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser
 165 170 175

Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro Arg
 180 185 190

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Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp
195 200 205

Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys
210 215 220

Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr
225 230 235 240

Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser Asp
245 250 255

His His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly
260 265 270

Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
275 280 285

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
290 295 300

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
305 310 315 320

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
325 330 335

Arg Ile Leu Ala
340

<210> 519

<211> 1020

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 519

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actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc	180
atcatcccgat atgaaggtct gagcggcgac caaatgggcc agatcgaaaa aatttttaag	240
gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgcactatgg cacttggtgta	300
atcagcgcta gcggagggttc aggcgggttcc ggaatgtatg aaagctttat tgagtcactg	360
ccattcctta aatcttttga gttttctgca cgctgaaag tagtagatgt gataggcacc	420
aaagtataca acgatggaga acaaatcatt gctcagggag attcggctga ttcttttttc	480

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attattgaat ctggagaagt gaaaattact atgaaaagaa agggtaaadc agaagtggaa	540
gagaatggtg cagtagaaat cgctcgatgc tcgcggggac agtactttgg agagcttgcc	600
ctggtaacta acaaacctcg agcagcttct gcccacgcca ttgggactgt caaatgttta	660
gcaatggatg tgcaagcatt tgaaaggctt ctgggacctt gcatggaaat tatgaaaagg	720
aacatcgcta cctatgaaga acagttagtt gccctgtatg gaacgaacat ggatattgta	780
gggtcagggt gatctggagg tagctcttct gacgggggta cgccgaacat gatcgactat	840
ttcggacggc cgtatgaagg catcgccgtg ttcgacggca aaaagatcac tgtaacaggg	900
accctgtgga acggcaacaa aattatcgac gagcgcctga tcaaccccga cggctccctg	960
ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct	1020

<210> 520

<211> 340

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 520

Met	Val	Phe	Thr	Leu	Glu	Asp	Phe	Val	Gly	Asp	Trp	Arg	Gln	Thr	Ala
1				5					10					15	

Gly	Tyr	Asn	Leu	Asp	Gln	Val	Leu	Glu	Gln	Gly	Gly	Val	Ser	Ser	Leu
		20					25						30		

Phe	Gln	Asn	Leu	Gly	Val	Ser	Val	Thr	Pro	Ile	Gln	Arg	Ile	Val	Leu
		35					40					45			

Ser	Gly	Glu	Asn	Gly	Leu	Lys	Ile	Asp	Ile	His	Val	Ile	Ile	Pro	Tyr
	50					55					60				

Glu	Gly	Leu	Ser	Gly	Asp	Gln	Met	Gly	Gln	Ile	Glu	Lys	Ile	Phe	Lys
65					70					75					80

Val	Val	Tyr	Pro	Val	Asp	Asp	His	His	Phe	Lys	Val	Ile	Leu	His	Tyr
				85					90					95	

Gly	Thr	Leu	Val	Ile	Ser	Ala	Ser	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Met
			100					105					110		

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

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

Asp	Gly	Glu	Gln	Ile	Ile	Ala	Gln	Gly	Asp	Ser	Ala	Asp	Ser	Phe	Phe
145					150					155					160

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Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly Lys
165 170 175

Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser Arg
180 185 190

Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro Arg Ala
195 200 205

Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp Val
210 215 220

Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys Arg
225 230 235 240

Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn
245 250 255

Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser Asp Gly
260 265 270

Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
275 280 285

Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
290 295 300

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
305 310 315 320

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
325 330 335

Arg Ile Leu Ala
340

<210> 521

<211> 1020

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 521

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gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 120

actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc 180

atcatcccgat atgaagggtct gagcggcgac caaatgggcc agatcgaaaa aatttttaag 240

gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgcactatgg cacactggta 300

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atcgacagcg ctagcggagg ttcaggcggg tccggaatgt atgaaagctt tattgagtca    360
ctgccattcc ttaaattctt ggagttttct gcacgcctga aagtagtaga tgtgataggc    420
accaaagtat acaacgatgg agaacaaatc attgctcagg gagattcggc tgattctttt    480
ttcattattg aatctggaga agtgaaaatt actatgaaaa gaaagggtaa atcagaagtg    540
gaagagaatg gtgcagtaga aatcgctcga tgctcgcggg gacagtactt tggagagctt    600
gccctggtaa ctaacaaacc tcgagcagct tctgcccacg ccattgggac tgtcaaagt    660
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accctgtgga acggcaacaa aattatcgac gagcgcctga tcaaccccga cggctccctg    960
ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct   1020

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<210> 522

<211> 340

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 522

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Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1           5           10           15

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Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
                20           25           30

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```

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
                35           40           45

```

```

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50           55           60

```

```

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65           70           75           80

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```

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
                85           90           95

```

```

Gly Thr Leu Val Ile Asp Ser Ala Ser Gly Gly Ser Gly Gly Ser Gly
100           105           110

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```

Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu Glu
115           120           125

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Phe Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val Tyr
 130 135 140 155193_1
 Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe
 145 150 155 160
 Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly
 165 170 175
 Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser
 180 185 190
 Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro Arg
 195 200 205
 Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp
 210 215 220
 Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys
 225 230 235 240
 Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr
 245 250 255
 Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser Gly
 260 265 270
 Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile
 275 280 285
 Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
 290 295 300
 Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
 305 310 315 320
 Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
 325 330 335
 Arg Ile Leu Ala
 340

<210> 523
 <211> 1020
 <212> DNA
 <213> Artificial Sequence

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

<400> 523
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actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc	180
atcatcccggt atgaagggtct gagcggcgac caaatgggccc agatcgaaaa aatttttaag	240
gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgcactatgg cacttggtg	300
atcgacggga gcgctagcgg aggttcaggc ggttcggaa tgtatgaaag ctttattgag	360
tcaactgcat tccttaaatac tttggagttt tctgcacgcc tgaaagtagt agatgtgata	420
ggcaccaaag tatacaacga tggagaacaa atcattgtctc agggagattc ggctgattct	480
tttttcatta ttgaatctgg agaagtgaat attactatga aaagaaaggg taaatcagaa	540
gtggaagaga atggtgcagt agaaatcgct cgatgctcgc ggggacagta ctttggagag	600
cttgccctgg taactaacia acctcgagca gcttctgccc acgccattgg gactgtcaaa	660
tgtttagcaa tggatgtgca agcatttgaa aggttctctg gaccttgcat ggaaattatg	720
aaaaggaaca tcgctaccta tgaagaacag ttagttgccc tgtatggaac gaacatggat	780
attgtagggt cagggtggtc tggaggtagc tcttctgtta cgccgaacat gatcgactat	840
ttcggacggc cgtatgaagg catcgccgtg ttcgacggca aaaagatcac tgtaacaggg	900
accctgtgga acggcaacia aattatcgac gagcgcctga tcaaccccga cggctccctg	960
ctgttccgag taaccatcaa cggagtgtacc ggctggcggc tgtgcgaacg cattctggct	1020

<210> 524
 <211> 340
 <212> PRT
 <213> Artificial Sequence

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

<400> 524
 Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Ser Ala Ser Gly Gly Ser Gly Gly Ser
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100	105	110
Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu	115	120
Glu Phe Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val	130	140
Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser	145	155
Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys	165	170
Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys	180	185
Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro	195	200
Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met	210	215
Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met	225	235
Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly	245	250
Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser	260	265
Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile	275	280
Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn	290	295
Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu	305	315
Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu	325	330
Arg Ile Leu Ala	340	

<210> 525
 <211> 1020
 <212> DNA
 <213> Artificial Sequence

155193_1

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 525

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atggtcttca cactcgaaga tttcgttggg gactggcgac agacagccgg ctacaacctg      60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta      120
actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc      180
atcatcccgt atgaaggtct gagcggcgac caaatgggccc agatcgaaaa aatttttaag      240
gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgcactatgg cactctggta      300
atcgacgggg ttagcgctag cggaggttca ggcggttccg gaatgtatga aagctttatt      360
gagtcactgc cattccttaa atctttggag ttttctgcac gcctgaaagt agtagatgtg      420
ataggcacca aagtatacaa cgatggagaa caaatcattg ctgagggaga ttcggctgat      480
tcttttttca ttattgaatc tggagaagtg aaaattacta tgaaaagaaa gggtaaataca      540
gaagtggaag agaatggtgc agtagaaatc gctcgatgct cgcggggaca gtactttgga      600
gagcttgccc tggtaactaa caaacctcga gcagcttctg cccacgccat tgggactgtc      660
aaatgtttag caatggatgt gcaagcattt gaaaggcttc tgggaccttg catggaaatt      720
atgaaaagga acatcgctac ctatgaagaa cagttagtgt ccctgtatgg aacgaacatg      780
gatattgtag ggtaggtggt atctggaggt agctcttcta cgccgaacat gatcgactat      840
ttcggacggc cgtatgaagg catcgccgtg ttcgacggca aaaagatcac tgtaacaggg      900
accctgtgga acggcaacaa aattatcgac gagcgcctga tcaaccccga cggctccctg      960
ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct     1020

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<210> 526

<211> 340

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 526

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Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1          5          10          15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20          25          30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
35          40          45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50          55          60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65          70          75          80

