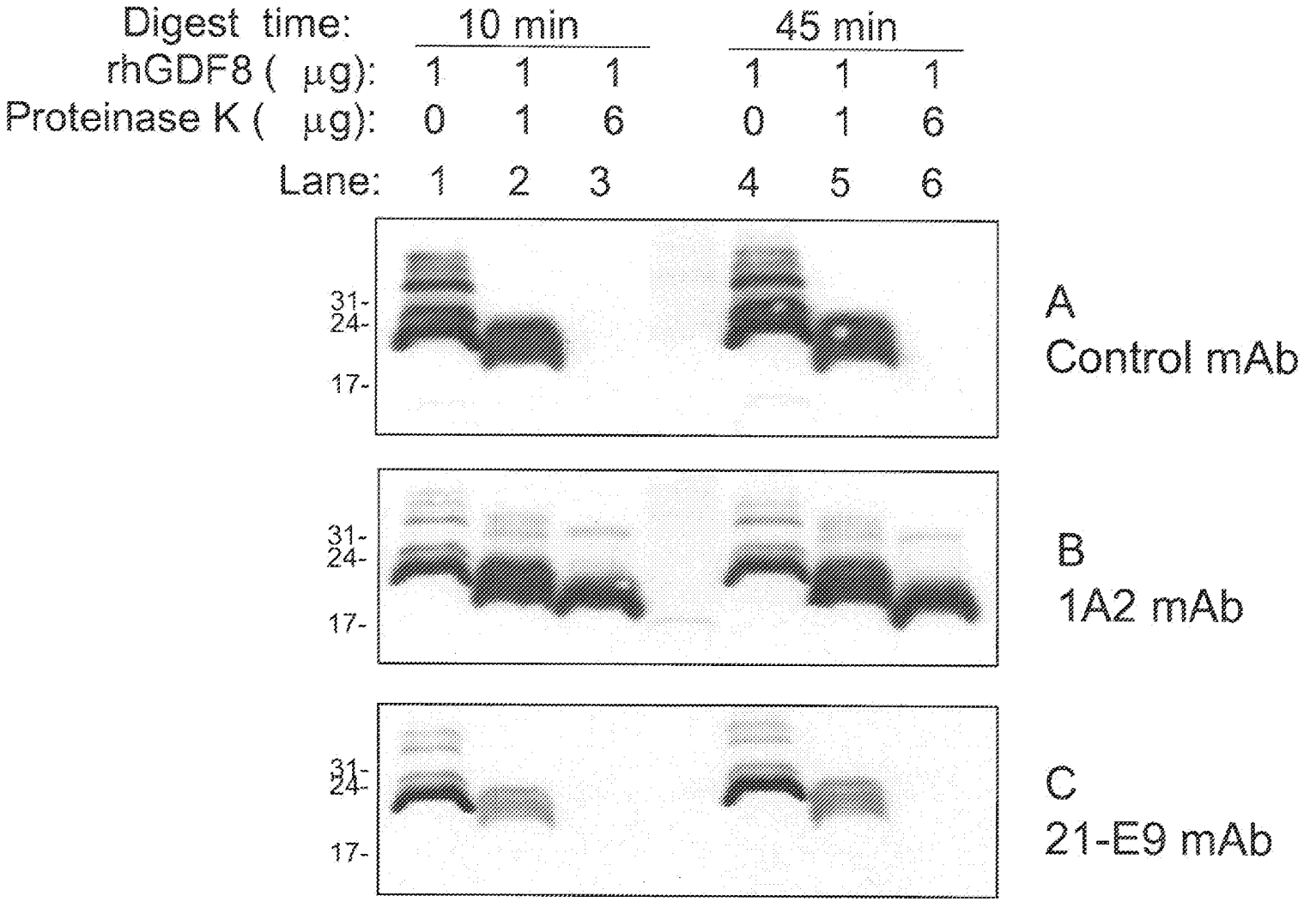

Digest time:
10 min
45 min
rhGDF8 (µg):
1 1 1 1 1 1
Proteinase K (µg):
0 1 6 0 1 6
Lane:
1 2 3 4 5 6
31-
24-
17-
A
Control mAb
31-
24-
17-
B
1A2 mAb
31-
24-
17-
C
21-E9 mAb

Fig. 1

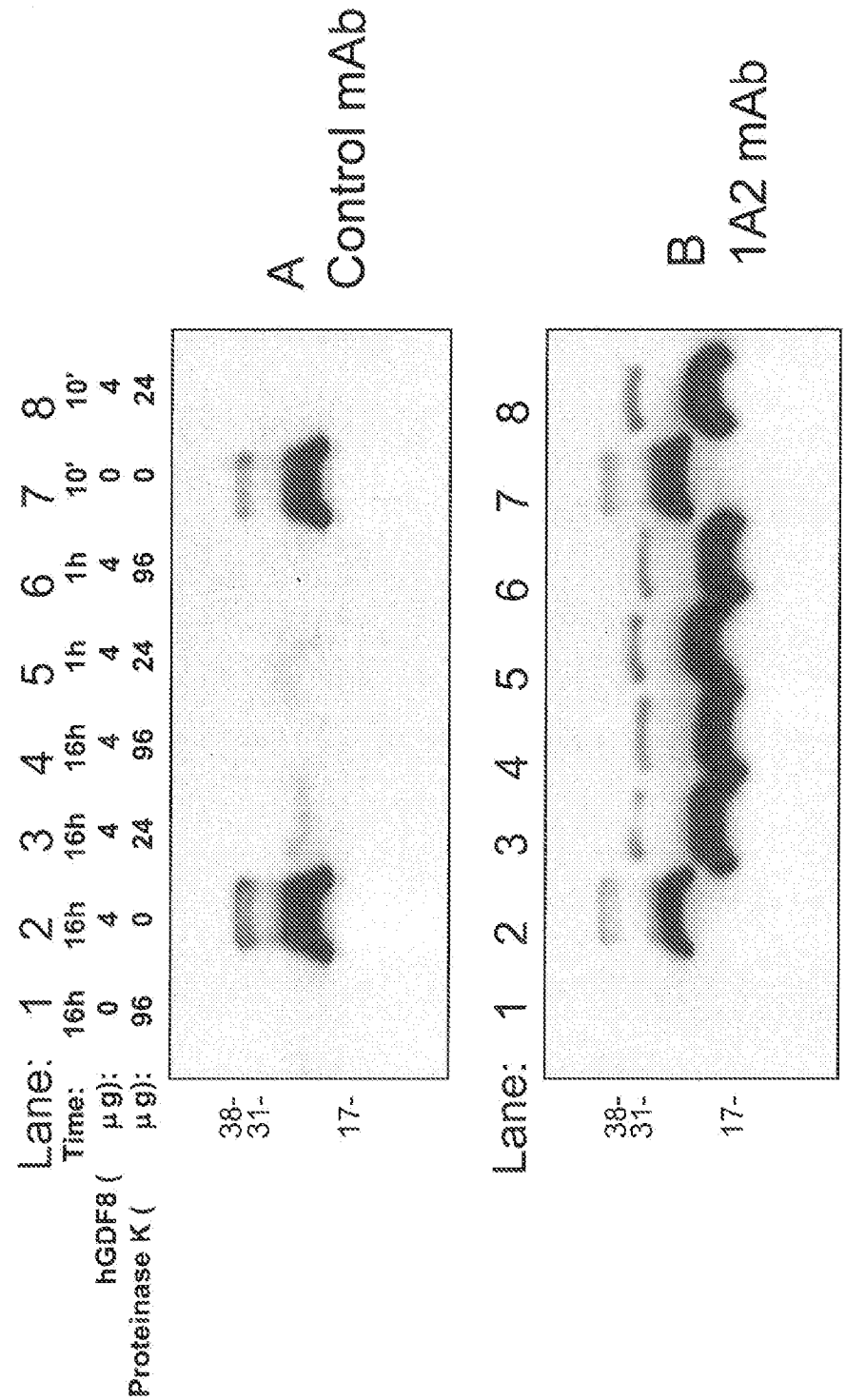

A
Control mAb
B
1A2 mAb
Lane: 1 2 3 4 5 6 7 8
Time: 16h 16h 16h 16h 1h 1h 10' 10'
hGDF8 (µg): 0 4 4 4 4 4 0 4
Proteinase K (µg): 96 0 24 96 24 96 0 24
38-
31-
17-
Lane: 1 2 3 4 5 6 7 8
38-
31-
17-

Fig. 2

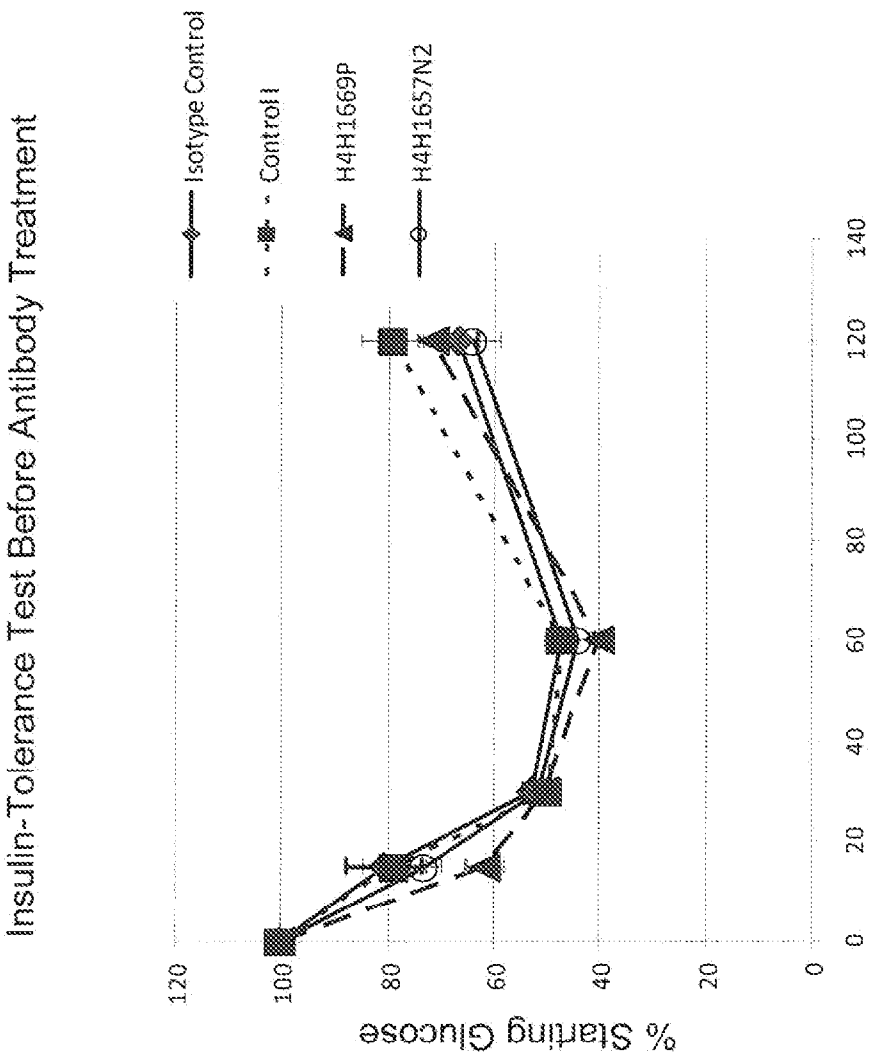

Insulin-Tolerance Test Before Antibody Treatment
Isotype Control
Control1
H4H1669P
H4H1657N2
% Starting Glucose
120
100
80
60
40
20
0
0
20
40
60
80
100
120
140
Time (min)

