SEQUENCE LISTING

<110> Ludwig Institute for Cancer Research

<120> Specific Binding Proteins and Uses Thereof

<130> 9662WOO2

<150> US 12/388,504
<151> 2009-02-18

<160> 195

<170> PatentIn version 3.5

<210> 1
<211> 402
<212> DNA
<213> Mus musculus

<400> 1
atgagagtgc tgattctttt gtggctgttc acagcctttc ctggtgtcct gtctgatgtg 60

cagcttcagg agtcgggacc tagcctggtg aaaccttctc agtctctgtc cctcacctgc 120

actgtcactg gctactcaat caccagtgat tttgcctgga actggatccg gcagtttcca 180

ggaaacaagc tggagtggat gggctacata agttatagtg gtaacactag gtacaaccca 240

tctctcaaaa gtcgaatctc tatcactcga gacacatcca agaaccaatt cttcctgcag 300

ttgaattctg tgactattga ggacacagcc acatattact gtgtaacggc gggacgcggg 360

tttccttatt ggggccaagg gactctggtc actgtctctg ca 402

<210> 2
<211> 134
<212> PRT
<213> Mus musculus

<400> 2

Met Arg Val Leu Ile Leu Leu Trp Leu Phe Thr Ala Phe Pro Gly Val
1 5 10 15

Leu Ser Asp Val Gln Leu Gln Glu Ser Gly Pro Ser Leu Val Lys

Pro
20 25 30

Ser Gln Ser Leu Ser Leu Thr Cys Thr Val Thr Gly Tyr Ser Ile
Thr
35 40 45

Ser Asp Phe Ala Trp Asn Trp Ile Arg Gln Phe Pro Gly Asn Lys
Leu
50 55 60

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

Ser Leu Lys Ser Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn
Gln
85 90 95

Phe Phe Leu Gln Leu Asn Ser Val Thr Ile Glu Asp Thr Ala Thr
Tyr
100 105 110

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

Leu Val Thr Val Ser Ala
130

<210> 3
<211> 384
<212> DNA
<213> Mus musculus

<400> 3
atggtgtcca cagctcagtt ccttgcattc ttgttgcttt ggtttccagg
tgcaagatgt 60

gacatcctga tgacccaatc tccatcctcc atgtctgtat ctctgggaga
cacagtcagc 120

atcacttgcc attcaagtca ggacattaac agtaatatag ggtggttgca
gcagagacca 180

gggaaatcat ttaagggcct gatctatcat ggaaccaact tggacgatga
agttccatca 240

aggttcagtg gcagtggatc tggagccgat tattctctca ccatcagcag
cctggaatct 300

gaagattttg cagactatta ctgtgtacag tatgctcagt ttccgtggac
gttcggtgga 360

ggcaccaagc tggaaatcaa acgt
384

<210> 4
<211> 128
<212> PRT
<213> Mus musculus

<400> 4

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

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

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

Ile Asn Ser Asn Ile Gly Trp Leu Gln Gln Arg Pro Gly Lys Ser
Phe
50 55 60

Lys Gly Leu Ile Tyr His Gly Thr Asn Leu Asp Asp Glu Val Pro
Ser
65 70 75 80

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

Ser Leu Glu Ser Glu Asp Phe Ala Asp Tyr Tyr Cys Val Gln Tyr
Ala
100 105 110

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

<210> 5
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> biotinylated at position 1

<400> 5

Leu Glu Glu Lys Lys Gly Asn Tyr Val Val Thr Asp His
1 5 10

<210> 6
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> biotinylated at position 13

<400> 6

Leu Glu Glu Lys Lys Gly Asn Tyr Val Val Thr Asp His
1 5 10

<210> 7
<211> 6149
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic vector