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155193_1

Val Val Tyr Pro Val₈₅ Asp Asp His His Phe₉₀ Lys Val Ile Leu His₉₅ Tyr
 Gly Thr Leu Val₁₀₀ Ile Asp Gly Val₁₀₅ Ser Ala Ser Gly Gly₁₁₀ Ser Gly Gly
 Ser Gly Met₁₁₅ Tyr Glu Ser Phe₁₂₀ Ile Glu Ser Leu Pro Phe₁₂₅ Leu Lys Ser
 Leu Glu₁₃₀ Phe Ser Ala Arg Leu₁₃₅ Lys Val Val Asp Val₁₄₀ Ile Gly Thr Lys
 Val₁₄₅ Tyr Asn Asp Gly Glu₁₅₀ Gln Ile Ile Ala Gln₁₅₅ Gly Asp Ser Ala Asp₁₆₀
 Ser Phe Phe Ile₁₆₅ Ile Glu Ser Gly Glu Val₁₇₀ Lys Ile Thr Met Lys₁₇₅ Arg
 Lys Gly Lys Ser₁₈₀ Glu Val Glu Glu₁₈₅ Asn Gly Ala Val Glu₁₉₀ Ile Ala Arg
 Cys Ser Arg₁₉₅ Gly Gln Tyr Phe Gly₂₀₀ Glu Leu Ala Leu Val₂₀₅ Thr Asn Lys
 Pro Arg₂₁₀ Ala Ala Ser Ala His₂₁₅ Ala Ile Gly Thr Val₂₂₀ Lys Cys Leu Ala
 Met₂₂₅ Asp Val Gln Ala Phe₂₃₀ Glu Arg Leu Leu Gly₂₃₅ Pro Cys Met Glu Ile₂₄₀
 Met Lys Arg Asn₂₄₅ Ile Ala Thr Tyr Glu Glu₂₅₀ Gln Leu Val Ala Leu₂₅₅ Tyr
 Gly Thr Asn Met₂₆₀ Asp Ile Val Gly Ser₂₆₅ Gly Gly Ser Gly₂₇₀ Gly Ser Ser
 Ser Thr Pro₂₇₅ Asn Met Ile Asp Tyr₂₈₀ Phe Gly Arg Pro Tyr₂₈₅ Glu Gly Ile
 Ala Val₂₉₀ Phe Asp Gly Lys Lys₂₉₅ Ile Thr Val Thr Gly₃₀₀ Thr Leu Trp Asn
 Gly₃₀₅ Asn Lys Ile Ile Asp₃₁₀ Glu Arg Leu Ile Asn₃₁₅ Pro Asp Gly Ser Leu₃₂₀
 Leu Phe Arg Val₃₂₅ Thr Ile Asn Gly Val Thr₃₃₀ Gly Trp Arg Leu Cys₃₃₅ Glu
 Arg Ile Leu Ala₃₄₀

<210> 527
 <211> 1020
 <212> DNA
 <213> Artificial Sequence

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

<400> 527
 atggtcttca cactcgaaga tttcgttggg gactggcgac agacagccgg ctacaacctg 60
 gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 120
 actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc 180
 atcatcccggt atgaagggtct gagcggcgac caaatgggccc agatcgaaaa aatttttaag 240
 gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgcactatgg cactctggtg 300
 atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgatga aggcacgcgc 360
 gtgagcgcta gcggagggttc aggcgggttcc ggaatgtatg aaagctttat tgagtcactg 420
 ccattcctta aatcttttga gttttctgca cgcctgaaag tagtagatgt gataggcacc 480
 aaagtataca acgatggaga acaaatcatt gctcaggagg attcggctga ttcttttttc 540
 attattgaat ctggagaagt gaaaattact atgaaaagaa agggtaaadc agaagtggaa 600
 gagaatggtg cagtagaaat cgctcgatgc tcgcggggac agtacttttg agagcttgcc 660
 ctggttaacta acaaacctcg agcagcttct gcccacgcca ttgggactgt caaatgttta 720
 gcaatggatg tgcaagcatt tgaaaggctt ctgggacctt gcatggaaat tatgaaaagg 780
 aacatcgcta cctatgaaga acagttagtt gccctgtatg gaacgaacat ggatattgta 840
 gggtcagggt gatctggagg tagctcttct ttcgacggca aaaagatcac tgtaacaggg 900
 accctgtgga acggcaacaa aattatcgac gagcgcctga tcaaccccga cggctccctg 960
 ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct 1020

<210> 528
 <211> 340
 <212> PRT
 <213> Artificial Sequence

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

<400> 528
 Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15
 Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30
 Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
 35 40 45

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Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60
 Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80
 Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95
 Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110
 Gly Arg Pro Tyr Glu Gly Ile Ala Val Ser Ala Ser Gly Gly Ser Gly
 115 120 125
 Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys
 130 135 140
 Ser Leu Glu Phe Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr
 145 150 155 160
 Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala
 165 170 175
 Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys
 180 185 190
 Arg Lys Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala
 195 200 205
 Arg Cys Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn
 210 215 220
 Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu
 225 230 235 240
 Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu
 245 250 255
 Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu
 260 265 270
 Tyr Gly Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser
 275 280 285
 Ser Ser Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
 290 295 300
 Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
 305 310 315 320

155193_1

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
 325 330 335

Arg Ile Leu Ala
 340

<210> 529

<211> 1020

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 529

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atggtcttca cactcgaaga tttcgttggg gactggcgac agacagccgg ctacaacctg      60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta      120
actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc      180
atcatcccgt atgaaggtct gagcggcgac caaatgggcc agatcgaaaa aatttttaag      240
gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgactatgg cacttggtta      300
atcgacgggg ttacgccgaa catgatcgac ttttctggac ggccgtatga aggcacgcgc      360
gtgttcgacg gcagcgctag cggaggttca ggcggttccg gaatgtatga aagctttatt      420
gagtcactgc cattccttaa atctttggag ttttctgcac gcctgaaagt agtagatgtg      480
ataggcacca aagtatacaa cgatggagaa caaatcattg ctcagggaga ttcggctgat      540
tcttttttca ttattgaatc tggagaagtg aaaattacta tgaaaagaaa gggtaaataca      600
gaagtggaag agaatggtgc agtagaaatc gctcgatgct cgcggggaca gtactttgga      660
gagcttgccc tggttaactaa caaacctcga gcagcttctg cccacgccat tgggactgtc      720
aaatgtttag caatggatgt gcaagcattt gaaaggcttc tgggaccttg catggaaatt      780
atgaaaagga acatcgctac ctatgaagaa cagttagtgt ccctgtatgg aacgaacatg      840
gatattgtag ggtcaggtgg atctggaggt agctcttcta aaaagatcac tgtaacaggg      900
accctgtgga acggcaacaa aattatcgac gagcgcctga tcaaccccga cggctccctg      960
ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct     1020
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<210> 530

<211> 340

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 530

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30
 Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
 35 40 45
 Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60
 Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80
 Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95
 Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110
 Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Ser Ala Ser Gly
 115 120 125
 Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro
 130 135 140
 Phe Leu Lys Ser Leu Glu Phe Ser Ala Arg Leu Lys Val Val Asp Val
 145 150 155 160
 Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly
 165 170 175
 Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile
 180 185 190
 Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val
 195 200 205
 Glu Ile Ala Arg Cys Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu
 210 215 220
 Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val
 225 230 235 240
 Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro
 245 250 255
 Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu
 260 265 270
 Val Ala Leu Tyr Gly Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser
 275 280 285

Gly Gly Ser Ser Ser Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn
 290 295 300

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
 305 310 315 320

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
 325 330 335

Arg Ile Leu Ala
 340

<210> 531
 <211> 1020
 <212> DNA
 <213> Artificial Sequence

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

<400> 531
 atggtcttca cactcgaaga tttcgttggg gactggcgac agacagccgg ctacaacctg 60
 gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 120
 actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc 180
 atcatcccgt atgaaggctt gagcggcgac caaatgggccc agatcgaaaa aatttttaag 240
 gtggtgtacc ctgtggatga tcatcacttt aagggtgatcc tgactatgg cactgtgta 300
 atcgacgggg ttacgccgaa catgatcgac ttttcggac ggccgatga aggcacgccc 360
 gtgttcgacg gcaaaagcgc tagcggaggt tcaggcgggt ccggaatgta tgaaagcttt 420
 attgagtcac tgccattcct taaatctttg gagttttctg cacgcctgaa agtagtagat 480
 gtgataggca ccaaagtata caacgatgga gaacaaatca ttgctcaggg agattcggct 540
 gattctttttt tcattattga atctggagaa gtgaaaatta ctatgaaaag aaagggtaaa 600
 tcagaagtgg aagagaatgg tgcagtagaa atcgctcgat gctcgcgggg acagtacttt 660
 ggagagcttg ccctggtaac taacaaacct cgagcagctt ctgccacgc cattgggact 720
 gtcaaagtgt tagcaatgga tgtgcaagca tttgaaaggc ttctgggacc ttgcatggaa 780
 attatgaaaa ggaacatcgc tacctatgaa gaacagttag ttgccctgta tggaacgaac 840
 atggatattg tagggtcagg tggatctgga ggtagctctt ctaagatcac tgtaacaggg 900
 accctgtgga acggcaacaa aattatcgac gagcgcctga tcaaccccga cggctccctg 960
 ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct 1020

<210> 532
 <211> 340
 <212> PRT
 <213> Artificial Sequence

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

polypeptide

<400> 532

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

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

Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu
 130 135 140

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

Val Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln
 165 170 175

Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu Val Lys
 180 185 190

Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn Gly Ala
 195 200 205

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

Leu Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly Thr
 225 230 235 240

Val Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu Gly
 245 250 255

Pro Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln
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[illegible]