Figure 3A

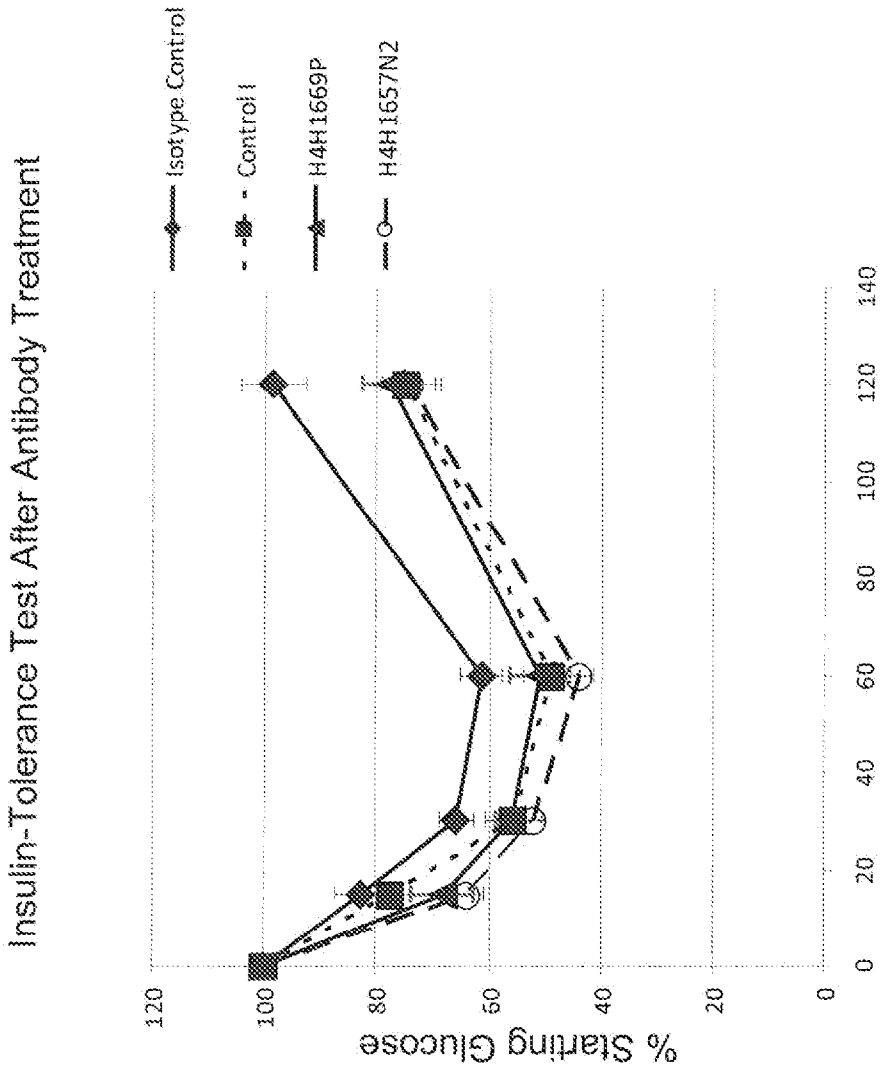

Insulin-Tolerance Test After Antibody Treatment
Isotype Control
Control I
H4H1669P
H4H1657N2
% Starting Glucose
120
100
80
50
40
20
0
0
20
40
60
80
100
120
140
Time (min)

Figure 3B

Consensus Sequences
Heavy Chain CDRs

HCDR1

	X1	X2	X3	X4	X5	X6	X7	X8	
1657N2	G	F	T	F	S	A	Y	A	(SEQ ID NO:362)
1669P	G	F	T	F	S	S	F	G	(SEQ ID NO:378)

HCDR2

	X1	X2	X3	X4	X5	X6	X7	X8	
1657N2	I	S	G	S	G	G	S	A	(SEQ ID NO:364)
1669P	I	G	Y	D	G	G	N	E	(SEQ ID NO:380)

HCDR3

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	
1657N2	A	K	D	G	A	W	K	M	S	G	L	D	V		(SEQ ID NO:366)
1669P	S	T	I	S	H	Y	D	I	L	S	G	M	D	V	(SEQ ID NO:382)

Figure 4A

Consensus Sequences
Light Chain CDRs

LCDR1

	X1	X2	X3	X4	X5	X6	
1657N2	Q	D	I	S	D	Y	(SEQ ID NO:370)
1669P	Q	G	I	S	N	W	(SEQ ID NO:386)

LCDR2

	X1	X2	X3	
1657N2	T	T	S	(SEQ ID NO:372)
1669P	A	A	S	(SEQ ID NO:388)

LCDR3

	X1	X2	X3	X4	X5	X6	X7	X8	X9	
1657N2	Q	K	Y	D	S	A	P	L	T	(SEQ ID NO:374)
1669P	Q	Q	A	N	S	F	P	L	T	(SEQ ID NO:390)

Figure 4B

SEQUENCE LISTING

<110> Regeneron Pharmaceuticals, Inc.

<120> Human Antibodies to Human GDF8

<130> 6073A-WO

<140> To be assigned
<141> Filed herewith

<150> 61/348,559
<151> 2010-05-26

<150> 61/372,882
<151> 2010-08-12

<160> 391

<170> FastSEQ for Windows Version 4.0

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ccagggaagg ggctggaatg ggtctcaact attactggta gtggttataa cacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacactgtat 240
ctacagatga gcagcctgag agccgaggac acggccgtat tttactgtgc gaaagactct 300
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tcctca 366

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

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1 5

<210> 5
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<210> 6
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1 5

<210> 7
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<211> 324
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ggccaggctc ccaggctcct catctatggt gtatccacca gggccactgg tatcccagcc 180
aggttcagtg gcaatgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag cataataact ggccgctcac tttcggcgga 300
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<210> 10
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<213> Artificial Sequence

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

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<211> 6

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cagccccag ggaaggggct ggagtggatt gggactacct attatagtgg gaccacctac 180
tacaacccgt ccctcaagag tcgagtcacc atatccgtag acacgtccaa gaaccagttc 240
tccctgaagc tgagctctgt gaccgccgca gacacggctg tgtattactg tgcgagagat 300
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gtcaccgtct cctca 375

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

<220>
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Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Asn Ser
20 25 30
Asn Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
35 40 45
Trp Ile Gly Thr Thr Tyr Tyr Ser Gly Thr Thr Tyr Tyr Asn Pro Ser
50 55 60
Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65 70 75 80
Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95
Cys Ala Arg Asp Tyr Tyr Asp Ser Ser Gly Tyr Tyr Tyr Asn Trp Phe
100 105 110
Asp Pro Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

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<211> 30
<212> DNA
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<220>
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Gly Gly Ser Ile Ser Asn Ser Asn Tyr Tyr
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<210> 21

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<400> 21
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<210> 22
<211> 7
<212> PRT
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<400> 22
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<210> 23
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<212> DNA
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<211> 17
<212> PRT
<213> Artificial Sequence

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<400> 24
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<210> 25
<211> 324
<212> DNA
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aggttcagcg gcagtggatc tgggacagaa ttcagtctca cactcagcag cctgcagcct 240
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gggaccaagc tggagatcaa acga 324

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<211> 108
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 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Arg Asn Asp
            20   25   30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35   40   45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Ser Leu Thr Leu Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln His His Ile Tyr Pro Trp
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100   105

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<210> 28
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<210> 29
<211> 9
<212> DNA
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<400> 29
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Leu Gln His His Ile Tyr Pro Trp Thr
 1   5

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tacaacccgt ccctcaagag tcgagtcacc atgtccgtag acacgtccaa gaaccagttc 240
tccctgaaac tgagctctgt gaccgccgca gacacggctg tttattactg tgtgagagat 300
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gtcaccgtct cctca 375

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            20   25   30

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


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<210> 36
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 1               5                  10


<210> 37
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<220>
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<400> 38
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<210> 39
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<211> 17
<212> PRT
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aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag cataatactt acccgtggac gttcggccaa 300
gggaccaagg tggagatcaa acga 324

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20 25 30
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35 40 45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
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Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Thr Tyr Pro Trp
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Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
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<210> 44
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<210> 45
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gcagactcag tgaagggccg attcaccatc tccagagaca acgccaagaa ctcactgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatcgt 300
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            20   25   30
Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ser Ile Ser Ser Ser Ser Ser Tyr Ile Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Arg Gly Tyr Thr Phe Gly Val Asp Tyr Trp Gly Gln Gly
            100   105   110
Thr Thr Val Thr Val Ser Ser
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 1   5

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gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag cataatagtt acccgtacac ttttggccag 300
gggaccaagg tggagatcaa acga 324

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

<210> 59
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 59
cagggcatta gaaatgat 18

<210> 60
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 60
Gln Gly Ile Arg Asn Asp
1 5

<210> 61
<211> 9
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 61
gctgcatcc 9

<210> 62
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 62
Ala Ala Ser
1

<210> 63
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 63
ctacagcata atagttaccc gtacact 27

<210> 64
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 64
Leu Gln His Asn Ser Tyr Pro Tyr Thr
1 5

<210> 65
<211> 375
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 65
caggtgcagc tggtgcagtc gggcccagga ctggtgaagc cttcggagac cctgtccctc 60
acctgcactg tctctggtgg ctccatcatc acttatagtt actactgggg ctggatccgc 120
cagccccag ggaaggggct ggagtggatt gggactatcc atcatagtgg gagcacctac 180
tacaacccgt ccctcaagag tcgagtcacc atatccgtag acacgtccaa gaaccagttc 240
tccctgacac tgagttctgt gaccgccgca gacacggctg tgtattactg tgcgagagac 300
tactatgata gtagtggtta ttattataac tggttcgacc cctggggcca gggaaccatg 360
gtcaccgtct cctca 375

<210> 66
<211> 125

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 66
Gln Val Gln Leu Val Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
 1   5   10   15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ile Thr Tyr
            20   25   30
Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
        35   40   45
Trp Ile Gly Thr Ile His His Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
    50   55   60
Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65   70   75   80
Ser Leu Thr Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
                85   90   95
Cys Ala Arg Asp Tyr Tyr Asp Ser Ser Gly Tyr Tyr Tyr Asn Trp Phe
            100   105   110
Asp Pro Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115   120   125

<210> 67
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 67
ggtggctcca tcatcactta tagttactac 30

<210> 68
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 68
Gly Gly Ser Ile Ile Thr Tyr Ser Tyr Tyr
 1   5   10

<210> 69
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 69
atccatcata gtgggagcac c 21

<210> 70
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 70
Ile His His Ser Gly Ser Thr
 1   5

<210> 71
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 71
gcgagagact actatgatag tagtggttat tattataact ggttcgaccc c   51

<210> 72
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 72
Ala Arg Asp Tyr Tyr Asp Ser Ser Gly Tyr Tyr Tyr Asn Trp Phe Asp
 1   5   10   15
Pro

<210> 73
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 73
gccatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gggcattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtctacag cataatagtt ccccgtggac gttcggccaa 300
gggaccaagg tggagatcaa acga   324