<210> 534

<211> 340

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 534

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

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

Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser
 130 135 140

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

Asp Val Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala
 165 170 175

Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu Val
 180 185 190

Lys Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn Gly
 195 200 205

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

Ala Leu Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly
 225 230 235 240

155193_1

Thr Val Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu
245 250 255

Gly Pro Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu
260 265 270

Gln Leu Val Ala Leu Tyr Gly Thr Asn Met Asp Ile Val Gly Ser Gly
275 280 285

Gly Ser Gly Gly Ser Ser Ser Ile Thr Val Thr Gly Thr Leu Trp Asn
290 295 300

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
305 310 315 320

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
325 330 335

Arg Ile Leu Ala
340

<210> 535

<211> 1020

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 535

atggtcttca cactcgaaga tttcgttggg gactggcgac agacagccgg ctacaacctg	60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta	120
actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc	180
atcatcccgat atgaagggtc gagcggcgac caaatgggac agatcgaaaa aatttttaag	240
gtggtgtacc ctgtggatga tcatcacttt aaggatgatc tgactatgg cacactggtg	300
atcgacgggg ttacgccgaa catgatcgac tttttcggac ggccgatga aggcacgcgc	360
gtgttcgacg gcaaaaagat cactgtaaca gggagcgcta gcggagggtc aggcgggttc	420
ggaatgtatg aaagctttat tgagtcactg ccatttcctta aatctttgga gttttctgca	480
cgctgaaag tagtagatgt gataggcacc aaagtataca acgatggaga acaaatcatt	540
gctcaggag attcggtga ttcttttttc attattgaat ctggagaagt gaaaattact	600
atgaaaagaa agggtaaata agaagtggaa gagaatggtg cagtagaaat cgctcgatgc	660
tcgcggggac agtacttttg agagcttgcc ctggtaacta acaaacctcg agcagcttct	720
gccacgccca ttgggactgt caaatgttta gcaatggatg tgcaagcatt tgaaaggctt	780
ctgggacctt gcatggaaat tatgaaaagg aacatcgcta cctatgaaga acagttagtt	840

155193_1

gccctgtatg gaacgaacat ggatattgta gggtcagggtg gatctggagg tagctcttct	900
accctgtgga acggcaacaa aattatcgac gagcgcctga tcaaccccga cggctccctg	960
ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct	1020

<210> 536
 <211> 340
 <212> PRT
 <213> Artificial Sequence

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

<400> 536
 Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Ser Ala Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu
 130 135 140

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

Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val Tyr Asn Asp Gly
 165 170 175

Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile
 180 185 190

Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly Lys Ser Glu
 195 200 205

155193_1

Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser Arg Gly Gln
210 215 220

Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro Arg Ala Ala Ser
225 230 235 240

Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp Val Gln Ala
245 250 255

Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys Arg Asn Ile
260 265 270

Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn Met Asp
275 280 285

Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser Thr Leu Trp Asn
290 295 300

Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
305 310 315 320

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
325 330 335

Arg Ile Leu Ala
340

<210> 537
<211> 1020
<212> DNA
<213> Artificial Sequence

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

<400> 537
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gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 120
actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc 180
atcatcccgat atgaaggctt gagcggcgac caaatgggccc agatcgaaaa aatttttaag 240
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ggaggttcag gcggttccgg aatgtatgaa agctttattg agtcactgcc attccttaaa 480
tctttggagt tttctgcacg cctgaaagta gtagatgtga taggcaccaa agtatacaac 540
gatggagaac aaatcattgc tcaggagat tcggctgatt cttttttcat tattgaatct 600
ggagaagtga aaattactat gaaaagaaa ggtaaatcag aagtgaaga gaatggtgca 660

155193_1

gtagaaatcg ctcgatgctc gcggggacag tactttggag agcttgccct ggtaactaac 720
 aaacctcgag cagcttctgc ccacgccatt gggactgtca aatgttttagc aatggatgtg 780
 caagcatttg aaaggcttct gggaccttgc atggaaatta tgaaaaggaa catcgctacc 840
 tatgaagaac agttagttgc cctgtatgga acgaacatgg atattgtagg gtcaggtgga 900
 tctggaggta gctcttctaa aattatcgac gagcgcctga tcaaccccga cggctccctg 960
 ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct 1020

<210> 538

<211> 340

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 538

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Ser Ala Ser Gly Gly Ser Gly
130 135 140

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

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

Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala
 180 185 190

Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys
 195 200 205

Arg Lys Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala
 210 215 220

Arg Cys Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn
 225 230 235 240

Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu
 245 250 255

Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu
 260 265 270

Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu
 275 280 285

Tyr Gly Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser
 290 295 300

Ser Ser Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu
 305 310 315 320

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
 325 330 335

Arg Ile Leu Ala
 340

<210> 539
 <211> 1020
 <212> DNA
 <213> Artificial Sequence

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

<400> 539
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 actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc 180
 atcatcccgat atgaagggtct gagcggcgac caaatgggccc agatcgaaaa aatttttaag 240
 gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgcactatgg cacttggtta 300
 atcgacgggg ttacgccgaa catgatcgac tttttcggac ggccgtatga aggcacgcgc 360
 gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc 420

155193_1

gacgagcgcc tgagcgctag cggaggttca ggcgggtccg gaatgtatga aagctttatt	480
gagtcactgc cattccttaa atctttggag ttttctgcac gcctgaaagt agtagatgtg	540
ataggcacca aagtatacaa cgatggagaa caaatcattg ctgagggaga ttcggctgat	600
tcttttttca ttattgaatc tggagaagtg aaaattacta tgaaaagaaa gggtaaatca	660
gaagtggaag agaatggtgc agtagaaatc gctcgatgct cgcggggaca gtactttgga	720
gagcttgccc tggtactaa caaacctcga gcagcttctg cccacgccat tgggactgtc	780
aaatgtttag caatggatgt gcaagcattt gaaaggcttc tgggaccttg catggaaatt	840
atgaaaagga acatcgctac ctatgaagaa cagtttagttg ccctgtatgg aacgaacatg	900
gatattgtag ggtaggtg atctggaggt agctcttcta tcaaccccga cggctcccgtg	960
ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct	1020

<210> 540
 <211> 340
 <212> PRT
 <213> Artificial Sequence

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

<400> 540
 Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ser Ala Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile
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gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgcactatgg cactactggta 300
atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgtatga aggcacgcc 360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc 420
gacgagcgcc tgatcaacag cgctagcgga gggttcaggcg gttccggaat gtatgaaagc 480
tttattgagt cactgccatt ccttaaactt ttggagtttt ctgcacgcct gaaagtagta 540
gatgtgatag gcaccaaagt atacaacgat ggagaacaaa tcattgctca gggagattcg 600
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aaatcagaag tggaagagaa tgggtgcagta gaaatcgctc gatgctcgcg gggacagtac 720
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aacatggata ttgtaggggtc aggtggatct ggaggtagct cttctcccga cggctccctg 960
ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct 1020

<210> 542

<211> 340

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 542

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

155193_1

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Asn Ser Ala Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser
145 150 155 160

Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu Glu Phe Ser Ala Arg
165 170 175

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

Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu
195 200 205

Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val
210 215 220

Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser Arg Gly Gln Tyr
225 230 235 240

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

His Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp Val Gln Ala Phe
260 265 270

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

Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn Met Asp Ile
290 295 300

Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser Pro Asp Gly Ser Leu
305 310 315 320

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
325 330 335

Arg Ile Leu Ala
340

<210> 543

<211> 1020

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 543

155193_1

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actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc	180
atcatcccgat atgaaggtct gagcggcgac caaatgggcc agatcgaaaa aatttttaag	240
gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgcactatgg cacttggtta	300
atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgtatga aggcacgccc	360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc	420
gacgagcgcc tgatcaaccc cgacagcgct agcggagggt caggcgggtc cggaatgtat	480
gaaagcttta ttgagtcact gccattcctt aaatctttgg agttttctgc acgcctgaaa	540
gtagtagatg tgataggcac caaagtatac aacgatggag aacaaatcat tgctcaggga	600
gattcggctg attctttttt cattattgaa tctggagaag tgaaaattac tatgaaaaga	660
aagggtaaat cagaagtgga agagaatggg gcagtagaaa tcgctcgatg ctcgcgggga	720
cagtactttg gagagcttgc cctggtaact aacaaacctc gagcagcttc tgcccacgcc	780
attgggactg tcaaattgtt agcaatggat gtgcaagcat ttgaaaggct tctgggacct	840
tgcatggaaa ttatgaaaag gaacatcgct acctatgaag aacagttagt tgccctgtat	900
ggaacgaaca tggatattgt agggtcaggt ggatctggag gtagctcttc tggctccctg	960
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<210> 544
 <211> 340
 <212> PRT
 <213> Artificial Sequence

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

<400> 544
 Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

155193_1

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

Ile Asn Pro Asp Ser Ala Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr
145 150 155 160

Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu Glu Phe Ser
165 170 175

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

Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile
195 200 205

Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly Lys Ser
210 215 220

Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser Arg Gly
225 230 235 240

Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro Arg Ala Ala
245 250 255

Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp Val Gln
260 265 270

Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys Arg Asn
275 280 285

Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn Met
290 295 300

Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser Gly Ser Leu
305 310 315 320

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
325 330 335

Arg Ile Leu Ala
340

<210> 545
<211> 1020
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 545

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actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc      180
atcatcccggt atgaagggtct gagcggcgac caaatgggcc agatcgaaaa aatttttaag      240
gtggtgtacc ctgtggatga tcatcacttt aaggatgatcc tgcactatgg cacttggtga      300
atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgatga aggcacgcgc      360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc      420
gacgagcgcc tgatcaaccc cgacggcagc gctagcggag gttcaggcgg ttccggaatg      480
tatgaaagct ttattgagtc actgccattc cttaaattct tggagttttc tgcacgcctg      540
aaagtagtag atgtgatagg caccaaagta tacaacgatg gagaacaaat cattgtctag      600
ggagattcgg ctgattcttt ttctattatt gaatctggag aagtgaaaat tactatgaaa      660
agaaagggta aatcagaagt ggaagagaat ggtgcagtag aaatcgctcg atgctcgagg      720
ggacagtact ttggagagct tgccctggta actaacaac ctcgagcagc ttctgccac      780
gccattggga ctgtcaaag tttagcaatg gatgtgcaag catttgaaag gcttctggga      840
ccttgcatgg aaattatgaa aaggaacatc gctacctatg aagaacagtt agttgccctg      900
tatggaacga acatggatat tgtaggggtca ggtggatctg gaggtagctc ttcttcctg      960
ctgttccgag taaccatcaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct     1020

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<210> 546

<211> 340

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 546

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Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
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Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20           25           30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
35           40           45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50           55           60

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Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Ala Ser Gly Gly Ser Gly Gly Ser Gly Met
 145 150 155 160

Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu Glu Phe
 165 170 175

Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val Tyr Asn
 180 185 190

Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe
 195 200 205

Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly Lys
 210 215 220

Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser Arg
 225 230 235 240

Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro Arg Ala
 245 250 255

Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp Val
 260 265 270

Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys Arg
 275 280 285

Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn
 290 295 300

Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser Ser Leu
 305 310 315 320

Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu
 325 330 335

Arg Ile Leu Ala
340

<210> 547
<211> 1020
<212> DNA
<213> Artificial Sequence

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

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<400> 547
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gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta      120
actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc      180
atcatcccgt atgaaggtct gagcggcgac caaatgggcc agatcgaaaa aatttttaag      240
gtggtgtacc ctgtggatga tcactacttt aaggatgatcc tgcactatgg cactctggta      300
atcgacgggg ttacgccgaa catgatcgac tttttcggac ggccgtatga aggcacgcgc      360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc      420
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gagtaaccat cagcgctagc      480
ggaggttcag gcggttccgg aatgtatgaa agctttattg agtcaactgcc attccttaaa      540
tctttggagt tttctgcacg cctgaaagta gtagatgtga taggcaccaa agtatacaac      600
gatggagaac aaatcattgc tcaggagat tcggctgatt cttttttcat tattgaatct      660
ggagaagtga aaattactat gaaaagaaag ggtaaatcag aagtggaaga gaatggtgca      720
gtagaaatcg ctcgatgctc gcggggacag tactttggag agcttgccct ggtaactaac      780
aaacctcgag cagcttctgc ccacgccatt gggactgtca aatgttttagc aatggatgtg      840
caagcatttg aaaggcttct gggaccttgc atggaaatta tgaaaaggaa catcgctacc      900
tatgaagaac agttagttgc cctgtatgga acgaacatgg atattgtagg gtcagggtgga      960
tctggaggta gctcttctaa cggagtgacc ggctggcggc tgtgcgaacg cattctggct      1020
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<210> 548
<211> 340
<212> PRT
<213> Artificial Sequence

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

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<400> 548
Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1           5           10           15
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Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20           25           30
```

```
Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
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35				40				155193_1				45			
Ser	Gly 50	Glu	Asn	Gly	Leu	Lys 55	Ile	Asp	Ile	His	Val 60	Ile	Ile	Pro	Tyr
Glu	Gly	Leu	Ser	Gly	Asp 70	Gln	Met	Gly	Gln	Ile 75	Glu	Lys	Ile	Phe	Lys 80
Val	Val	Tyr	Pro	Val 85	Asp	Asp	His	His	Phe 90	Lys	Val	Ile	Leu	His 95	Tyr
Gly	Thr	Leu	Val 100	Ile	Asp	Gly	Val	Thr 105	Pro	Asn	Met	Ile	Asp 110	Tyr	Phe
Gly	Arg	Pro 115	Tyr	Glu	Gly	Ile	Ala 120	Val	Phe	Asp	Gly	Lys 125	Lys	Ile	Thr
Val	Thr 130	Gly	Thr	Leu	Trp	Asn 135	Gly	Asn	Lys	Ile	Ile 140	Asp	Glu	Arg	Leu
Ile	Asn	Pro	Asp	Gly	Ser 150	Leu	Leu	Phe	Arg	Val 155	Thr	Ile	Ser	Ala	Ser 160
Gly	Gly	Ser	Gly	Gly 165	Ser	Gly	Met	Tyr	Glu 170	Ser	Phe	Ile	Glu	Ser 175	Leu
Pro	Phe	Leu	Lys 180	Ser	Leu	Glu	Phe	Ser 185	Ala	Arg	Leu	Lys	Val 190	Val	Asp
Val	Ile	Gly 195	Thr	Lys	Val	Tyr	Asn 200	Asp	Gly	Glu	Gln	Ile 205	Ile	Ala	Gln
Gly	Asp 210	Ser	Ala	Asp	Ser	Phe 215	Phe	Ile	Ile	Glu	Ser 220	Gly	Glu	Val	Lys
Ile	Thr	Met	Lys	Arg	Lys 230	Gly	Lys	Ser	Glu	Val 235	Glu	Glu	Asn	Gly	Ala 240
Val	Glu	Ile	Ala	Arg 245	Cys	Ser	Arg	Gly	Gln 250	Tyr	Phe	Gly	Glu	Leu 255	Ala
Leu	Val	Thr	Asn 260	Lys	Pro	Arg	Ala	Ala 265	Ser	Ala	His	Ala	Ile 270	Gly	Thr
Val	Lys	Cys 275	Leu	Ala	Met	Asp	Val 280	Gln	Ala	Phe	Glu	Arg 285	Leu	Leu	Gly
Pro	Cys 290	Met	Glu	Ile	Met	Lys 295	Arg	Asn	Ile	Ala	Thr 300	Tyr	Glu	Glu	Gln
Leu	Val	Ala	Leu	Tyr	Gly	Thr	Asn	Met	Asp	Ile	Val	Gly	Ser	Gly	Gly

155193_1

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140

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

Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser
165 170 175

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

Asp Val Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala
195 200 205

Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu Val
210 215 220

Lys Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn Gly
225 230 235 240

Ala Val Glu Ile Ala Arg Cys Ser Arg Gly Gln Tyr Phe Gly Glu Leu
245 250 255

Ala Leu Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly
260 265 270

Thr Val Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu
275 280 285

155193_1

Gly Pro Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu
 290 295 300

Gln Leu Val Ala Leu Tyr Gly Thr Asn Met Asp Ile Val Gly Ser Gly
 305 310 315 320

Gly Ser Gly Gly Ser Ser Ser Gly Val Thr Gly Trp Arg Leu Cys Glu
 325 330 335

Arg Ile Leu Ala
 340

<210> 551

<211> 1020

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 551

atggtcttca cactcgaaga tttcgttggg gactggcgac agacagccgg ctacaacctg	60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta	120
actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc	180
atcatcccgt atgaaggtct gagcggcgac caaatgggcc agatcgaaaa aatttttaag	240
gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgcactatgg cactctggtg	300
atcgacgggg ttacgccgaa catgatcgac tttttcggac ggccgtatga aggcacgcgc	360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc	420
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gagtaaccat caacggaagc	480
gctagcggag gttcaggcgg ttccggaatg tatgaaagct ttattgagtc actgccattc	540
cttaaattct tggagttttc tgcacgcctg aaagtagtag atgtgatagg caccaaagta	600
tacaacgatg gagaacaaat cattgctcag ggagattcgg ctgattcttt tttcattatt	660
gaatctggag aagtgaaaat tactatgaaa agaaagggta aatcagaagt ggaagagaat	720
ggtgcagtag aaatcgctcg atgctcgcgg ggacagtact ttggagagct tgccctggta	780
actaacaac ctcgagcagc ttctgccac gccattggga ctgtcaaatg tttagcaatg	840
gatgtgcaag catttgaaag gcttctggga ccttgcacgg aaattatgaa aaggaacatc	900
gctacctatg aagaacagtt agttgccctg tatggaacga acatggatat tgtagggtca	960
ggtggatctg gaggtagctc ttctgtgacc ggctggcggc tgtgcgaacg cattctggct	1020

<210> 552

<211> 340

<212> PRT

<213> Artificial Sequence

155193_1

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 552

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
1 5 10 15Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
20 25 30Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
35 40 45Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
50 55 60Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
65 70 75 80Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
85 90 95Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
100 105 110Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
115 120 125Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
130 135 140Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Ser
145 150 155 160Ala Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu
165 170 175Ser Leu Pro Phe Leu Lys Ser Leu Glu Phe Ser Ala Arg Leu Lys Val
180 185 190Val Asp Val Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile
195 200 205Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu
210 215 220Val Lys Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn
225 230 235 240Gly Ala Val Glu Ile Ala Arg Cys Ser Arg Gly Gln Tyr Phe Gly Glu
245 250 255

155193_1

Leu Ala Leu Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile
260 265 270

Gly Thr Val Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu
275 280 285

Leu Gly Pro Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu
290 295 300

Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn Met Asp Ile Val Gly Ser
305 310 315 320

Gly Gly Ser Gly Gly Ser Ser Ser Val Thr Gly Trp Arg Leu Cys Glu
325 330 335

Arg Ile Leu Ala
340

<210> 553
<211> 1020
<212> DNA
<213> Artificial Sequence

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

<400> 553
atggtcttca cactcgaaga tttcgttggg gactggcgac agacagccgg ctacaacctg 60
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta 120
actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc 180
atcatcccgat atgaagggtct gagcggcgac caaatgggccc agatcgaaaa aatttttaag 240
gtggtgtacc ctgtggatga tcatcacttt aagggtgatcc tgcactatgg cactctggtg 300
atcgacgggg ttacgccgaa catgatcgac ttttcggac ggccgatga aggcacgcgc 360
gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaattatc 420
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gagtaaccat caacggagtg 480
accggctggc ggctgtgcga aagcgctagc ggagggttcag gcggttccgg aatgtatgaa 540
agctttattg agtcactgcc attccttaaa tctttggagt tttctgcacg cctgaaagta 600
gtagatgtga taggcaccaa agtatacaac gatggagaac aaatcattgc tcaggagat 660
tcggctgatt cttttttcat tattgaatct ggagaagtga aaattactat gaaaagaaag 720
ggtaaatacag aagtggaaga gaatggtgca gtagaaatcg ctcatgctc gcggggacag 780
tactttggag agcttgccct ggtaactaac aaacctcgag cagcttctgc ccacgccatt 840
gggactgtca aatgttttagc aatggatgtg caagcatttg aaaggcttct gggaccttgc 900
atggaaatta tgaaaaggaa catcgctacc tatgaagaac agttagtgc cctgtatgga 960
acgaacatgg atattgtagg gtcaggtgga tctggaggta gctcttctcg cattctggct 1020