<210> 74
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 74
Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
            20   25   30

```
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35                  40                  45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Ser Pro Trp
                85                  90                  95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
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<210> 75
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 75
cagggcatta gaaatgat 18

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

<220>
<223> Synthetic

<400> 76
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Gln Gly Ile Arg Asn Asp
 1               5
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<210> 77
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 77
gctgcatcc 9

<210> 78
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 78
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Ala Ala Ser
 1
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<210> 79
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 79
ctacagcata atagttcccc gtggacg 27

<210> 80
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 80
Leu Gln His Asn Ser Ser Pro Trp Thr
1 5

<210> 81
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 81
caggtgcact tgaaggagtc tggtcctacg ctggtgaaac ccacacagac cctcacgctg 60
acctgcaccc tctctgggtt ctcactcagc actagtggag tgggtgtggg ctggatccgt 120
cagccccccag gaaaggccct ggagtggctt gcactcattt attggaatga tgataagcgc 180
tacagcccat ctctgaagag caggctcacc atcaccaagg acacctccaa aaaccaggtg 240
gtccttacaa tgaccaacat ggaccctgtg gacacagcca catattactg tacacacacc 300
tcccgttata actggcacta cggcttcctt gactactggg gccagggaac cacggtcacc 360
gtctcctca 369

<210> 82
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 82
Gln Val His Leu Lys Glu Ser Gly Pro Thr Leu Val Lys Pro Thr Gln
1 5 10 15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Thr Ser
20 25 30
Gly Val Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45
Trp Leu Ala Leu Ile Tyr Trp Asn Asp Asp Lys Arg Tyr Ser Pro Ser
50 55 60
Leu Lys Ser Arg Leu Thr Ile Thr Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95
Cys Thr His Thr Ser Arg Tyr Asn Trp His Tyr Gly Phe Leu Asp Tyr
100 105 110
Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 83
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 83
gggttctcac tcagcactag tggagtgggt 30

<210> 84
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 84
Gly Phe Ser Leu Ser Thr Ser Gly Val Gly
1 5 10

<210> 85
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 85
atttattgga atgatgataa g 21

<210> 86
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 86
Ile Tyr Trp Asn Asp Asp Lys
1 5

<210> 87
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 87
acacacacct cccgttataa ctggcactac ggcttccttg actac 45

<210> 88
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 88
Thr His Thr Ser Arg Tyr Asn Trp His Tyr Gly Phe Leu Asp Tyr
1 5 10 15

<210> 89
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 89
gccatccaga tgacccagtc tccatcctca ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggcattagc aattatttag cctggtttca gcagaaacca 120
gggaaagccc ctaagtcctt gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aagttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagattttg caacttatta ctgccaacaa tataatagtt acccgctcac tttcggcgga 300
gggaccaagg tggaaatcaa acga 324

<210> 90
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 91
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 91
cagggcatta gcaattat 18

<210> 92
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 92
Gln Gly Ile Ser Asn Tyr
1 5

<210> 93
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 93
gctgcatcc 9

<210> 94
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 94
Ala Ala Ser
1

<210> 95
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 95
caacaatata atagttaccc gctcact 27

<210> 96
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 96
Gln Gln Tyr Asn Ser Tyr Pro Leu Thr
1 5

<210> 97
<211> 375
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 97
gaggtgcagc tggtgcagtt gggcccagga ctggtgaagc cttcggagac cctgtccctc 60
acctgcactg tctctggtgg ctccatcagc aatagtaatt actactgggg ctggatccgc 120
cagccccag ggaaggggct ggagtggatt gggactacct attatagtgg gaccacctac 180
tacaacccgt ccctcaagag tcgagtcacc atatccgtag acacgtccaa gaaccagttc 240
tccctgaagc tgagctctgt gaccgccgca gacacggctg tgtattactg tgcgagagat 300
tattatgata gtagtggtta ttattacaac tggttcgatc cctggggcca gggaaccacg 360
gtcaccgtct cctca 375

<210> 98
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 98
Glu Val Gln Leu Val Gln Leu Gly Pro Gly Leu Val Lys Pro Ser Glu
 1   5   10   15
Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Asn Ser
            20   25   30
Asn Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
        35   40   45
Trp Ile Gly Thr Thr Tyr Tyr Ser Gly Thr Thr Tyr Tyr Asn Pro Ser
    50   55   60
Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65   70   75   80
Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
                85   90   95
Cys Ala Arg Asp Tyr Tyr Asp Ser Ser Gly Tyr Tyr Tyr Asn Trp Phe
            100   105   110
Asp Pro Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120   125

<210> 99
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 99
ggtggctcca tcagcaatag taattactac 30

<210> 100
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 100
Gly Gly Ser Ile Ser Asn Ser Asn Tyr Tyr
 1   5   10

<210> 101
<211> 21
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 101
acctattata gtgggaccac c 21

<210> 102
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 102
Thr Tyr Tyr Ser Gly Thr Thr
1 5

<210> 103
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 103
gcgagagatt attatgatag tagtggttat tattacaact ggttcgatcc c 51

<210> 104
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 104
Ala Arg Asp Tyr Tyr Asp Ser Ser Gly Tyr Tyr Tyr Asn Trp Phe Asp
1 5 10 15
Pro

<210> 105
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 105
gccatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca ggacattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcagtctca cactcagcag cctgcagcct 240
gaagattttg caacttattt ctgtctacag catcatattt acccgtggac gttcggccaa 300
gggaccaagg tggagatcaa acga 324

<210> 106

<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 106
Ala Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Arg Asn Asp
            20   25   30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35   40   45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Ser Leu Thr Leu Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Phe Cys Leu Gln His His Ile Tyr Pro Trp
                85   90   95
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100   105

<210> 107
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 107
caggacatta gaaatgat 18

<210> 108
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 108
Gln Asp Ile Arg Asn Asp
 1   5

<210> 109
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 109
gctgcatcc 9

<210> 110
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 110
Ala Ala Ser
 1

<210> 111
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 111
ctacagcatc atatttaccc gtggacg 27

<210> 112
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 112
Leu Gln His His Ile Tyr Pro Trp Thr
 1   5

<210> 113
<211> 355
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 113
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt cgctatggca ttcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggctgtt atatcttatg atggaagtga tgaatactat 180
gtagactccg tgaagggccg attcagcatc tcccgagaca attccaagaa cacgctttat 240
ctacaaatga acagtctgag gcctgcggac tcggctgttt attactgtgt gaaaggagat 300
ctggaacttg gttttgacta ctggggccag ggaaccctgg tcaccgtctc ctcaa 355

<210> 114
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 114
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Arg Tyr
            20   25   30
Gly Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Val Ile Ser Tyr Asp Gly Ser Asp Glu Tyr Tyr Val Asp Ser Val

```
    50                  55                  60
Lys Gly Arg Phe Ser Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Pro Ala Asp Ser Ala Val Tyr Tyr Cys
                85                  90                  95
Val Lys Gly Asp Leu Glu Leu Gly Phe Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110
Leu Val Thr Val Ser Ser
        115
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<210> 115
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 115
ggattcacct tcagtcgcta tggc 24

<210> 116
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 116
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Gly Phe Thr Phe Ser Arg Tyr Gly
 1               5
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<210> 117
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 117
atatcttatg atggaagtga tgaa 24

<210> 118
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 118
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Ile Ser Tyr Asp Gly Ser Asp Glu
 1               5
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<210> 119
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 119
gtgaaaggag atctggaact tggttttgac tac 33

<210> 120
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 120
Val Lys Gly Asp Leu Glu Leu Gly Phe Asp Tyr
1 5 10

<210> 121
<211> 337
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 121
gatattgtga tgactcaggc tgcaccctct atacctgtca ttccaggaga gtcagtatcc 60
atgtcctgca ggtctagtaa gagtctcctg tacagtaatg gacatactta cgtgtattgg 120
tttgtgcaga ggccaggcca gtctcctcag ctcctgatat atcggatgtc caaccttgcc 180
tcaggagtcc cagacaggtt cagtggcagt gggtcaggaa ctgctttcac actgagaatc 240
agtagagtgg aggctgagga tgtgggtgtt tattactgta tgcaaaatct agaatttccg 300
ctcacgttcg gtgctgggac caagctggag ctgaaac 337

<210> 122
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 122
Asp Ile Val Met Thr Gln Ala Ala Pro Ser Ile Pro Val Ile Pro Gly
1 5 10 15
Glu Ser Val Ser Met Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Ser
20 25 30
Asn Gly His Thr Tyr Val Tyr Trp Phe Val Gln Arg Pro Gly Gln Ser
35 40 45
Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
50 55 60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile
65 70 75 80
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Asn
85 90 95
Leu Glu Phe Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
100 105 110

<210> 123
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 123
aagagtctcc tgtacagtaa tggacatact tac 33

<210> 124
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 124
Lys Ser Leu Leu Tyr Ser Asn Gly His Thr Tyr
1 5 10

<210> 125
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 125
cggatgtcc 9

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

<220>
<223> Synthetic

<400> 126
Arg Met Ser
1

<210> 127
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 127
atgcaaaatc tagaatttcc gctcacg 27