<210> 554
 <211> 340
 <212> PRT
 <213> Artificial Sequence

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

<400> 554

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
 1 5 10 15

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Ser Ala Ser Gly Gly Ser Gly Gly Ser
 165 170 175

Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu
 180 185 190

Glu Phe Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val
 195 200 205

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

Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys
 225 230 235 240
 Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys
 245 250 255
 Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro
 260 265 270
 Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met
 275 280 285
 Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met
 290 295 300
 Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly
 305 310 315 320
 Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser
 325 330 335
 Arg Ile Leu Ala
 340

<210> 555
 <211> 1023
 <212> DNA
 <213> Artificial Sequence

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

<400> 555
 atgggtgtgt ccagtttgtt tcagaatctc ggggtgtccg taactccgat ccaaaggatt 60
 gtcctgagcg gtgaaaatgg gctgaagatc gacatccatg tcatcatccc gtatgaaggt 120
 ctgagcggcg accaaatggg ccagatcgaa aaaattttta aggtggtgta ccctgtggat 180
 gatcatcact ttaagggtgat cctgcactat ggcacactgg taatcgacgg gggtacgccg 240
 aacatgatcg actatttcgg acggccgtat gaaggcatcg ccgtgttcga cggcaaaaag 300
 atcactgtaa cagggaccct gtggaacggc aacaaaatta tcgacgagcg cctgatcaac 360
 cccgacggct ccctgctgtt ccgagtaacc atcaacggag tgaccggctg gcggctgtgc 420
 gaacgcattc tggctagctc aagcggaggt tcaggcgggt ccggaatgta tgaaagcttt 480
 attgagtcac tgccattcct taaatctttg gagttttctg cacgcctgaa agtagtagat 540
 gtgataggca ccaaagtata caacgatgga gaacaaatca ttgctcaggg agattcggct 600
 gattctttttt tcattattga atctggagaa gtgaaaatta ctatgaaaag aaagggtaaa 660
 tcagaagtgg aagagaatgg tgcagtagaa atcgctcgat gctcgcgggg acagtacttt 720
 ggagagcttg ccctggtaac taacaaacct cgagcagctt ctgcccacgc cattgggact 780

155193_1

gtcaa	atg	tt	tag	caat	gga	tgt	gca	agca	ttt	gaa	aggc	ttc	tgg	gacc	ttg	cat	ggaa	840
attat	gaaaa	gga	acat	cgc	tac	ctat	gaa	gaac	ag	ttag	ttg	ccct	gta	tgga	ac	gaac	900	
atgg	atattg	tag	gg	tcagg	tgga	tct	gga	gg	tag	ctctt	ctat	gg	tctt	cac	act	cgaa	960	
gatt	tcgttg	ggg	act	ggcg	acag	acag	cc	gg	ctaca	aacc	tgga	cca	agt	cct	tga	acag	1020	
gga																	1023	

<210> 556
 <211> 341
 <212> PRT
 <213> Artificial Sequence

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

<400> 556
 Met Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
 1 5 10 15

Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile
 20 25 30

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
 35 40 45

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
 50 55 60

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

Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
 85 90 95

Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys
 100 105 110

Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg
 115 120 125

Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu
 130 135 140

Ala Ser Ser Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe
 145 150 155 160

Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu Glu Phe Ser Ala Arg Leu
 165 170 175

Lys Val Val Asp Val Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln
 180 185 190

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Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser
195 200 205

Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu
210 215 220

Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser Arg Gly Gln Tyr Phe
225 230 235 240

Gly Glu Leu Ala Leu Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His
245 250 255

Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu
260 265 270

Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr
275 280 285

Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn Met Asp Ile Val
290 295 300

Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser Met Val Phe Thr Leu Glu
305 310 315 320

Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln
325 330 335

Val Leu Glu Gln Gly
340

<210> 557

<211> 1023

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 557

atggctcctga gcggtgaaaa tgggctgaag atcgacatcc atgtcatcat cccgtatgaa 60

ggctctgagcg gcgaccaaatt gggccagatc gaaaaaattt ttaagggtgggt gtaccctgtg 120

gatgatcatc actttaaggt gatcctgcac tatggcacac tggtaatcga cgggggttacg 180

ccgaacatga tcgactatatt cggacggccg tatgaaggca tcgccgtggt cgacggcaaaa 240

aagatcactg taacaggggac cctgtggaac ggcaacaaaa ttatcgacga gcgcctgatc 300

aaccccgacg gtcctctgct gttccgagta accatcaacg gagtgaccgg ctggcggctg 360

tgcgaacgca ttctggctag ctcaagcgga gggttcaggcg gttccggaat gtatgaaagc 420

tttattgagt cactgccatt ccttaaattt ttggagtttt ctgcacgcct gaaagtagta 480

gatgtgatag gcaccaaagt atacaacgat ggagaacaaa tcattgctca gggagattcg 540

155193_1

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gctgattcctt ttttcattat tgaatctgga gaagtgaataa ttactatgaa aagaaagggt      600
aaatcagaag  tggaagagaa tgggtgcagta gaaatcgctc gatgctcgcg gggacagtac      660
tttgagagac  ttgccctggt aactaacaaa cctcgagcag cttctgccca cgccattggg      720
actgtcaaat  gtttagcaat ggatgtgcaa gcatttgaaa ggcttctggg accttgcatg      780
gaaattatga  aaaggaacat cgctacctat gaagaacagt tagttgccct gtatggaacg      840
aacatggata  ttgtagggtc aggtggatct ggaggtagct cttctatggt cttcacactc      900
gaagatttcg  ttggggactg gcgacagaca gccggctaca acctggacca agtccttgaa      960
cagggaggtg  tgtccagttt gtttcagaat ctcgggggtgt ccgtaactcc gatccaaagg     1020
att                                                1023

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<210> 558

<211> 341

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 558

```

Met Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile
1          5          10          15

```

```

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

```

```

Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile
35          40          45

```

```

Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile
50          55          60

```

```

Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys
65          70          75          80

```

```

Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp
85          90          95

```

```

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

```

```

Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Ser Ser
115         120         125

```

```

Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser
130         135         140

```

```

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

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155193_1

Asp Val Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala
165 170 175

Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu Val
180 185 190

Lys Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn Gly
195 200 205

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

Ala Leu Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly
225 230 235 240

Thr Val Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu
245 250 255

Gly Pro Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu
260 265 270

Gln Leu Val Ala Leu Tyr Gly Thr Asn Met Asp Ile Val Gly Ser Gly
275 280 285

Gly Ser Gly Gly Ser Ser Ser Met Val Phe Thr Leu Glu Asp Phe Val
290 295 300

Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu
305 310 315 320

Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr
325 330 335

Pro Ile Gln Arg Ile
340

<210> 559

<211> 1026

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 559

atggacgggg ttacgccgaa catgatcgac tatttcggac ggccgtatga aggcacgcc 60

gtgttcgacg gcaaaaagat cactgtaaca gggaccctgt ggaacggcaa caaaattatc 120

gacgagcgcc tgatcaacc cgcggctcc ctgctgttcc gagtaaccat caacggagtg 180

accggctggc ggctgtgcga acgcattctg gctagctcaa gcggagggttc aggcgggttc 240

155193_1

ggaatgtatg aaagctttat tgagtcactg ccatttcctta aatcttttga gttttctgca	300
cgcctgaaag tagtagatgt gataggcacc aaagtataca acgatggaga acaaattcatt	360
gctcagggag attcggctga ttcttttttc attattgaat ctggagaagt gaaaattact	420
atgaaaagaa agggtaaadc agaagtggaa gagaatggtg cagtagaaat cgctcgatgc	480
tcgcggggac agtactttgg agagcttgcc ctggtaacta acaaacctcg agcagcttct	540
gccacgccca ttgggactgt caaatgttta gcaatggatg tgcaagcatt tgaaaggctt	600
ctgggacctt gcatggaaat tatgaaaagg aacatcgcta cctatgaaga acagttagtt	660
gccctgtatg gaacgaacat ggatattgta gggctcaggtg gatctggagg tagctcttct	720
atggtcttca cactcgaaga tttcgttggg gactggcgac agacagccgg ctacaacctg	780
gaccaagtcc ttgaacaggg aggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta	840
actccgatcc aaaggattgt cctgagcggg gaaaatgggc tgaagatcga catccatgtc	900
atcatcccgatgaaggtct gagcggcgac caaatgggcc agatcgaaaa aatttttaag	960
gtggtgtacc ctgtggatga tcatcacttt aaggtgatcc tgcactatgg cactctggtg	1020
atcgac	1026

<210> 560

<211> 342

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 560

Met	Asp	Gly	Val	Thr	Pro	Asn	Met	Ile	Asp	Tyr	Phe	Gly	Arg	Pro	Tyr
1			5					10					15		

Glu	Gly	Ile	Ala	Val	Phe	Asp	Gly	Lys	Lys	Ile	Thr	Val	Thr	Gly	Thr
			20					25					30		

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

Gly	Ser	Leu	Leu	Phe	Arg	Val	Thr	Ile	Asn	Gly	Val	Thr	Gly	Trp	Arg
	50					55					60				

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

Gly	Met	Tyr	Glu	Ser	Phe	Ile	Glu	Ser	Leu	Pro	Phe	Leu	Lys	Ser	Leu
				85					90					95	

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

Tyr	Asn	Asp	Gly	Glu	Gln	Ile	Ile	Ala	Gln	Gly	Asp	Ser	Ala	Asp	Ser
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

115 120 155193_1 125

Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys
130 135 140

Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys
145 150 155 160

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

Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met
180 185 190

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

Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly
210 215 220

Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser
225 230 235 240

Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala
245 250 255

Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
260 265 270

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
275 280 285

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
290 295 300

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
305 310 315 320

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
325 330 335

Gly Thr Leu Val Ile Asp
340

<210> 561

<211> 1026

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polynucleotide

155193_1

```

<400> 561
atgggggtta cgccgaacat gatcgactat ttcggacggc cgtatgaagg catcgccgtg      60
ttcgacggca aaaagatcac tgtaacaggg accctgtgga acggcaacaa aattatcgac      120
gagcgcctga tcaaccccgga cggctccctg ctgttccgag taaccatcaa cggagtgacc      180
ggctggcggc tgtgcgaacg cattctggct agctcaagcg gaggttcagg cggttccgga      240
atgtatgaaa gctttattga gtcactgcca ttccttaaatt ctttggagtt ttctgcacgc      300
ctgaaagtag tagatgtgat aggcacaaa gtatacaacg atggagaaca aatcattgct      360
cagggagatt cggctgattc ttttttcatt attgaatctg gagaagtga aattactatg      420
aaaagaaagg gtaaatcaga agtgggaagag aatgggtgcag tagaaatcgc tcgatgctcg      480
cggggacagt actttggaga gcttgccctg gtaactaaca aacctcgagc agcttctgcc      540
cacgccattg ggactgtcaa atgttttagca atggatgtgc aagcatttga aaggcttctg      600
ggaccttgca tggaaattat gaaaaggaac atcgctacct atgaagaaca gttagttgcc      660
ctgtatggaa cgaacatgga tattgtaggg tcaggtggat ctggaggtag ctcttctatg      720
gtcttcacac tcgaagattt cgttgggggac tggcgacaga cagccggcta caacctggac      780
caagtccttg aacagggagg tgtgtccagt ttgtttcaga atctcggggg gtccgtaact      840
ccgatccaaa ggattgtcct gagcggtgaa aatgggctga agatcgacat ccatgtcatc      900
atcccgtatg aaggtctgag cggcgaccaa atgggccaga tcgaaaaaat ttttaagggtg      960
gtgtaccctg tggatgatca tcactttaag gtgatcctgc actatggcac actggtaatc     1020
gacggg                                           1026

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<210> 562
<211> 342
<212> PRT
<213> Artificial Sequence

```

```

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

```

```

<400> 562
Met Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu
1          5          10          15

Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu
          20          25          30

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

Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu
          50          55          60