<210> 128
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 128

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Met Gln Asn Leu Glu Phe Pro Leu Thr
 1               5
```

<210> 129
<211> 355
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 129
caggtgcagc tggtggaggc gggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt cgctatggca ttcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggctgtt atatcttatg atggaactga tgaatactat 180
gcagactccg tgaagggccg attcaccatc tcccgagaca attccaagaa cacgctttat 240
ctacaaatga acagtctgag acctgcggac tcggctgtat attactgtgc gaaaggagat 300
ctggaacttg gttttgacta ctggggccag ggaaccctgg tcaccgtctc ctcaa 355

<210> 130
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 130
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Gln Val Gln Leu Val Glu Ala Gly Gly Gly Val Val Gln Pro Gly Arg
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Arg Tyr
            20                  25                  30
Gly Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ala Val Ile Ser Tyr Asp Gly Thr Asp Glu Tyr Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Pro Ala Asp Ser Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Lys Gly Asp Leu Glu Leu Gly Phe Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110
Leu Val Thr Val Ser Ser
        115
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<210> 131
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 131
ggattcacct tcagtcgcta tggc 24

<210> 132
<211> 8
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 132
Gly Phe Thr Phe Ser Arg Tyr Gly
1 5

<210> 133
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 133
atatcttatg atggaactga tgaa 24

<210> 134
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 134
Ile Ser Tyr Asp Gly Thr Asp Glu
1 5

<210> 135
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 135
gcgaaaggag atctggaact tggttttgac tac 33

<210> 136
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 136
Ala Lys Gly Asp Leu Glu Leu Gly Phe Asp Tyr
1 5 10

<210> 137
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 137

gccatccggt tgacccagtc tccatcttcc gtgtctgcat ctgtgggaga cagagtcacc 60
atcacttgtc gggcgagtca ggatattagt atttggttag cctggtatca gcagagtcca 120
gggaaagccc ctaaactcct gatcaatgtt gcatcccgtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagat ttcactctca ccatcaacgg tctgcagcct 240
gaagattttg taacttacta ttgtcaacag gctaacagtt tccccgatcac cttcggccaa 300
gggacacgac tggcgaccaa ac 322

<210> 138
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

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

<210> 139
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 139
caggatatta gtatttgg 18

<210> 140
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 140
Gln Asp Ile Ser Ile Trp
 1   5

<210> 141
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 141
gttgcatcc 9

<210> 142
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 142
Val Ala Ser
1

<210> 143
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 143
caacaggcta acagtttccc gatcacc 27

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

<220>
<223> Synthetic

<400> 144
Gln Gln Ala Asn Ser Phe Pro Ile Thr
1 5

<210> 145
<211> 358
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 145
caggtgcagc tggtgcagtc tgggggaggc ctggtcaagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt catcttcaat acctatacca tgaattgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcatcc atcactagtc gtggtactta tatattctac 180
tcagactcac ttaagggccg attcaccatt tccagagaca acgccaataa ctcactgttt 240
ctgcaaatga acagcctgag agtcgaagac acggctgttt attactgttc gagagatcgt 300
ggatacacct ttggtcctga ctactggggc cagggaaccc tggtcaccgt ctcttcag 358

<210> 146
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 146
Gln Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ile Phe Asn Thr Tyr
            20   25   30
Thr Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ser Ile Thr Ser Arg Gly Thr Tyr Ile Phe Tyr Ser Asp Ser Leu
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Asn Asn Ser Leu Phe
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ser Arg Asp Arg Gly Tyr Thr Phe Gly Pro Asp Tyr Trp Gly Gln Gly
            100   105   110
Thr Leu Val Thr Val Ser Ser
        115

<210> 147
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 147
ggattcatct tcaataccta tacc   24

<210> 148
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 148
Gly Phe Ile Phe Asn Thr Tyr Thr
 1   5

<210> 149
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 149
atcactagtc gtggtactta tata   24

<210> 150
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 150
Ile Thr Ser Arg Gly Thr Tyr Ile

1 5

<210> 151
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 151
tcgagagatc gtggatacac ctttggtcct gactac 36

<210> 152
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 152
Ser Arg Asp Arg Gly Tyr Thr Phe Gly Pro Asp Tyr
1 5 10

<210> 153
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 153
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca ggacattaga aatgatttag gctggtatca gcagaaacca 120
gggaaagccc ctaagggcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatca ctgtctacat tatgattttc atcctcggac gttcggccaa 300
gggaccaagg tggaaatcaa gc 322

<210> 154
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 154
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Arg Asn Asp
20 25 30
Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Gly Leu Ile
35 40 45
Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80
Glu Asp Phe Ala Thr Tyr His Cys Leu His Tyr Asp Phe His Pro Arg
85 90 95

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

<210> 155
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 155
caggacatta gaaatgat 18

<210> 156
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 156
Gln Asp Ile Arg Asn Asp
1 5

<210> 157
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 157
gctgcatcc 9

<210> 158
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 158
Ala Ala Ser
1

<210> 159
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 159
ctacattatg attttcatcc tcggacg 27

<210> 160

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

<220>
<223> Synthetic

<400> 160
Leu His Tyr Asp Phe His Pro Arg Thr
 1   5

<210> 161
<211> 391
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 161
caggtgcaac tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgcag cgtctggatt caccttcagt agctatgcca tgcactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggaactaa ttattactat 180
gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatccc 300
ctatattacg atattttgac tggttattcc cccgactact actacggtat ggacgtctgg 360
ggccaaggga ccacggtcac cgtctcctca g   391

<210> 162
<211> 130
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 162
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20   25   30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ala Val Ile Trp Tyr Asp Gly Thr Asn Tyr Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Asp Pro Leu Tyr Tyr Asp Ile Leu Thr Gly Tyr Ser Pro Asp
            100   105   110
Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val
        115   120   125
Ser Ser
    130

<210> 163
<211> 24
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 163
ggattcacct tcagtagcta tgcc 24

<210> 164
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 164
Gly Phe Thr Phe Ser Ser Tyr Ala
1 5

<210> 165
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 165
atatggtatg atggaactaa ttat 24

<210> 166
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 166
Ile Trp Tyr Asp Gly Thr Asn Tyr
1 5

<210> 167
<211> 69
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 167
gcgagagatc ccctatatta cgatattttg actggttatt cccccgacta ctactacggt 60
atggacgtc 69

<210> 168
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 168
Ala Arg Asp Pro Leu Tyr Tyr Asp Ile Leu Thr Gly Tyr Ser Pro Asp

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 1               5                  10                  15
Tyr Tyr Tyr Gly Met Asp Val
            20
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<210> 169
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 169
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gacttttagc agcaacttag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataagt ggccgctcac tttcggcgga 300
gggaccaagg tggagatcaa ac   322

<210> 170
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 170
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Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Thr Phe Ser Ser Asn
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35                  40                  45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65                  70                  75                  80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Lys Trp Pro Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105
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<210> 171
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 171
cagactttta gcagcaac   18

<210> 172
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 172
Gln Thr Phe Ser Ser Asn
1 5

<210> 173
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 173
ggtgcatcc 9

<210> 174
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 174
Gly Ala Ser
1

<210> 175
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 175
cagcagtata ataagtggcc gctcact 27

<210> 176
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 176
Gln Gln Tyr Asn Lys Trp Pro Leu Thr
1 5

<210> 177
<211> 367
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 177
gaggtgcagc tgttggagtc tgggggaggc ttggtccagc ctggggagtc cctgagactc 60

tcctgtgcag cctctggatt cacctttagc agctatgcca tgaactgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcaact atcagtggta gtggtggtta tatatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaagac acggccgtat atttctgtgc gaaagattcc 300
aggtataact ggaactacgg caattttgac tactggggcc agggaaccct ggtcaccgtc 360
tcctcag 367

<210> 178
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 178
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Glu
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20   25   30
Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Thr Ile Ser Gly Ser Gly Gly Tyr Ile Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Phe Cys
                85   90   95
Ala Lys Asp Ser Arg Tyr Asn Trp Asn Tyr Gly Asn Phe Asp Tyr Trp
            100   105   110
Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115   120

<210> 179
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 179
ggattcacct ttagcagcta tgcc 24

<210> 180
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 180
Gly Phe Thr Phe Ser Ser Tyr Ala
 1   5

<210> 181
<211> 24
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 181
atcagtggta gtggtggtta tata 24

<210> 182
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 182
Ile Ser Gly Ser Gly Gly Tyr Ile
1 5

<210> 183
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 183
gcgaaagatt ccaggtataa ctggaactac ggcaattttg actac 45

<210> 184
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 184
Ala Lys Asp Ser Arg Tyr Asn Trp Asn Tyr Gly Asn Phe Asp Tyr
1 5 10 15

<210> 185
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 185
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gaatgttagc agcaacttag cctggaacaa gcagaaacct 120
ggccaggctc ccagactcct catctatgct acatccacca gggccactgg tgtcccagcc 180
aggttcagtg ccagtgggtc tgggacagac ttcgctctca ccatcaacag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataact ggcctctcac tttcggcgga 300
gggaccaagg tggagatcaa ac 322

<210> 186
<211> 107
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 186
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Asn Val Ser Ser Asn
            20   25   30
Leu Ala Trp Asn Lys Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35   40   45
Tyr Ala Thr Ser Thr Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Ala
    50   55   60
Ser Gly Ser Gly Thr Asp Phe Ala Leu Thr Ile Asn Ser Leu Gln Ser
65   70   75   80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu
                85   90   95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 187
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 187
cagaatgtta gcagcaac 18

<210> 188
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 188
Gln Asn Val Ser Ser Asn
 1   5

<210> 189
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 189
gctacatcc 9

<210> 190
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 190
Ala Thr Ser

1

<210> 191
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 191
cagcagtata ataactggcc tctcact 27

<210> 192
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 192
Gln Gln Tyr Asn Asn Trp Pro Leu Thr
1 5

<210> 193
<211> 367
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 193
gaggtgcaac tgttggaatc tgggggaggc ttggtacagc ctgggggggtc cctgagactc 60
tcctgtgtag cctctcgatt caccttcagc agcaatgcca tgagttgggt ccgccaggct 120
ccagggacgg ggctggagtg ggtctcagct attactggta gtggtagtag gacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacggtgtat 240
ctgcaaatga acagcctgag aggcgaggac acggccgtat attactgtgc gaaagatcaa 300
gggggtacct ggaactacgg agattttgac tactggggcc agggaaccct ggtcaccgtc 360
tcctcag 367

<210> 194
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 194
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Val Ala Ser Arg Phe Thr Phe Ser Ser Asn
20 25 30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Thr Gly Leu Glu Trp Val
35 40 45
Ser Ala Ile Thr Gly Ser Gly Ser Arg Thr Tyr Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Gly Glu Asp Thr Ala Val Tyr Tyr Cys

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                85                  90                  95
Ala Lys Asp Gln Gly Gly Thr Trp Asn Tyr Gly Asp Phe Asp Tyr Trp
            100                 105                 110
Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120
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<210> 195
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 195
cgattcacct tcagcagcaa tgcc 24

<210> 196
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 196
Arg Phe Thr Phe Ser Ser Asn Ala
 1   5

<210> 197
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 197
attactggta gtggtagtag gaca 24

<210> 198
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 198
Ile Thr Gly Ser Gly Ser Arg Thr
 1   5

<210> 199
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 199

gcgaaagatc aaggggtac ctggaactac ggagattttg actac 45

<210> 200
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 200
Ala Lys Asp Gln Gly Gly Thr Trp Asn Tyr Gly Asp Phe Asp Tyr
1 5 10 15

<210> 201
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 201
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcaacttag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tctcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataact ggcctctcac tttcggcgga 300
gggaccaagg tggagatcaa gc 322

<210> 202
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 202
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
20 25 30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Leu Pro Ala Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65 70 75 80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu
85 90 95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 203
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 203
cagagtgtta gcagcaac 18

<210> 204
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 204
Gln Ser Val Ser Ser Asn
1 5

<210> 205
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 205
ggtgcatcc 9

<210> 206
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 206
Gly Ala Ser
1

<210> 207
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 207
cagcagtata ataactggcc tctcact 27

<210> 208
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 208
Gln Gln Tyr Asn Asn Trp Pro Leu Thr
1 5

<210> 209
<211> 373
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 209
caggtgcagc tggtggagtc tgggggagac gtggtccagc ctgggaggtc cctgagactc 60
tcctgtacag cctctggatt caccttcagt agttatggca tgcactgggt ccgccaggct 120
ccaggcaggg ggctggagtg ggtggcagtt atatcatttg atggaaaaaa taaatactat 180
gcagactccg tgaagggccg attcaccgtc tccagagaca attccaagaa cacgctgttt 240
ctgcaaatga acagcctgag agctgaggac acggctctat attactgtgc gaaaaggata 300
gcagcaactg gttactacta cttctacggt ttggacgtct ggggccaagg gaccacggtc 360
accgtctcct cag 373

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

<220>
<223> Synthetic

<400> 210
Gln Val Gln Leu Val Glu Ser Gly Gly Asp Val Val Gln Pro Gly Arg
 1   5   10   15
Ser Leu Arg Leu Ser Cys Thr Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20   25   30
Gly Met His Trp Val Arg Gln Ala Pro Gly Arg Gly Leu Glu Trp Val
        35   40   45
Ala Val Ile Ser Phe Asp Gly Lys Asn Lys Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Ser Lys Asn Thr Leu Phe
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
                85   90   95
Ala Lys Arg Ile Ala Ala Thr Gly Tyr Tyr Tyr Phe Tyr Gly Leu Asp
            100   105   110
Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120

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

<220>
<223> Synthetic

<400> 211
ggattcacct tcagtagtta tggc 24

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

<220>
<223> Synthetic

<400> 212

Gly Phe Thr Phe Ser Ser Tyr Gly
1 5

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

<220>
<223> Synthetic

<400> 213
atatcatttg atggaaaaaa taaa 24

<210> 214
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 214
Ile Ser Phe Asp Gly Lys Asn Lys
1 5

<210> 215
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 215
gcgaaaagga tagcagcaac tggttactac tacttctacg gtttggacgt c 51

<210> 216
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 216
Ala Lys Arg Ile Ala Ala Thr Gly Tyr Tyr Tyr Phe Tyr Gly Leu Asp
1 5 10 15
Val

<210> 217
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 217
gaaataatga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagaggcacc 60

ctctcctgca gggccagtca gagtgttagt agcaacttag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccagtgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccgtcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataact ggccgctcac tttcggcgga 300
gggaccaagg tggagatcaa ac 322

<210> 218
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 218
Glu Ile Met Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15
Glu Arg Gly Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
20 25 30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45
Tyr Gly Ala Ser Thr Arg Ala Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Val Ser Ser Leu Gln Ser
65 70 75 80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu
85 90 95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 219
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 219
cagagtgtta gtagcaac 18

<210> 220
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 220
Gln Ser Val Ser Ser Asn
1 5

<210> 221
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 221

ggtgcatcc 9

<210> 222
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 222
Gly Ala Ser
1

<210> 223
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 223
cagcagtata ataactggcc gctcact 27

<210> 224
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 224
Gln Gln Tyr Asn Asn Trp Pro Leu Thr
1 5

<210> 225
<211> 367
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 225
gaggttcagc tgttggagtc tgggggaggc ttggtacagc cgggggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctctatc acctatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attagtgtta gtggtactaa tacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca agtccaagaa catgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtgt attactgtgc gaaagatctc 300
ctacataact ggaaatacgg gacttttgat atctggggcc aagggacaat ggtcaccgtc 360
tcttcag 367

<210> 226
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 226
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Ser Ile Thr Tyr
            20   25   30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ala Ile Ser Val Ser Gly Thr Asn Thr Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Lys Ser Lys Asn Met Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Lys Asp Leu Leu His Asn Trp Lys Tyr Gly Thr Phe Asp Ile Trp
            100   105   110
Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115   120

<210> 227
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 227
ggattcacct ctatcaccta tgcc 24

<210> 228
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 228
Gly Phe Thr Ser Ile Thr Tyr Ala
 1   5

<210> 229
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 229
attagtgtta gtggtactaa taca 24

<210> 230
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 230
Ile Ser Val Ser Gly Thr Asn Thr

1 5

<210> 231
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 231
gcgaaagatc tcctacataa ctggaaatac gggacttttg atatc 45

<210> 232
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 232
Ala Lys Asp Leu Leu His Asn Trp Lys Tyr Gly Thr Phe Asp Ile
1 5 10 15

<210> 233
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 233
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttgac agcaacttag tctggtacca acaaaaacct 120
ggccaggttc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataagt ggccgctcac tttcggcgga 300
gggaccaagg tggagatcaa ac 322

<210> 234
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 234
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Asp Ser Asn
20 25 30
Leu Val Trp Tyr Gln Gln Lys Pro Gly Gln Val Pro Arg Leu Leu Ile
35 40 45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65 70 75 80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Lys Trp Pro Leu
85 90 95

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

<210> 235
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 235
cagagtgttg acagcaac 18

<210> 236
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 236
Gln Ser Val Asp Ser Asn
1 5

<210> 237
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 237
ggtgcatcc 9

<210> 238
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 238
Gly Ala Ser
1

<210> 239
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 239
cagcagtata ataagtggcc gctcact 27

<210> 240

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

<220>
<223> Synthetic

<400> 240
Gln Gln Tyr Asn Lys Trp Pro Leu Thr
 1   5

<210> 241
<211> 367
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 241
gaggttcagc tgttggagtc tgggggaggc ttggtacagc cgggggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctctatc acctatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attagtgtta gtggtactaa tacatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca agtccaagaa catgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtgt attactgtgc gaaagatctc 300
ctacataact ggaaatacgg gacttttgat atctggggcc aagggacaat ggtcaccgtc 360
tcttcag   367

<210> 242
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 242
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Ser Ile Thr Tyr
            20   25   30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ala Ile Ser Val Ser Gly Thr Asn Thr Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Lys Ser Lys Asn Met Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Lys Asp Leu Leu His Asn Trp Lys Tyr Gly Thr Phe Asp Ile Trp
            100   105   110
Gly Gln Gly Thr Met Val Thr Val Ser Ser
        115   120

<210> 243
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 243
ggattcacct ctatcaccta tgcc 24

<210> 244
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 244
Gly Phe Thr Ser Ile Thr Tyr Ala
1 5

<210> 245
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 245
attagtgtta gtggtactaa taca 24

<210> 246
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 246
Ile Ser Val Ser Gly Thr Asn Thr
1 5

<210> 247
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 247
gcgaaagatc tcctacataa ctggaaatac gggacttttg atatc 45

<210> 248
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 248
Ala Lys Asp Leu Leu His Asn Trp Lys Tyr Gly Thr Phe Asp Ile
1 5 10 15

<210> 249
<211> 325
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 249
gaaatagtga tgacgcagtc tccagccacc ctgtctgtgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcaacttag cctggaacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccacggg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataacaact ggcccatgta cacttttggc 300
caggggacca agctggagat caaac 325

<210> 250
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 250
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
            20   25   30
Leu Ala Trp Asn Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35   40   45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65   70   75   80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Met
                85   90   95
Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105

<210> 251
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 251
cagagtgtta gcagcaac 18

<210> 252
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 252
Gln Ser Val Ser Ser Asn
 1   5

<210> 253
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 253
ggtgcatcc 9

<210> 254
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 254
Gly Ala Ser
1

<210> 255
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 255
cagcagtata acaactggcc catgtacact 30

<210> 256
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 256
Gln Gln Tyr Asn Asn Trp Pro Met Tyr Thr
1 5 10

<210> 257
<211> 361
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 257
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgaag cctctggatt caccttcagt agttctggca tgcactgggt ccgccaggct 120
ccaggcaagg ggctgcagtg ggtggctgtt atatcatatg atggaaataa taaattttat 180
gaagactccg tgaagggccg attgaccatt tccagagaca attccaacaa cactctgtgg 240
ctgcaaatga acagcctgag agttgaagac acggctgttt attactgtgc gaaatcagga 300
ggtagagtgg gagccgcctt tgcctactgg ggccagggaa ccctggtcac cgtctcctca 360

g 361

<210> 258
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 258
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15
Ser Leu Arg Leu Ser Cys Glu Ala Ser Gly Phe Thr Phe Ser Ser Ser
20 25 30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Gln Trp Val
35 40 45
Ala Val Ile Ser Tyr Asp Gly Asn Asn Lys Phe Tyr Glu Asp Ser Val
50 55 60
Lys Gly Arg Leu Thr Ile Ser Arg Asp Asn Ser Asn Asn Thr Leu Trp
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Lys Ser Gly Gly Arg Val Gly Ala Ala Phe Ala Tyr Trp Gly Gln
100 105 110
Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 259
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 259
ggattcacct tcagtagttc tggc 24

<210> 260
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 260
Gly Phe Thr Phe Ser Ser Ser Gly
1 5

<210> 261
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 261
atatcatatg atggaaataa taaa 24

<210> 262
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 262
Ile Ser Tyr Asp Gly Asn Asn Lys
 1   5

<210> 263
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 263
gcgaaatcag gaggtagagt gggagccgcc tttgcctac   39

<210> 264
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 264
Ala Lys Ser Gly Gly Arg Val Gly Ala Ala Phe Ala Tyr
 1   5   10

<210> 265
<211> 337
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 265
gatattgtga acactcagtc tccactctct ctgcccgtca cccctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg tatggtaatg gatacaacta tttggattgg 120
tacctgcaga agccagggca ctctccacag ctcctgatct atttgggttc taatcggggc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaagatc 240
agcagagtgg aggctgaaga tgttggcatt tattactgca tgcaaactct acaaactcca 300
ttcactttcg gccctgggac caaaatgtat atcaaac   337

<210> 266
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 266
Asp Ile Val Asn Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
 1   5   10   15

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Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Tyr Gly
            20                  25                  30
Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly His Ser
        35                  40                  45
Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Gly Ser Gly Val Pro
    50                  55                  60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65                  70                  75                  80
Ser Arg Val Glu Ala Glu Asp Val Gly Ile Tyr Tyr Cys Met Gln Thr
                85                  90                  95
Leu Gln Thr Pro Phe Thr Phe Gly Pro Gly Thr Lys Met Tyr Ile Lys
            100                 105                 110
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<210> 267
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 267
cagagcctcc tgtatggtaa tggatacaac tat 33

<210> 268
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 268
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Gln Ser Leu Leu Tyr Gly Asn Gly Tyr Asn Tyr
 1               5                  10
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<210> 269
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 269
ttgggttct 9

<210> 270
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 270
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Leu Gly Ser
 1
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<210> 271
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 271
atgcaaactc tacaaactcc attcact 27

<210> 272
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 272
Met Gln Thr Leu Gln Thr Pro Phe Thr
1 5

<210> 273
<211> 376
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 273
gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag gctctggaat cacctttagc agctatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attagtggta atggtggtac cacaaactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca actccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagaaaga 300
atccttacca gcagctggac gaggtacggt attatggacg tctggggcca agggaccacg 360
gtcaccgtct cctcag 376

<210> 274
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 274
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Ile Thr Phe Ser Ser Tyr
20 25 30
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Ala Ile Ser Gly Asn Gly Gly Thr Thr Asn Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Lys Glu Arg Ile Leu Thr Ser Ser Trp Thr Arg Tyr Gly Ile Met
100 105 110
Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 275
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 275
ggaatcacct ttagcagcta tgcc 24

<210> 276
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 276
Gly Ile Thr Phe Ser Ser Tyr Ala
1 5

<210> 277
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 277
attagtggta atggtggtac caca 24

<210> 278
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 278
Ile Ser Gly Asn Gly Gly Thr Thr
1 5

<210> 279
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 279
gcgaaagaaa gaatccttac cagcagctgg acgaggtacg gtattatgga cgtc 54

<210> 280
<211> 18
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 280
Ala Lys Glu Arg Ile Leu Thr Ser Ser Trp Thr Arg Tyr Gly Ile Met
 1   5   10   15
Asp Val

<210> 281
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 281
gaaatagtga tgacgcagtc tccagccacc ctgtctatgt ctccagggga aagagccacc 60
ctctcctgca gggccagtca gagtgttagc agcaacttag cctggtacca gcagaaacct 120
ggccaggctc ccaggctcct catctatggt gcatccacca gggccactgg tatcccagcc 180
aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag cctgcagtct 240
gaagattttg cagtttatta ctgtcagcag tataataact ggcctctcac tttcggcgga 300
gggaccaagt tagagatcaa ac   322

<210> 282
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 282
Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Met Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
        35   40   45
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65   70   75   80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Leu
                85   90   95
Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
            100   105

<210> 283
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 283
cagagtgtta gcagcaac   18

<210> 284
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 284
Gln Ser Val Ser Ser Asn
 1   5

<210> 285
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 285
ggtgcatcc   9

<210> 286
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 286
Gly Ala Ser
 1

<210> 287
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 287
cagcagtata ataactggcc tctcact   27

<210> 288
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 288
Gln Gln Tyr Asn Asn Trp Pro Leu Thr
 1   5

<210> 289
<211> 358
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 289
caggtgcaac tacagcagtg gggcgcagga ctgttgaagc cttcggagac cctgtccctc 60
acctgcgctg tctatggtgg gtccttcagt ggttactact ggagctggat ccgccagccc 120
ccagggaagg ggctggagtg gattggggaa atcaatcata gtggaaacac caactacaac 180
ccgtccctca agagtcgagt caccatatca gtagacacgt ccaagaacca gttctccctg 240
aaactgaact ctgtgaccgc cgcggacacg gctgtgtatt actgtgcgag aagagaggct 300
acagtaactc catactttga ctactggggc cagggaaccc tggtcaccgt ctcctcag 358

<210> 290
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 290
Gln Val Gln Leu Gln Gln Trp Gly Ala Gly Leu Leu Lys Pro Ser Glu
1 5 10 15
Thr Leu Ser Leu Thr Cys Ala Val Tyr Gly Gly Ser Phe Ser Gly Tyr
20 25 30
Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45
Gly Glu Ile Asn His Ser Gly Asn Thr Asn Tyr Asn Pro Ser Leu Lys
50 55 60
Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu
65 70 75 80
Lys Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95
Arg Arg Glu Ala Thr Val Thr Pro Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110
Thr Leu Val Thr Val Ser Ser
115

<210> 291
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 291
ggtgggtcct tcagtggtta ctac 24

<210> 292
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 292
Gly Gly Ser Gly Ser Gly Tyr Tyr
1 5

<210> 293
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 293
atcaatcata gtggaaacac c 21

<210> 294
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 294
Ile Asn His Ser Gly Asn Thr
1 5

<210> 295
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 295
gcgagaagag aggctacagt aactccatac tttgactac 39

<210> 296
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 296
Ala Arg Arg Glu Ala Thr Val Thr Pro Tyr Phe Asp Tyr
1 5 10

<210> 297
<211> 322
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 297
gacatccagt tgacccagtc tccatccttc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgct gggccagtca gggcattagc agttatttag cctggtatca gcaaaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccactt tgcaaagtgg ggtcccatca 180
aggttcagcg gcagtggatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240
gaagattttg caacttatta ctgtcaacag cttaatagtt atccgctcac tttcggcgga 300
gggaccaagg tggagatcaa ac 322

<210> 298
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 298
Asp Ile Gln Leu Thr Gln Ser Pro Ser Phe Leu Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Trp Ala Ser Gln Gly Ile Ser Ser Tyr
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Tyr Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Leu Asn Ser Tyr Pro Leu
                85   90   95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 299
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 299
cagggcatta gcagttat 18

<210> 300
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 300
Gln Gly Ile Ser Ser Tyr
 1   5

<210> 301
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 301
gctgcatcc 9

<210> 302
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 302
Ala Ala Ser
 1

<210> 303
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 303
caacagctta atagttatcc gctcact 27

<210> 304
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 304
Gln Gln Leu Asn Ser Tyr Pro Leu Thr
 1   5

<210> 305
<211> 355
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 305
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60
tcctgtgtag tctctggatt caacttcagt aggaatggca tacactgggt ccgccaggct 120
ccaggcaagg ggctggaatg ggtggcagtt atatcatatg atggaagaaa taaatttttat 180
gtagagtccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagtctgag agttgaggac acggctgtat attactgtgc gaaatcctca 300
attggagggt tttttgaata ctggggccag ggaaccctgg tcaccgtctc ctcag 355

<210> 306
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 306
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1   5   10   15
Ser Leu Arg Leu Ser Cys Val Val Ser Gly Phe Asn Phe Ser Arg Asn
            20   25   30
Gly Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45