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

```

155193_1

155193_1

<210> 563
 <211> 1026
 <212> DNA
 <213> Artificial Sequence

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

<400> 563
 atggttacgc cgaacatgat cgactatttc ggacggccgt atgaaggcat cgccgtgttc 60
 gacggcaaaa agatcactgt aacagggacc ctgtggaacg gcaacaaaat tatcgacgag 120
 cgcctgatca accccgacgg ctccctgctg ttccgagtaa ccatcaacgg agtgaccggc 180
 tggcggctgt gcgaacgcat tctggctagc tcaagcggag gttcaggcgg ttccggaatg 240
 tatgaaagct ttattgagtc actgccattc cttaaactct tggagttttc tgcacgcctg 300
 aaagtagtag atgtgatagg caccaaagta tacaacgatg gagaacaaat cattgtctag 360
 ggagattcgg ctgattcttt ttctattatt gaatctggag aagtgaaaat tactatgaaa 420
 agaaagggta aatcagaagt ggaagagaat ggtgcagtag aaatcgctcg atgctcgcg 480
 ggacagtact ttggagagct tgccctggta actaacaac ctcgagcagc ttctgcccac 540
 gccattggga ctgtcaaatg tttagcaatg gatgtgcaag catttgaaag gcttctggga 600
 ccttgcatgg aaattatgaa aaggaacatc gctacctatg aagaacagtt agttgccctg 660
 tatggaacga acatggatat tgtagggtca ggtggatctg gaggtagctc ttctatggtc 720
 ttcacactcg aagatttcgt tggggactgg cgacagacag ccggctacaa cctggaccaa 780
 gtccttgaac agggaggtgt gtccagttt tttcagaatc tcggggtgtc cgtaactccg 840
 atccaaagga ttgtcctgag cggtgaaaat gggctgaaga tcgacatcca tgtcatcatc 900
 ccgtatgaag gtctgagcgg cgaccaaatg ggccagatcg aaaaaatttt taagggtgtg 960
 taccctgtgg atgatcatca cttaagggtg atcctgcact atggcacact ggtaatcgac 1020
 ggggtt 1026

<210> 564
 <211> 342
 <212> PRT
 <213> Artificial Sequence

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

<400> 564
 Met Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly
 1 5 10 15
 Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp
 20 25 30
 Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser
 35 40 45

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Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp Arg Leu Cys
 50 55 60
 Glu Arg Ile Leu Ala Ser Ser Ser Gly Gly Ser Gly Gly Ser Gly Met
 65 70 75 80
 Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu Glu Phe
 85 90 95
 Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys Val Tyr Asn
 100 105 110
 Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe
 115 120 125
 Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly Lys
 130 135 140
 Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser Arg
 145 150 155 160
 Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys Pro Arg Ala
 165 170 175
 Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp Val
 180 185 190
 Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys Arg
 195 200 205
 Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn
 210 215 220
 Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser Met Val
 225 230 235 240
 Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr
 245 250 255
 Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln
 260 265 270
 Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly
 275 280 285
 Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr Glu Gly
 290 295 300
 Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val
 305 310 315 320

Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr
325 330 335

Leu Val Ile Asp Gly Val
340

<210> 565
<211> 1026
<212> DNA
<213> Artificial Sequence

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

<400> 565						
atgatcaacc	ccgacggctc	cctgctgttc	cgagtaacca	tcaacggagt	gaccggctgg	60
cggtctgtcg	aacgcattct	ggctagctca	agcggagggt	caggcggttc	cggaatgtat	120
gaaagcttta	ttgagtcact	gccatttcct	aaatctttgg	agttttctgc	acgcctgaaa	180
gtagtagatg	tgataggcac	caaagtatac	aacgatggag	aacaaatcat	tgctcagggg	240
gattcggtcg	attctttttt	cattattgaa	tctggagaag	tgaaaattac	tatgaaaaga	300
aagggtaaat	cagaagtgga	agagaatggt	gcagtagaaa	tcgctcgatg	ctcgcggggg	360
cagtactttg	gagagcttgc	cctggtaact	aacaaacctc	gagcagcttc	tgcccacgcc	420
attgggactg	tcaaatgttt	agcaatggat	gtgcaagcat	ttgaaaggct	tctgggacct	480
tgcatggaaa	ttatgaaaag	gaacatcgct	acctatgaag	aacagttagt	tgccctgtat	540
ggaacgaaca	tggaatttgt	agggtcaggt	ggatctggag	gtagctcttc	tatggctctc	600
acactcgaag	atttcgttgg	ggactggcga	cagacagccg	gctacaacct	ggaccaagtc	660
cttgaacagg	gaggtgtgtc	cagtttgttt	cagaatctcg	gggtgtccgt	aactccgatc	720
caaaggattg	tcctgagcgg	tgaaaatggg	ctgaagatcg	acatccatgt	catcatcccg	780
tatgaaggtc	tgagcggcga	ccaaatgggc	cagatcgaaa	aaatttttaa	ggtggtgtac	840
cctgtggatg	atcatcactt	taaggatgat	ctgcactatg	gcacactggt	aatcgacggg	900
gttacgccga	acatgatcga	ctatttcgga	cggccgtatg	aaggcatcgc	cgtgttcgac	960
ggcaaaaaga	tcactgtaac	agggaccctg	tggaacggca	acaaaattat	cgacgagcgc	1020
ctgatac						1026

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<210> 566
<211> 342
<212> PRT
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 566
Met Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly
1 5 10 15

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Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Ser Ser Ser Gly
 20 25 30
 Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro
 35 40 45
 Phe Leu Lys Ser Leu Glu Phe Ser Ala Arg Leu Lys Val Val Asp Val
 50 55 60
 Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly
 65 70 75 80
 Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile
 85 90 95
 Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val
 100 105 110
 Glu Ile Ala Arg Cys Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu
 115 120 125
 Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val
 130 135 140
 Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro
 145 150 155 160
 Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu
 165 170 175
 Val Ala Leu Tyr Gly Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser
 180 185 190
 Gly Gly Ser Ser Ser Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp
 195 200 205
 Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly
 210 215 220
 Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile
 225 230 235 240
 Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His
 245 250 255
 Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile
 260 265 270
 Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe Lys
 275 280 285

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Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn
290 295 300

Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp
305 310 315 320

Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile
325 330 335

Ile Asp Glu Arg Leu Ile
340

<210> 567
<211> 1026
<212> DNA
<213> Artificial Sequence

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

<400> 567
atgggctccc tgctgttccg agtaaccatc aacggagtga ccggctggcg gctgtgcgaa 60
cgcattcttg ctagctcaag cggagggtca ggcggttccg gaatgtatga aagctttatt 120
gagtcactgc cattccttaa atctttggag ttttctgcac gcctgaaagt agtagatgtg 180
ataggcacca aagtatacaa cgatggagaa caaatcattg ctcagggaga ttcggctgat 240
tcttttttca ttattgaatc tggagaagtg aaaattacta tgaaaagaaa gggtaaataca 300
gaagtggaag agaatggtgc agtagaaatc gctcgaatgc cgcggggaca gtactttgga 360
gagcttgccc tggtactaa caaacctcga gcagcttctg cccacgccat tgggactgtc 420
aaatgtttag caatggatgt gcaagcattt gaaaggcttc tgggaccttg catggaaatt 480
atgaaaagga acatcgctac ctatgaagaa cagttagtgt ccctgtatgg aacgaacatg 540
gatattgtag ggtcagggtg atctggaggt agctcttcta tggctttcac actcgaagat 600
ttcgttgggg actggcgaca gacagccggc tacaacctgg accaagtcct tgaacagga 660
gggtgtgtcca gtttgtttca gaatctcggg gtgtccgtaa ctccgatcca aaggattgtc 720
ctgagcgggtg aaaatgggct gaagatcgac atccatgtca tcatcccgta tgaaggcttg 780
agcggcgacc aaatgggcca gatcgaaaaa atttttaagg tgggtgtacc tgtggatgat 840
catcacttta aggtgatcct gcactatggc aacttggtta tcgacggggt tacgccgaac 900
atgatcgact atttcggacg gccgtatgaa ggcacgcgg tggtcgacgg caaaaagatc 960
actgtaacag ggaccctgtg gaacggcaac aaaattatcg acgagcgct gatcaacccc 1020
gacggc 1026

<210> 568
<211> 342
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 568

Met Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly Trp
1 5 10 15Arg Leu Cys Glu Arg Ile Leu Ala Ser Ser Ser Gly Gly Ser Gly Gly
20 25 30Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser
35 40 45Leu Glu Phe Ser Ala Arg Leu Lys Val Val Asp Val Ile Gly Thr Lys
50 55 60Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp
65 70 75 80Ser Phe Phe Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg
85 90 95Lys Gly Lys Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg
100 105 110Cys Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu Val Thr Asn Lys
115 120 125Pro Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala
130 135 140Met Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile
145 150 155 160Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr
165 170 175Gly Thr Asn Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser
180 185 190Ser Met Val Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr
195 200 205Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser
210 215 220Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val
225 230 235 240Leu Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro
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245					250					255					
Tyr	Glu	Gly	Leu 260	Ser	Gly	Asp	Gln	Met 265	Gly	Gln	Ile	Glu	Lys 270	Ile	Phe
Lys	Val	Val 275	Tyr	Pro	Val	Asp	Asp 280	His	His	Phe	Lys	Val 285	Ile	Leu	His
Tyr	Gly 290	Thr	Leu	Val	Ile	Asp 295	Gly	Val	Thr	Pro	Asn 300	Met	Ile	Asp	Tyr
Phe 305	Gly	Arg	Pro	Tyr	Glu 310	Gly	Ile	Ala	Val	Phe 315	Asp	Gly	Lys	Lys	Ile 320
Thr	Val	Thr	Gly	Thr 325	Leu	Trp	Asn	Gly	Asn 330	Lys	Ile	Ile	Asp	Glu 335	Arg
Leu	Ile	Asn	Pro 340	Asp	Gly										

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aacaaaatta tcgacgagcg cctgatcaac cccgacggct ccctgctggt ccgagtaacc 1020
atcaac 1026

<210> 570
<211> 342
<212> PRT
<213> Artificial Sequence

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

<400> 570
Met Asn Gly Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Ser
1 5 10 15

Ser Ser Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu
20 25 30

Ser Leu Pro Phe Leu Lys Ser Leu Glu Phe Ser Ala Arg Leu Lys Val
35 40 45

Val Asp Val Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile
50 55 60

Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu
65 70 75 80

Val Lys Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn
85 90 95

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

Leu Ala Leu Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile
115 120 125

Gly Thr Val Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu
130 135 140

Leu Gly Pro Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu
145 150 155 160

Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn Met Asp Ile Val Gly Ser
165 170 175

Gly Gly Ser Gly Gly Ser Ser Ser Met Val Phe Thr Leu Glu Asp Phe
180 185 190

Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu
195 200 205

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Glu Gln Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val
210 215 220

Thr Pro Ile Gln Arg Ile Val Leu Ser Gly Glu Asn Gly Leu Lys Ile
225 230 235 240

Asp Ile His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met
245 250 255

Gly Gln Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His
260 265 270

His Phe Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val
275 280 285

Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala
290 295 300

Val Phe Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly
305 310 315 320

Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu
325 330 335

Phe Arg Val Thr Ile Asn
340

<210> 571
<211> 1026
<212> DNA
<213> Artificial Sequence

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

<400> 571
atggtgaccg gctggcggct gtgcgaacgc attctggcta gctcaagcgg aggttcaggc 60
ggttccggaa tgtatgaaag ctttattgag tctactgccat tccttaaatac tttggagttt 120
tctgcacgcc tgaaagtagt agatgtgata ggcaccaaag tatacaacga tggagaacaa 180
atcattgctc agggagattc ggctgattct tttttcatta ttgaatctgg agaagtgaag 240
attactatga aaagaaaggg taaatcagaa gtggaagaga atggtgcagt agaaatcgct 300
cgatgctcgc ggggacagta ctttgagag cttgccctgg taactaacaac acctcgagca 360
gcttctgccc acgccattgg gactgtcaaa tgttttagcaa tggatgtgca agcatttgaa 420
aggcttctgg gaccttgcac ggaaattatg aaaaggaaca tcgctaccta tgaagaacag 480
ttagttgccc tgtatggaac gaacatggat attgtagggt caggtggatc tggaggtagc 540
tcttctatgg tcttcacact cgaagatttc gttggggact ggcgacagac agccggctac 600
aacctggacc aagtccttga acagggaggt gtgtccagtt tgtttcagaa tctcgggggtg 660

155193_1

tccgtaactc cgatccaaag gattgtcctg agcggtgaaa atgggctgaa gatcgacatc	720
catgtcatca tcccgtatga aggtctgagc ggcgaccaa tgggccagat cgaaaaaatt	780
tttaagggtg tgtaccctgt ggatgatcat cactttaagg tgatcctgca ctatggcaca	840
ctggtaatcg acgggggttac gccgaacatg atcgactatt tcggacggcc gtatgaaggc	900
atcgccgtgt tcgacggcaa aaagatcact gtaacaggga ccctgtggaa cggcaacaaa	960
attatcgacg agcgcctgat caaccccgac ggctccctgc tgttccgagt aaccatcaac	1020
ggagtg	1026

<210> 572
 <211> 342
 <212> PRT
 <213> Artificial Sequence

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

<400> 572
 Met Val Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Ser Ser Ser
 1 5 10 15

Gly Gly Ser Gly Gly Ser Gly Met Tyr Glu Ser Phe Ile Glu Ser Leu
 20 25 30

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

Val Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln
 50 55 60

Gly Asp Ser Ala Asp Ser Phe Phe Ile Ile Glu Ser Gly Glu Val Lys
 65 70 75 80

Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn Gly Ala
 85 90 95

Val Glu Ile Ala Arg Cys Ser Arg Gly Gln Tyr Phe Gly Glu Leu Ala
 100 105 110

Leu Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly Thr
 115 120 125

Val Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu Gly
 130 135 140

Pro Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln
 145 150 155 160

Leu Val Ala Leu Tyr Gly Thr Asn Met Asp Ile Val Gly Ser Gly Gly
 165 170 175

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Ser Gly Gly Ser Ser Ser Met Val Phe Thr Leu Glu Asp Phe Val Gly
180 185 190

Asp Trp Arg Gln Thr Ala Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln
195 200 205

Gly Gly Val Ser Ser Leu Phe Gln Asn Leu Gly Val Ser Val Thr Pro
210 215 220

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

His Val Ile Ile Pro Tyr Glu Gly Leu Ser Gly Asp Gln Met Gly Gln
245 250 255

Ile Glu Lys Ile Phe Lys Val Val Tyr Pro Val Asp Asp His His Phe
260 265 270

Lys Val Ile Leu His Tyr Gly Thr Leu Val Ile Asp Gly Val Thr Pro
275 280 285

Asn Met Ile Asp Tyr Phe Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe
290 295 300

Asp Gly Lys Lys Ile Thr Val Thr Gly Thr Leu Trp Asn Gly Asn Lys
305 310 315 320

Ile Ile Asp Glu Arg Leu Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg
325 330 335

Val Thr Ile Asn Gly Val
340

<210> 573
<211> 1026
<212> DNA
<213> Artificial Sequence

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

<400> 573
atgcgcattc tggctagctc aagcggaggt tcaggcgggt ccggaatgta tgaaagcttt 60
attgagtcac tgccattcct taaatctttg gagttttctg cacgcctgaa agtagtagat 120
gtgataggca ccaaagtata caacgatgga gaacaaatca ttgctcaggg agattcggct 180
gattcttttt tcattattga atctggagaa gtgaaaatta ctatgaaaag aaagggtaaa 240
tcagaagtgg aagagaatgg tgcagtagaa atcgctcgat gctcgcgggg acagtacttt 300
ggagagcttg ccctggtaac taacaaacct cgagcagctt ctgcccacgc cattgggact 360
gtcaaagtgt tagcaatgga tgtgcaagca tttgaaaggc ttctgggacc ttgcatggaa 420
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attatgaaaa ggaacatcgc tacctatgaa gaacagttag ttgccctgta tggaacgaac      480
atggatattg tagggtcagg tggatctgga ggtagctctt ctatggtctt cacactcgaa      540
gatttcgttg gggactggcg acagacagcc ggctacaacc tggaccaagt ccttgaacag      600
ggaggtgtgt ccagtttggt tcagaatctc ggggtgtccg taactccgat ccaaaggatt      660
gtcctgagcg gtgaaaatgg gctgaagatc gacatccatg tcatcatccc gtatgaaggt      720
ctgagcggcg accaaatggg ccagatcgaa aaaattttta aggtggtgta ccctgtggat      780
gatcatcact ttaaggtgat cctgcactat ggcacactgg taatcgacgg ggttacgccg      840
aacatgatcg actatttcgg acggccgtat gaaggcatcg ccgtgttcga cggcaaaaag      900
atcactgtaa cagggaccct gtggaacggc aaaaaatta tcgacgagcg cctgatcaac      960
cccgacggct ccctgctggt ccgagtaacc atcaacggag tgaccggctg gcggctgtgc     1020
gaacgc                                1026

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<210> 574

<211> 342

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 574

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Met Arg Ile Leu Ala Ser Ser Ser Gly Gly Ser Gly Gly Ser Gly Met
1           5           10           15