```
Ala Val Ile Ser Tyr Asp Gly Arg Asn Lys Phe Tyr Val Glu Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Lys Ser Ser Ile Gly Gly Phe Phe Glu Tyr Trp Gly Gln Gly Thr
            100                 105                 110
Leu Val Thr Val Ser Ser
        115
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<210> 307
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 307
ggattcaact tcagtaggaa tggc 24

<210> 308
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 308
```
Gly Phe Asn Phe Ser Arg Asn Gly
 1               5
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<210> 309
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 309
atatcatatg atggaagaaa taaa 24

<210> 310
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 310
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Ile Ser Tyr Asp Gly Arg Asn Lys
 1               5
```

<210> 311
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 311
gcgaaatcct caattggagg gttttttgaa tac 33

<210> 312
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 312
Ala Lys Ser Ser Ile Gly Gly Phe Phe Glu Tyr
1 5 10

<210> 313
<211> 337
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 313
gatattgtga tgactcagtc tccactctcc ctgcccgtca ctcctggaga gccggcctcc 60
atctcctgca ggtctagtca gagcctcctg catagtaatg gatacaacta tttggattgg 120
tacctgcaga agccaggaca gtctccacaa ctcatgatct atttgggttc tcatcgggcc 180
tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
agcagagtgg aggctgagga tgttggagtc tattactgca ttcaagttca acaaactccg 300
atcaccttcg gccaagggac acggctggag attaaac 337

<210> 314
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 314
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15
Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30
Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45
Pro Gln Leu Met Ile Tyr Leu Gly Ser His Arg Ala Ser Gly Val Pro
50 55 60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ile Gln Val
85 90 95
Gln Gln Thr Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105 110

<210> 315
<211> 33
<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 315
cagagcctcc tgcatagtaa tggatacaac tat 33

<210> 316
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 316
Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr
1 5 10

<210> 317
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 317
ttgggttct 9

<210> 318
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 318
Leu Gly Ser
1

<210> 319
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 319
attcaagttc aacaaactcc gatcacc 27

<210> 320
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 320
Ile Gln Val Gln Gln Thr Pro Ile Thr
 1   5

<210> 321
<211> 337
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 321
gatattgtga tgactcagac tccactctcc tcacctgtca cccttggaca gccggcctcc 60
atctcctgca ggtctagtca aagcctcgta cacagtgatg gaaacaccta cttgagttgg 120
cttcagcaga ggccaggcca gcctccaaga ctcctaattt acaagatttc taaccggttc 180
tctggggtcc cagacagatt cagtggcagt ggggcaggga cagatttcac actgaaaatc 240
agcagggtgg aagctgagga tgtcgggggtt tatttctgca tgcaagctac acaatttccg 300
tacacttttg gccaggggac caagctggag atcaaag   337

<210> 322
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 322
Asp Ile Val Met Thr Gln Thr Pro Leu Ser Ser Pro Val Thr Leu Gly
 1   5   10   15
Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser
            20   25   30
Asp Gly Asn Thr Tyr Leu Ser Trp Leu Gln Gln Arg Pro Gly Gln Pro
        35   40   45
Pro Arg Leu Leu Ile Tyr Lys Ile Ser Asn Arg Phe Ser Gly Val Pro
    50   55   60
Asp Arg Phe Ser Gly Ser Gly Ala Gly Thr Asp Phe Thr Leu Lys Ile
65   70   75   80
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Phe Cys Met Gln Ala
                85   90   95
Thr Gln Phe Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100   105   110

<210> 323
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 323
caaagcctcg tacacagtga tggaaacacc tac   33

<210> 324
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 324
Gln Ser Leu Val His Ser Asp Gly Asn Thr Tyr
1 5 10

<210> 325
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 325
aagatttct 9

<210> 326
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 326
Lys Ile Ser
1

<210> 327
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 327
atgcaagcta cacaatttcc gtacact 27

<210> 328
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 328
Met Gln Ala Thr Gln Phe Pro Tyr Thr
1 5

<210> 329
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT

<222> (1)...(1)
<223> Xaa = Gly

<220>
<221> VARIANT
<222> (2)...(2)
<223> Xaa = Phe

<220>
<221> VARIANT
<222> (3)...(3)
<223> Xaa = Thr

<220>
<221> VARIANT
<222> (4)...(4)
<223> Xaa = Phe

<220>
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<222> (5)...(5)
<223> Xaa = Ser

<220>
<221> VARIANT
<222> (6)...(6)
<223> Xaa = Ala or Ser

<220>
<221> VARIANT
<222> (7)...(7)
<223> Xaa = Phe or Tyr

<220>
<221> VARIANT
<222> (8)...(8)
<223> Xaa = Gly or Ala

<400> 329
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1   5

<210> 330
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (1)...(1)
<223> Xaa = Ile

<220>
<221> VARIANT
<222> (2)...(2)
<223> Xaa = Gly or Ser

<220>
<221> VARIANT
<222> (3)...(3)
<223> Xaa = Tyr or Gly

<220>
<221> VARIANT
<222> (4)...(4)
<223> Xaa = Ser or Asp

<220>
<221> VARIANT
<222> (5)...(5)
<223> Xaa = Gly

<220>
<221> VARIANT
<222> (6)...(6)
<223> Xaa = Gly

<220>
<221> VARIANT
<222> (7)...(7)
<223> Xaa = Ser or Asn

<220>
<221> VARIANT
<222> (8)...(8)
<223> Xaa = Ala or Glu

<400> 330
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1   5

<210> 331
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (1)...(1)
<223> Xaa = Ser or Ala

<220>
<221> VARIANT
<222> (2)...(2)
<223> Xaa = Thr or Lys

<220>
<221> VARIANT
<222> (3)...(3)
<223> Xaa = Asp or Ile

<220>

<221> VARIANT
<222> (4)...(4)
<223> Xaa = Gly or Ser

<220>
<221> VARIANT
<222> (5)...(5)
<223> Xaa = Ala or His

<220>
<221> VARIANT
<222> (6)...(6)
<223> Xaa = Trp or Tyr

<220>
<221> VARIANT
<222> (7)...(7)
<223> Xaa = Lys or Asp

<220>
<221> VARIANT
<222> (8)...(8)
<223> Xaa = Met or Ile

<220>
<221> VARIANT
<222> (9)...(9)
<223> Xaa = Ser or Leu

<220>
<221> VARIANT
<222> (10)...(10)
<223> Xaa = Gly or Ser

<220>
<221> VARIANT
<222> (11)...(11)
<223> Xaa = Leu or Gly

<220>
<221> VARIANT
<222> (12)...(12)
<223> Xaa = Asp or Met

<220>
<221> VARIANT
<222> (13)...(13)
<223> Xaa = Val or Asp

<220>
<221> VARIANT
<222> (14)...(14)
<223> Xaa = Val or absent

<400> 331
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1   5   10

<210> 332
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (1)...(1)
<223> Xaa = Gln

<220>
<221> VARIANT
<222> (2)...(2)
<223> Xaa = Asp or Gly

<220>
<221> VARIANT
<222> (3)...(3)
<223> Xaa = Ile

<220>
<221> VARIANT
<222> (4)...(4)
<223> Xaa = Ser

<220>
<221> VARIANT
<222> (5)...(5)
<223> Xaa = Asp or Asn

<220>
<221> VARIANT
<222> (6)...(6)
<223> Xaa = Tyr or Trp

<400> 332
Xaa Xaa Xaa Xaa Xaa Xaa
 1   5

<210> 333
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (1)...(1)
<223> Xaa = Thr or Ala

<220>

<221> VARIANT
<222> (2)...(2)
<223> Xaa = Thr or Ala

<220>
<221> VARIANT
<222> (3)...(3)
<223> Xaa = Ser

<400> 333
Xaa Xaa Xaa
 1

<210> 334
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> VARIANT
<222> (1)...(1)
<223> Xaa = Gln

<220>
<221> VARIANT
<222> (2)...(2)
<223> Xaa = Lys or Gln

<220>
<221> VARIANT
<222> (3)...(3)
<223> Xaa = Ala or Tyr

<220>
<221> VARIANT
<222> (4)...(4)
<223> Xaa = Asp or Asn

<220>
<221> VARIANT
<222> (5)...(5)
<223> Xaa = Ser

<220>
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<222> (6)...(6)
<223> Xaa = Ala or Phe

<220>
<221> VARIANT
<222> (7)...(7)
<223> Xaa = Pro

<220>
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<222> (8)...(8)

<223> Xaa = Leu

<220>
<221> VARIANT
<222> (9)...(9)
<223> Xaa = Thr

<400> 334
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1   5

<210> 335
<211> 330
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 335
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
 1   5   10   15
Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
            20   25   30
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
        35   40   45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
    50   55   60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65   70   75   80
Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
                85   90   95
Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
            100   105   110
Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
        115   120   125
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
    130   135   140
Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145   150   155   160
Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
                165   170   175
Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
            180   185   190
His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
        195   200   205
Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
    210   215   220
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
225   230   235   240
Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
                245   250   255
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
            260   265   270
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
        275   280   285
Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
    290   295   300
Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
305   310   315   320
Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
                325   330

<210> 336
<211> 327
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 336
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
1 5 10 15
Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
20 25 30
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
35 40 45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
50 55 60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
65 70 75 80
Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95
Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro
100 105 110
Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
115 120 125
Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
130 135 140
Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
145 150 155 160
Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
165 170 175
Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
180 185 190
Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
195 200 205
Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
210 215 220
Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
225 230 235 240
Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
245 250 255
Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
260 265 270
Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
275 280 285
Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
290 295 300
Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
305 310 315 320
Leu Ser Leu Ser Leu Gly Lys
325

<210> 337
<211> 327
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 337

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Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
 1               5                  10                  15
Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
            20                  25                  30
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
        35                  40                  45
Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
    50                  55                  60
Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
65                  70                  75                  80
Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
                85                  90                  95
Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro
            100                 105                 110
Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
        115                 120                 125
Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
    130                 135                 140
Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
145                 150                 155                 160
Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
                165                 170                 175
Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
            180                 185                 190
Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
        195                 200                 205
Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
    210                 215                 220
Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
225                 230                 235                 240
Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
                245                 250                 255
Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
            260                 265                 270
Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
        275                 280                 285
Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
    290                 295                 300
Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
305                 310                 315                 320
Leu Ser Leu Ser Leu Gly Lys
                325
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<210> 338
<211> 1128
<212> DNA
<213> Homo sapiens

<400> 338
atgcaaaaac tgcaactctg tgtttatatt tacctgttta tgctgattgt tgctggtcca 60
gtggatctaa atgagaacag tgagcaaaaa gaaaatgtgg aaaaagaggg gctgtgtaat 120
gcatgtactt ggagacaaaa cactaaatct tcaagaatag aagccattaa gatacaaatc 180
ctcagtaaac ttcgtctgga aacagctcct aacatcagca aagatgttat aagacaactt 240
ttacccaaag ctcctccact ccgggaactg attgatcagt atgatgtcca gagggatgac 300
agcagcgatg gctctttgga agatgacgat tatcacgcta caacggaaac aatcattacc 360
atgcctacag agtctgattt tctaatgcaa gtggatggaa aacccaaatg ttgcttcttt 420
aaatttagct ctaaaataca atacaataaa gtagtaaagg cccaactatg gatatatttg 480
agacccgtcg agactcctac aacagtgttt gtgcaaatcc tgagactcat caaacctatg 540
aaagacggta caaggtatac tggaatccga tctctgaaac ttgacatgaa cccaggcact 600
ggtatttggc agagcattga tgtgaagaca gtgttgcaaa attggctcaa acaacctgaa 660
tccaacttag gcattgaaat aaaagcttta gatgagaatg gtcatgatct tgctgtaacc 720
ttcccaggac caggagaaga tgggctgaat ccgtttttag aggtcaaggt aacagacaca 780
ccaaaaagat ccagaaggga ttttggtctt gactgtgatg agcactcaac agaatcacga 840

tgctgtcgtt accctctaac tgtggatttt gaagcttttg gatgggattg gattatcgct 900
cctaaaagat ataaggccaa ttactgctct ggagagtgtg aatttgtatt tttacaaaaa 960
tatcctcata ctcatctggt acaccaagca aaccccagag gttcagcagg cccttgctgt 1020
actcccacaa agatgtctcc aattaatatg ctatatttta atggcaaaga acaaataata 1080
tatgggaaaa ttccagcgat ggtagtagac cgctgtgggt gctcatga 1128

<210> 339
<211> 375
<212> PRT
<213> Homo sapiens

<400> 339
Met Gln Lys Leu Gln Leu Cys Val Tyr Ile Tyr Leu Phe Met Leu Ile
1 5 10 15
Val Ala Gly Pro Val Asp Leu Asn Glu Asn Ser Glu Gln Lys Glu Asn
20 25 30
Val Glu Lys Glu Gly Leu Cys Asn Ala Cys Thr Trp Arg Gln Asn Thr
35 40 45
Lys Ser Ser Arg Ile Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu
50 55 60
Arg Leu Glu Thr Ala Pro Asn Ile Ser Lys Asp Val Ile Arg Gln Leu
65 70 75 80
Leu Pro Lys Ala Pro Pro Leu Arg Glu Leu Ile Asp Gln Tyr Asp Val
85 90 95
Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr His
100 105 110
Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Phe Leu
115 120 125
Met Gln Val Asp Gly Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser Ser
130 135 140
Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr Leu
145 150 155 160
Arg Pro Val Glu Thr Pro Thr Thr Val Phe Val Gln Ile Leu Arg Leu
165 170 175
Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser Leu
180 185 190
Lys Leu Asp Met Asn Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp Val
195 200 205
Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu Gly
210 215 220
Ile Glu Ile Lys Ala Leu Asp Glu Asn Gly His Asp Leu Ala Val Thr
225 230 235 240
Phe Pro Gly Pro Gly Glu Asp Gly Leu Asn Pro Phe Leu Glu Val Lys
245 250 255
Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp Cys
260 265 270
Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
275 280 285
Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
290 295 300
Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln Lys
305 310 315 320
Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser Ala
325 330 335
Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
340 345 350
Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met Val
355 360 365
Val Asp Arg Cys Gly Cys Ser
370 375