```

```

Tyr Glu Ser Phe Ile Glu Ser Leu Pro Phe Leu Lys Ser Leu Glu Phe
           20           25           30

```

```

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

```

```

Asp Gly Glu Gln Ile Ile Ala Gln Gly Asp Ser Ala Asp Ser Phe Phe
           50           55           60

```

```

Ile Ile Glu Ser Gly Glu Val Lys Ile Thr Met Lys Arg Lys Gly Lys
65           70           75           80

```

```

Ser Glu Val Glu Glu Asn Gly Ala Val Glu Ile Ala Arg Cys Ser Arg
           85           90           95

```

```

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

```

```

Ala Ser Ala His Ala Ile Gly Thr Val Lys Cys Leu Ala Met Asp Val
           115          120          125

```

```

Gln Ala Phe Glu Arg Leu Leu Gly Pro Cys Met Glu Ile Met Lys Arg
130          135          140

```


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Asn Ile Ala Thr Tyr Glu Glu Gln Leu Val Ala Leu Tyr Gly Thr Asn
145 150 155 160

Met Asp Ile Val Gly Ser Gly Gly Ser Gly Gly Ser Ser Ser Met Val
165 170 175

Phe Thr Leu Glu Asp Phe Val Gly Asp Trp Arg Gln Thr Ala Gly Tyr
180 185 190

Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu Phe Gln
195 200 205

Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu Ser Gly
210 215 220

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

Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys Val Val
245 250 255

Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr Gly Thr
260 265 270

Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe Gly Arg
275 280 285

Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr Val Thr
290 295 300

Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu Ile Asn
305 310 315 320

Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val Thr Gly
325 330 335

Trp Arg Leu Cys Glu Arg
340

<210> 575

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 575

gggtcaggtg gatctggagg tagctcttct

30

<210> 576

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

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

<400> 576
 agctcaagcg gaggttcagg cggttccgga 30

<210> 577
 <211> 377
 <212> DNA
 <213> Homo sapiens

<400> 577
 atgccgtccg agaagacctt caaacagcgc cggagcttcg aacaaagagt ggaagatgtc 60
 cggctcatcc gggagcagca cccaccaag atcccagtga ttatagagcg atacaagggt 120
 gagaagcagc tgcccgtcct ggacaagacc agttccttgt acctgatcac gtgaatatga 180
 gcgaactcat caagataatt agaaggcgcc tgcagctcaa tgctaaccaa gccttcttcc 240
 tcctggtgaa tgggcacagc atggtgagtg tgtccacacc catctctgaa gtgtacgaga 300
 gcgagagaga tgaagacggc ttctgtaca tggcttatgc ctcccaggag acgttcggga 360
 cagcactggc tgtgtaa 377

<210> 578
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 578
 Met Pro Ser Glu Lys Thr Phe Lys Gln Arg Arg Ser Phe Glu Gln Arg
 1 5 10 15

Val Glu Asp Val Arg Leu Ile Arg Glu Gln His Pro Thr Lys Ile Pro
 20 25 30

Val Ile Ile Glu Arg Tyr Lys Gly Glu Lys Gln Leu Pro Val Leu Asp
 35 40 45

Lys Thr Lys Phe Leu Val Pro Asp His Val Asn Met Ser Glu Leu Ile
 50 55 60

Lys Ile Ile Arg Arg Arg Leu Gln Leu Asn Ala Asn Gln Ala Phe Phe
 65 70 75 80

Leu Leu Val Asn Gly His Ser Met Val Ser Val Ser Thr Pro Ile Ser
 85 90 95

Glu Val Tyr Glu Ser Glu Arg Asp Glu Asp Gly Phe Leu Tyr Met Val
 100 105 110

Tyr Ala Ser Gln Glu Thr Phe Gly Thr Ala Leu Ala Val

115	120	155193_1	125
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<210> 579
 <211> 4
 <212> PRT
 <213> Artificial Sequence

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

 <400> 579
 Met Lys Ala Leu
 1

<210> 580
 <211> 6
 <212> PRT
 <213> Artificial Sequence

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

 <400> 580
 His Gln His Gln His Gln
 1 5

<210> 581
 <211> 4
 <212> PRT
 <213> Unknown

 <220>
 <223> Description of Unknown: Caspase-3 cleavage sequence

 <400> 581
 Asp Glu Val Asp
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<210> 582

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<210> 592

<211> 936

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 592

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gaccaagtcc ttgagcaggg cgggtgtgtcc agtttgtttc agaatctcgg ggtgtccgta	120
actccgatcc aaaggattgt cctgagcggg gaaaacggcc tgaagatcga catccatgtc	180
atcatcccgt atgaaggtct gagcggcgat cagatgggccc agatcgaaaa aatttttaag	240
gtggtgtacc ctgtggatga tcatcacttt aagggtgattc tgcactatgg cactctggta	300
atcgacgggg ttacgccgaa catgatcgac tatttcggac ggccgtatga aggcacgcgc	360
gtgttcgacg gcaaaaagat cactgtaacc gggaccctgt ggaacggcaa caaaattatc	420
gacgagcgcc tgatcaaccc cgacggctcc ctgctgttcc gcgtaaccat caacggagtg	480
accggctggc ggctgtgcga gagaattttg gcgggctcga gcggaggtgg aggttcaggt	540
ggtggcggga gcgggtggaat gccgtccgag aagaccttca aacagcgccg gagcttcgaa	600
caaagagtgg aagatgtccg gctcatccgg gagcagcacc ccaccaagat cccagtgatt	660

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atagagcgat acaaggggtga gaagcagctg cccgtcctgg acaagaccaa gttccttgta	720
cctgatcacg tgaatatgag cgaactcatc aagataatta gaaggcgct gcagctcaat	780
gctaaccaag ctttcttcct cctggatgaat gggcacagca tggtagagtgt gtccacaccc	840
atctctgaag tgtacgagag cgagagagat gaagacggct tcctgtacat ggtctatgcc	900
tcccaggaga cgttcgggac agcactggct gtgtaa	936

<210> 593
 <211> 311
 <212> PRT
 <213> Artificial Sequence

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

<400> 593
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Gly Tyr Asn Leu Asp Gln Val Leu Glu Gln Gly Gly Val Ser Ser Leu
 20 25 30

Phe Gln Asn Leu Gly Val Ser Val Thr Pro Ile Gln Arg Ile Val Leu
 35 40 45

Ser Gly Glu Asn Gly Leu Lys Ile Asp Ile His Val Ile Ile Pro Tyr
 50 55 60

Glu Gly Leu Ser Gly Asp Gln Met Gly Gln Ile Glu Lys Ile Phe Lys
 65 70 75 80

Val Val Tyr Pro Val Asp Asp His His Phe Lys Val Ile Leu His Tyr
 85 90 95

Gly Thr Leu Val Ile Asp Gly Val Thr Pro Asn Met Ile Asp Tyr Phe
 100 105 110

Gly Arg Pro Tyr Glu Gly Ile Ala Val Phe Asp Gly Lys Lys Ile Thr
 115 120 125

Val Thr Gly Thr Leu Trp Asn Gly Asn Lys Ile Ile Asp Glu Arg Leu
 130 135 140

Ile Asn Pro Asp Gly Ser Leu Leu Phe Arg Val Thr Ile Asn Gly Val
 145 150 155 160

Thr Gly Trp Arg Leu Cys Glu Arg Ile Leu Ala Gly Ser Ser Gly Gly
 165 170 175

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Met Pro Ser Glu Lys Thr
 180 185 190

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Phe Lys Gln Arg Arg Ser Phe Glu Gln Arg Val Glu Asp Val Arg Leu
 195 200 205
 Ile Arg Glu Gln His Pro Thr Lys Ile Pro Val Ile Ile Glu Arg Tyr
 210 215 220
 Lys Gly Glu Lys Gln Leu Pro Val Leu Asp Lys Thr Lys Phe Leu Val
 225 230 235 240
 Pro Asp His Val Asn Met Ser Glu Leu Ile Lys Ile Ile Arg Arg Arg
 245 250 255
 Leu Gln Leu Asn Ala Asn Gln Ala Phe Phe Leu Leu Val Asn Gly His
 260 265 270
 Ser Met Val Ser Val Ser Thr Pro Ile Ser Glu Val Tyr Glu Ser Glu
 275 280 285
 Arg Asp Glu Asp Gly Phe Leu Tyr Met Val Tyr Ala Ser Gln Glu Thr
 290 295 300
 Phe Gly Thr Ala Leu Ala Val
 305 310