<210> 340
<211> 109

<212> PRT
<213> Homo sapiens

<400> 340
Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1   5   10   15
Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile
            20   25   30
Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu
        35   40   45
Phe Val Phe Leu Gln Lys Tyr Pro His Thr His Leu Val His Gln Ala
    50   55   60
Asn Pro Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser
65   70   75   80
Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly
                85   90   95
Lys Ile Pro Ala Met Val Val Asp Arg Cys Gly Cys Ser
            100   105

<210> 341
<211> 1224
<212> DNA
<213> Homo sapiens

<400> 341
atggtgctcg cggccccgct gctgctgggc ttcctgctcc tcgccctgga gctgcggccc 60
cggggggagg cggccgaggg ccccgcggcg gcggcggcgg cggcggcggc ggcggcagcg 120
gcgggggtcg gggggagcgg ctccagccgg ccagccccgt ccgtggcgcc cgagccggac 180
ggctgccccg tgtgcgtttg gcggcagcac agccgcgagc tgcgcctaga gagcatcaag 240
tcgcagatct tgagcaaact gcggctcaag gaggcgccca acatcagccg cgaggtggtg 300
aagcagctgc tgcccaaggc gccgccgctg cagcagatcc tggacctaca cgacttccag 360
ggcgacgcgc tgcagcccga ggacttcctg gaggaggacg agtaccacgc caccaccgag 420
accgtcatta gcatggccca ggagacggac ccagcagtac agacagatgg cagccctctc 480
tgctgccatt ttcacttcag ccccaaggtg atgttcacaa aggtactgaa ggcccagctg 540
tgggtgtacc tacggcctgt accccgccca gccacagtct acctgcagat cttgcgacta 600
aaaccccctaa ctggggaagg gaccgcaggg ggaggggggcg gaggccggcg tcacatccgt 660
atccgctcac tgaagattga gctgcactca cgctcaggcc attggcagag catcgacttc 720
aagcaagtgc tacacagctg gttccgccag ccacagagca actggggcat cgagatcaac 780
gcctttgatc ccagtggcac agacctggct gtcacctccc tggggccggg agccgagggg 840
ctgcatccat tcatggagct tcgagtccta gagaacacaa aacgttcccg gcggaacctg 900
ggtctggact gcgacgagca ctcaagcgag tcccgctgct gccgatatcc cctcacagtg 960
gactttgagg ctttcggctg ggactggatc atcgcaccta agcgctacaa ggccaactac 1020
tgctccggcc agtgcgagta catgttcatg caaaaatatc cgcataccca tttggtgcag 1080
caggccaatc caagaggctc tgctgggccc tgttgtaccc ccaccaagat gtccccaatc 1140
aacatgctct acttcaatga caagcagcag attatctacg gcaagatccc tggcatggtg 1200
gtggatcgct gtggctgctc ttaa   1224

<210> 342
<211> 407
<212> PRT
<213> Homo sapiens

<400> 342
Met Val Leu Ala Ala Pro Leu Leu Leu Gly Phe Leu Leu Leu Ala Leu
 1   5   10   15
Glu Leu Arg Pro Arg Gly Glu Ala Ala Glu Gly Pro Ala Ala Ala Ala
            20   25   30
Ala Ala Ala Ala Ala Ala Ala Ala Ala Gly Val Gly Gly Glu Arg Ser
        35   40   45
Ser Arg Pro Ala Pro Ser Val Ala Pro Glu Pro Asp Gly Cys Pro Val
    50   55   60
Cys Val Trp Arg Gln His Ser Arg Glu Leu Arg Leu Glu Ser Ile Lys
65   70   75   80

```
Ser Gln Ile Leu Ser Lys Leu Arg Leu Lys Glu Ala Pro Asn Ile Ser
                85                  90                  95
Arg Glu Val Val Lys Gln Leu Leu Pro Lys Ala Pro Pro Leu Gln Gln
            100                 105                 110
Ile Leu Asp Leu His Asp Phe Gln Gly Asp Ala Leu Gln Pro Glu Asp
        115                 120                 125
Phe Leu Glu Glu Asp Glu Tyr His Ala Thr Thr Glu Thr Val Ile Ser
    130                 135                 140
Met Ala Gln Glu Thr Asp Pro Ala Val Gln Thr Asp Gly Ser Pro Leu
145                 150                 155                 160
Cys Cys His Phe His Phe Ser Pro Lys Val Met Phe Thr Lys Val Leu
                165                 170                 175
Lys Ala Gln Leu Trp Val Tyr Leu Arg Pro Val Pro Arg Pro Ala Thr
            180                 185                 190
Val Tyr Leu Gln Ile Leu Arg Leu Lys Pro Leu Thr Gly Glu Gly Thr
        195                 200                 205
Ala Gly Gly Gly Gly Gly Gly Arg Arg His Ile Arg Ile Arg Ser Leu
    210                 215                 220
Lys Ile Glu Leu His Ser Arg Ser Gly His Trp Gln Ser Ile Asp Phe
225                 230                 235                 240
Lys Gln Val Leu His Ser Trp Phe Arg Gln Pro Gln Ser Asn Trp Gly
                245                 250                 255
Ile Glu Ile Asn Ala Phe Asp Pro Ser Gly Thr Asp Leu Ala Val Thr
            260                 265                 270
Ser Leu Gly Pro Gly Ala Glu Gly Leu His Pro Phe Met Glu Leu Arg
        275                 280                 285
Val Leu Glu Asn Thr Lys Arg Ser Arg Arg Asn Leu Gly Leu Asp Cys
    290                 295                 300
Asp Glu His Ser Ser Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
305                 310                 315                 320
Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
                325                 330                 335
Lys Ala Asn Tyr Cys Ser Gly Gln Cys Glu Tyr Met Phe Met Gln Lys
            340                 345                 350
Tyr Pro His Thr His Leu Val Gln Gln Ala Asn Pro Arg Gly Ser Ala
        355                 360                 365
Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
    370                 375                 380
Phe Asn Asp Lys Gln Gln Ile Ile Tyr Gly Lys Ile Pro Gly Met Val
385                 390                 395                 400
Val Asp Arg Cys Gly Cys Ser
                405
```

<210> 343
<211> 109
<212> PRT
<213> Homo sapiens

<400> 343

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

<210> 344
<211> 1503
<212> DNA
<213> Homo spiens

<400> 344
atgagactcc ccaaactcct cactttcttg ctttggtacc tggcttggct ggacctggaa 60
ttcatctgca ctgtgttggg tgcccctgac ttgggccaga gaccccaggg gaccaggcca 120
ggattggcca aagcagaggc caaggagagg ccccccctgg cccggaacgt cttcaggcca 180
gggggtcaca gctatggtgg gggggccacc aatgccaatg ccagggcaaa gggaggcacc 240
gggcagacag gaggcctgac acagcccaag aaggatgaac ccaaaaagct gccccccaga 300
ccgggcggcc ctgaacccaa gccaggacac cctccccaaa caaggcaggc tacagccccgg 360
actgtgaccc caaaaggaca gcttcccgga ggcaaggcac ccccaaaagc aggatctgtc 420
cccagctcct tcctgctgaa gaaggccagg gagccccggc ccccacgaga gcccaaggag 480
ccgtttcgcc cacccccccat cacaccccac gagtacatgc tctcgctgta caggacgctg 540
tccgatgctg acagaaaggg aggcaacagc agcgtgaagt tggaggctgg cctggccaac 600
accatcacca gctttattga caaagggcaa gatgaccgag gtcccgtggt caggaagcag 660
aggtacgtgt ttgacattag tgccctggag aaggatgggc tgctgggggc cgagctgcgg 720
atcttgcgga agaagccctc ggacacggcc aagccagcgg ccccccggagg cgggcgggct 780
gcccagctga agctgtccag ctgccccagc ggccggcagc cggcctcctt gctggatgtg 840
cgctccgtgc caggcctgga cggatctggc tgggaggtgt tcgacatctg gaagctcttc 900
cgaaacttta agaactcggc ccagctgtgc ctggagctgg aggcctggga acggggcagg 960
gccgtggacc tccgtggcct gggcttcgac cgcgccgccc ggcaggtcca cgagaaggcc 1020
ctgttcctgg tgtttggccg caccaagaaa cgggacctgt tctttaatga gattaaggcc 1080
cgctctggcc aggacgataa gaccgtgtat gagtacctgt tcagccagcg gcgaaaacgg 1140
cgggccccac tggccactcg ccagggcaag cgacccagca agaaccttaa ggctcgctgc 1200
agtcggaagg cactgcatgt caacttcaag gacatgggct gggacgactg gatcatcgca 1260
cccctgagt acgaggcttt ccactgcgag gggctgtgcg agttcccatt gcgctcccac 1320
ctggagccca cgaatcatgc agtcatccag accctgatga actccatgga ccccgagtcc 1380
acaccaccca cctgctgtgt gcccacgcgg ctgagtccca tcagcatcct cttcattgac 1440
tctgccaaca acgtggtgta taagcagtat gaggacatgg tcgtggagtc gtgtggctgc 1500
agg 1503

<210> 345
<211> 501
<212> PRT
<213> Homo sapiens

<400> 345
Met Arg Leu Pro Lys Leu Leu Thr Phe Leu Leu Trp Tyr Leu Ala Trp
 1   5   10   15
Leu Asp Leu Glu Phe Ile Cys Thr Val Leu Gly Ala Pro Asp Leu Gly
            20   25   30
Gln Arg Pro Gln Gly Thr Arg Pro Gly Leu Ala Lys Ala Glu Ala Lys
        35   40   45
Glu Arg Pro Pro Leu Ala Arg Asn Val Phe Arg Pro Gly Gly His Ser
    50   55   60
Tyr Gly Gly Gly Ala Thr Asn Ala Asn Ala Arg Ala Lys Gly Gly Thr
65   70   75   80
Gly Gln Thr Gly Gly Leu Thr Gln Pro Lys Lys Asp Glu Pro Lys Lys
                85   90   95
Leu Pro Pro Arg Pro Gly Gly Pro Glu Pro Lys Pro Gly His Pro Pro
            100   105   110
Gln Thr Arg Gln Ala Thr Ala Arg Thr Val Thr Pro Lys Gly Gln Leu
        115   120   125
Pro Gly Gly Lys Ala Pro Pro Lys Ala Gly Ser Val Pro Ser Ser Phe
    130   135   140
Leu Leu Lys Lys Ala Arg Glu Pro Gly Pro Pro Arg Glu Pro Lys Glu
145   150   155   160
Pro Phe Arg Pro Pro Pro Ile Thr Pro His Glu Tyr Met Leu Ser Leu
                165   170   175
Tyr Arg Thr Leu Ser Asp Ala Asp Arg Lys Gly Gly Asn Ser Ser Val

```
            180                 185                 190
Lys Leu Glu Ala Gly Leu Ala Asn Thr Ile Thr Ser Phe Ile Asp Lys
        195                 200                 205
Gly Gln Asp Asp Arg Gly Pro Val Val Arg Lys Gln Arg Tyr Val Phe
    210                 215                 220
Asp Ile Ser Ala Leu Glu Lys Asp Gly Leu Leu Gly Ala Glu Leu Arg
225                 230                 235                 240
Ile Leu Arg Lys Lys Pro Ser Asp Thr Ala Lys Pro Ala Ala Pro Gly
                245                 250                 255
Gly Gly Arg Ala Ala Gln Leu Lys Leu Ser Ser Cys Pro Ser Gly Arg
            260                 265                 270
Gln Pro Ala Ser Leu Leu Asp Val Arg Ser Val Pro Gly Leu Asp Gly
        275                 280                 285
Ser Gly Trp Glu Val Phe Asp Ile Trp Lys Leu Phe Arg Asn Phe Lys
    290                 295                 300
Asn Ser Ala Gln Leu Cys Leu Glu Leu Glu Ala Trp Glu Arg Gly Arg
305                 310                 315                 320
Ala Val Asp Leu Arg Gly Leu Gly Phe Asp Arg Ala Ala Arg Gln Val
                325                 330                 335
His Glu Lys Ala Leu Phe Leu Val Phe Gly Arg Thr Lys Lys Arg Asp
            340                 345                 350
Leu Phe Phe Asn Glu Ile Lys Ala Arg Ser Gly Gln Asp Asp Lys Thr
        355                 360                 365
Val Tyr Glu Tyr Leu Phe Ser Gln Arg Arg Lys Arg Arg Ala Pro Leu
    370                 375                 380
Ala Thr Arg Gln Gly Lys Arg Pro Ser Lys Asn Leu Lys Ala Arg Cys
385                 390                 395                 400
Ser Arg Lys Ala Leu His Val Asn Phe Lys Asp Met Gly Trp Asp Asp
                405                 410                 415
Trp Ile Ile Ala Pro Leu Glu Tyr Glu Ala Phe His Cys Glu Gly Leu
            420                 425                 430
Cys Glu Phe Pro Leu Arg Ser His Leu Glu Pro Thr Asn His Ala Val
        435                 440                 445
Ile Gln Thr Leu Met Asn Ser Met Asp Pro Glu Ser Thr Pro Pro Thr
    450                 455                 460
Cys Cys Val Pro Thr Arg Leu Ser Pro Ile Ser Ile Leu Phe Ile Asp
465                 470                 475                 480
Ser Ala Asn Asn Val Val Tyr Lys Gln Tyr Glu Asp Met Val Val Glu
                485                 490                 495
Ser Cys Gly Cys Arg
            500
```

<210> 346
<211> 120
<212> PRT
<213> Homo sapiens

<400> 346

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

115 120

<210> 347
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 347
Gln Ala Lys His Lys Gln Arg Lys Arg Leu Lys Ser Ser Cys Arg Tyr
1 5 10 15
Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala
20 25 30
Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val
35 40 45
Phe Leu Gln Lys Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro
50 55 60
Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile
65 70 75 80
Asn Met Leu Tyr Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile
85 90 95
Pro Ala Met Val Val Asp Arg Cys Gly Cys Ser
100 105

<210> 348
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 348
Ala Leu Asp Thr Asn Tyr Cys Phe Ser Ser Thr Glu Lys Asn Cys Cys
1 5 10 15
Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile
20 25 30
Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu
35 40 45
Phe Val Phe Leu Gln Lys Tyr Pro His Thr His Leu Val His Gln Ala
50 55 60
Asn Pro Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser
65 70 75 80
Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly
85 90 95
Lys Ile Pro Ala Met Val Val Asp Arg Cys Gly Cys Ser
100 105

<210> 349
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 349
Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
1 5 10 15

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


<210> 350
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 350
Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1               5                  10                  15
Val Arg Gln Leu Tyr Ile Asp Phe Arg Lys Asp Leu Gly Trp Lys Trp
            20                  25                  30
Ile His Glu Pro Lys Gly Tyr His Ala Asn Phe Cys Ser Gly Glu Cys
        35                  40                  45
Glu Phe Val Phe Leu Gln Lys Tyr Pro His Thr His Leu Val His Gln
    50                  55                  60
Ala Asn Pro Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys Met
65                  70                  75                  80
Ser Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Glu Gln Ile Ile Tyr
                85                  90                  95
Gly Lys Ile Pro Ala Met Val Val Asp Arg Cys Gly Cys Ser
            100                 105                 110


<210> 351
<211> 114
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 351
Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1               5                  10                  15
Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile
            20                  25                  30
Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Pro
        35                  40                  45
Phe Pro Leu Ala Asp His Leu Asn Ser Thr Asn His Ala Ile Val Gln
    50                  55                  60
Thr Leu Val Asn Ser Val Asn Ser Lys Ile Pro Lys Ala Cys Cys Thr
65                  70                  75                  80
Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Glu
                85                  90                  95
Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met Val Val Asp Arg Cys Gly
            100                 105                 110
Cys Ser
```

<210> 352
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 352
Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1   5   10   15
Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile
            20   25   30
Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Pro
        35   40   45
Tyr Ile Trp Ser Leu Asp Thr Gln Tyr Ser Lys Val Leu Ala Leu Tyr
    50   55   60
Asn Gln His Asn Pro Gly Ala Ser Ala Ala Pro Cys Cys Thr Pro Thr
65   70   75   80
Lys Met Ser Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Glu Gln Ile
                85   90   95
Ile Tyr Gly Lys Ile Pro Ala Met Val Val Asp Arg Cys Gly Cys Ser
            100   105   110

<210> 353
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 353
Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1   5   10   15
Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile
            20   25   30
Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu
        35   40   45
Phe Val Phe Leu Gln Lys Tyr Pro His Thr His Leu Val His Gln Ala
    50   55   60
Asn Ser Val Asn Ser Lys Ile Pro Cys Cys Thr Pro Thr Lys Met Ser
65   70   75   80
Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly
                85   90   95
Lys Ile Pro Ala Met Val Val Asp Arg Cys Gly Cys Ser
            100   105

<210> 354
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 354
Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1   5   10   15
Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile

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

<210> 355
<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 355

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

<210> 356
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 356

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

<210> 357

<211> 109
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 357
Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1   5   10   15
Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile
            20   25   30
Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu
        35   40   45
Phe Val Phe Leu Gln Lys Tyr Pro His Thr His Leu Val His Gln Ala
    50   55   60
Asn Pro Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser
65   70   75   80
Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Glu Lys Val Val Leu Lys
                85   90   95
Asn Tyr Gln Asp Met Val Val Glu Gly Cys Gly Cys Ser
            100   105

<210> 358
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 358
Asp Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys
 1   5   10   15
Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile
            20   25   30
Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu
        35   40   45
Phe Val Phe Leu Gln Lys Tyr Pro His Thr His Leu Val His Gln Ala
    50   55   60
Asn Pro Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser
65   70   75   80
Pro Ile Asn Met Leu Tyr Phe Asn Gly Lys Lys Pro Lys Val Glu Gln
                85   90   95
Leu Ser Asn Met Ile Val Arg Ser Cys Gly Cys Ser
            100   105

<210> 359
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 359
gaggtgcagg tgttggagtc tgggggagac ttggtacagc ctgggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagt gcctatgcca tgacctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcagct attagtggta gtggtggtag cgcatactac 180
gcagactccg tgaagggccg gttcaccatc tccagagaca attccaagaa cacggtatat 240
ctgcagatga acagcctgag agccgaggac acggccgtat attactgtgc gaaagatggg 300
gccctggaaaa tgtccggttt ggacgtctgg ggccaaggga ccacggtcat cgtctcctca 360

<210> 360
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 360
Glu Val Gln Val Leu Glu Ser Gly Gly Asp Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ala Tyr
            20   25   30
Ala Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Ala Ile Ser Gly Ser Gly Gly Ser Ala Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Lys Asp Gly Ala Trp Lys Met Ser Gly Leu Asp Val Trp Gly Gln
            100   105   110
Gly Thr Thr Val Ile Val Ser Ser
        115   120

<210> 361
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 361
ggattcacct ttagtgccta tgcc   24

<210> 362
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 362
Gly Phe Thr Phe Ser Ala Tyr Ala
 1   5

<210> 363
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 363
attagtggta gtggtggtag cgca   24

<210> 364
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 364
Ile Ser Gly Ser Gly Gly Ser Ala
1 5

<210> 365
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 365
gcgaaagatg gggcctggaa aatgtccggt ttggacgtc 39

<210> 366
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 366
Ala Lys Asp Gly Ala Trp Lys Met Ser Gly Leu Asp Val
1 5 10

<210> 367
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 367
gacatccaga tgacccagtc tccagcctcc ctgtctgcat ctgttggaga cagagtcacc 60
atcacttgtc gggcgagtca ggacattagc gattatttag cctggtatca gcagaaacca 120
gggaaaattc ctaggctcct gatctatact acatccactt tgcaatcagg ggtcccatct 180
cggttccgtg gcagtgggtc tgggacagat ttcactctca ccatcagcag cctgcagcct 240
gaagatgttg caacttatta ctgtcagaag tatgacagtg ccccgctcac tttcggcgga 300
gggaccaagg tggagatcaa a 321

<210> 368
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 368
Asp Ile Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly
1 5 10 15

```
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Asp Tyr
            20                  25                  30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ile Pro Arg Leu Leu Ile
        35                  40                  45
Tyr Thr Thr Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Arg Gly
    50                  55                  60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
Glu Asp Val Ala Thr Tyr Tyr Cys Gln Lys Tyr Asp Ser Ala Pro Leu
                85                  90                  95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105
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<210> 369
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 369
caggacatta gcgattat 18

<210> 370
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 370
Gln Asp Ile Ser Asp Tyr
 1   5

<210> 371
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 371
actacatcc 9

<210> 372
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 372
Thr Thr Ser
 1

<210> 373
<211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 373
cagaagtatg acagtgcccc gctcact 27

<210> 374
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 374
Gln Lys Tyr Asp Ser Ala Pro Leu Thr
1 5

<210> 375
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 375
caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaagtc cctgcgactc 60
tcctgtgcag cgtctggatt caccttcagt agttttggca tgcattgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcagtt attgggtatg atggaggtaa tgaatactat 180
gccgactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgaat 240
ctgcaaatga gcagcctgag agccgaagac acggctgtgt attattgttc gactataagt 300
cattacgata ttttgagcgg tatggacgtc tggggccgag ggaccacggt caccgtctcc 360
tca 363

<210> 376
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 376
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Lys
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
20 25 30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ala Val Ile Gly Tyr Asp Gly Gly Asn Glu Tyr Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Asn
65 70 75 80
Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ser Thr Ile Ser His Tyr Asp Ile Leu Ser Gly Met Asp Val Trp Gly
100 105 110
Arg Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 377
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 377
ggattcacct tcagtagttt tggc 24

<210> 378
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 378
Gly Phe Thr Phe Ser Ser Phe Gly
1 5

<210> 379
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 379
attgggtatg atggaggtaa tgaa 24

<210> 380
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 380
Ile Gly Tyr Asp Gly Gly Asn Glu
1 5

<210> 381
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 381
tcgactataa gtcattacga tattttgagc ggtatggacg tc 42

<210> 382
<211> 14
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic

<400> 382
Ser Thr Ile Ser His Tyr Asp Ile Leu Ser Gly Met Asp Val
 1   5   10

<210> 383
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 383
gacatccaga tgacccagtc tccatcttcc gtgtctgcat ctgtaggaga cagagtcacc 60
atcacttgtc gggcgagtca gggtattagc aactggttag cctggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctttgct gcatccagtt tgcaaagtgg ggtcccatca 180
cggttcagcg gcagtgcatc tgggacagat ttcactctca ccatcaacag cctgcagcct 240
gaagattttg caacttacta ttgtcaacag gctaacagtt tccccgctcac tttcggcgga 300
gggaccaagg tggagatcaa acga   324

<210> 384
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 384
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
 1   5   10   15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asn Trp
            20   25   30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
        35   40   45
Phe Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50   55   60
Ser Ala Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Gln Pro
65   70   75   80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Leu
                85   90   95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
            100   105

<210> 385
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 385
cagggtatta gcaactgg   18

<210> 386
<211> 6

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 386
Gln Gly Ile Ser Asn Trp
 1   5

<210> 387
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 387
gctgcatcc   9

<210> 388
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 388
Ala Ala Ser
 1

<210> 389
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 389
caacaggcta acagtttccc gctcact   27

<210> 390
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 390
Gln Gln Ala Asn Ser Phe Pro Leu Thr
 1   5

<210> 391
<211> 340
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 391
Glu Ala Glu Thr Arg Glu Cys Ile Tyr Tyr Asn Ala Asn Trp Glu Leu
1 5 10 15
Glu Arg Thr Asn Gln Ser Gly Leu Glu Arg Cys Glu Gly Glu Gln Asp
20 25 30
Lys Arg Leu His Cys Tyr Ala Ser Trp Ala Asn Ser Ser Gly Thr Ile
35 40 45
Glu Leu Val Lys Lys Gly Cys Trp Leu Asp Asp Phe Asn Cys Tyr Asp
50 55 60
Arg Gln Glu Cys Val Ala Thr Glu Glu Asn Pro Gln Val Tyr Phe Cys
65 70 75 80
Cys Cys Glu Gly Asn Phe Cys Asn Glu Arg Phe Thr His Leu Pro Glu
85 90 95
Ala Gly Gly Pro Glu Val Thr Tyr Glu Pro Pro Pro Thr Ala Pro Ser
100 105 110
Gly Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
115 120 125
Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
130 135 140
Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
145 150 155 160
His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
165 170 175
Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
180 185 190
Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
195 200 205
Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
210 215 220
Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
225 230 235 240
Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val
245 250 255
Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
260 265 270
Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
275 280 285
Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
290 295 300
Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
305 310 315 320
Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
325 330 335
Ser Pro Gly Lys
340