<400> 7
ctcgagagcg ggcagtgagc gcaacgcaat taatgtgagt tagctcactc
attaggcacc 60

ccaggcttta cactttatgc tcccggctcg tatgttgtgt ggagattgtg
agcggataac 120

aatttcacac agaattcgtg aggctccggt gcccgtcagt gggcagagcg
cacatcgccc 180

acagtccccg agaagttggg gggaggggtc ggcaattgaa ccggtgccta
gagaaggtgg 240

cgcggggtaa actgggaaag tgatgtcgtg tactggctcc gccttttcc
cgagggtggg 300

ggagaaccgt atataagtgc agtagtcgcc gtgaacgttc tttttcgcaa
cgggtttgcc 360

gccagaacac aggtaagtgc cgtgtgtggt tcccgcgggc ctggcctctt
tacgggttat 420

ggcccttgcg tgccttgaat tacttccacg cccctggctg cagtacgtga
ttcttgatcc 480

cgagcttcgg gttggaagtg ggtgggagag ttcgaggcct tgcgcttaag
gagccccttc 540

gcctcgtgct tgagttgagg cctggcctgg gcgctggggc cgccgcgtgc
gaatctggtg 600

gcaccttcgc gcctgtctcg ctgctttcga taagtctcta gccatttaaa
atttttgatg 660

acctgctgcg acgctttttt tctggcaaga tagtcttgta aatgcgggcc
aagatctgca 720

cactggtatt tcggtttttg gggccgcggg cggcgacggg gcccgtgcgt
cccagcgcac 780

atgttcggcg aggcggggcc tgcgagcgcg gccaccgaga atcggacggg
ggtagtctca 840

agctggccgg cctgctctgg tgcctggcct cgcgccgccg tgtatcgccc
cgccctgggc 900

ggcaaggctg gcccggtcgg caccagttgc gtgagcggaa agatggccgc
ttcccggccc 960

tgctgcaggg agctcaaaat ggaggacgcg gcgctcggga gagcgggcgg
gtgagtcacc 1020

cacacaaagg aaaagggcct ttccgtcctc agccgtcgct tcatgtgact
ccacggagta 1080

ccgggcgccg tccaggcacc tcgattagtt ctcgagcttt tggagtacgt
cgtctttagg 1140

ttggggggag gggttttatg cgatggagtt tccccacact gagtgggtgg
agactgaagt 1200

taggccagct tggcacttga tgtaattctc cttggaattt gccctttttg
agtttggatc 1260

ttggttcatt ctcaagcctc agacagtggt tcaaagtttt tttcttccat
ttcaggtgta 1320

cgcgtctcgg gaagctttag tttaaacgcc gccaccatgg tgtccacagc
tcagttcctt 1380

gcattcttgt tgctttggtt tccaggtgca agatgtgaca tcctgatgac
ccaatctcca 1440

tcctccatgt ctgtatctct gggagacaca gtcagcatca cttgccattc
aagtcaggac 1500

attaacagta atatagggtg gttgcagcag agaccaggga aatcatttaa
gggcctgatc 1560

tatcatggaa ccaacttgga cgatgaagtt ccatcaaggt tcagtggcag
tggatctgga 1620

gccgattatt ctctcaccat cagcagcctg gaatctgaag attttgcaga
ctattactgt 1680

gtacagcatg ctcagtttcc gtggacgttc ggtggaggca ccaagctgga
aatcaaacgg 1740

gtgagtggat ccatctggga taagcatgct gttttctgtc tgtccctaac
atgccctgtg 1800

attatgcgca aacaacacac ccaagggcag aactttgtta cttaaacacc
atcctgtttg 1860

cttctttcct caggaactgt ggctgcacca tctgtcttca tcttcccgcc
atctgatgag 1920

cagttgaaat ctggaactgc ctctgttgtg tgcctgctga ataacttcta
tcccagagag 1980

gccaaagtac agtggaaggt ggataacgcc ctccaatcgg gtaactccca
ggagagtgtc 2040

acagagcagg acagcaagga cagcacctac agcctcagca gcaccctgac
gctgagcaaa 2100

gcagactacg agaaacacaa agtctacgcc tgcgaagtca cccatcaggg
cctgagctcg 2160

cccgtcacaa agagcttcaa caggggagag tgttgagcta gaactaacta
actaagctag 2220

caacggtttc cctctagcgg gatcaattcc gccccccccc cctaacgtta
ctggccgaag 2280

ccgcttggaa taaggccggt gtgcgtttgt ctatatgtta ttttccacca
tattgccgtc 2340

ttttggcaat gtgagggccc ggaaacctgg ccctgtcttc ttgacgagca
ttcctagggg 2400

tctttcccct ctcgccaaag gaatgcaagg tctgttgaat gtcgtgaagg
aagcagttcc 2460

tctggaagct tcttgaagac aaacaacgtc tgtagcgacc ctttgcaggc
agcggaaccc 2520

cccacctggc gacaggtgcc tctgcggcca aaagccacgt gtataagata
cacctgcaaa 2580

ggcggcacaa ccccagtgcc acgttgtgag ttggatagtt gtggaaagag

tcaaatggct 2640

ctcctcaagc gtattcaaca aggggctgaa ggatgcccag aaggtacccc
attgtatggg 2700

atctgatctg gggcctcggt gcacatgctt tacgtgtgtt tagtcgaggt
taaaaaacgt 2760

ctaggccccc cgaaccacgg ggacgtggtt ttcctttgaa aaacacgata
ataccatggt 2820

tgaacaagat ggattgcacg caggttctcc ggccgcttgg gtggagaggc
tattcggcta 2880

tgactgggca caacagacaa tcggctgctc tgatgccgcc gtgttccggc
tgtcagcgca 2940

ggggcgcccg gttctttttg tcaagaccga cctgtccggt gccctgaatg
aactgcagga 3000

cgaggcagcg cggctatcgt ggctggccac gacgggcgtt ccttgcgcag
ctgtgctcga 3060

cgttgtcact gaagcgggaa gggactggct gctattgggc gaagtgccgg
ggcaggatct 3120

cctgtcatct caccttgctc ctgccgagaa agtatccatc atggctgatg
caatgcggcg 3180

gctgcatacg cttgatccgg ctacctgccc attcgaccac caagcgaaac
atcgcatcga 3240

gcgagcacgt actcggatgg aagccggtct tgtcgatcag gatgatctgg
acgaagagca 3300

tcaggggctc gcgccagccg aactgttcgc caggctcaag gcgcgcatgc
ccgacggcga 3360

ggatctcgtc gtgacccatg gcgatgcctg cttgccgaat atcatggtgg
aaaatggccg 3420

cttttctgga ttcatcgact gtggccggct gggtgtggcg gaccgctatc
aggacatagc 3480

gttggctacc cgtgatattg ctgaagagct tggcggcgaa tgggctgacc
gcttcctcgt 3540

gctttacggt atcgccgctc ccgattcgca gcgcatcgcc ttctatcgcc
ttcttgacga 3600

gttcttctga gtcgatcgac ctggcgtaat agcgaagagg cccgcaccga
tcgcccttcc 3660

caacagttgc gcagcctgaa tggcgaatgg gacgcgccct gtagcggcgc
attaagcgcg 3720

gcgggtgtgg tggttacgcg cagcgtgacc gctacacttg ccagcgccct
agcgcccgct 3780

cctttcgctt tcttcccttc ctttctcgcc acgttcgccg gctttccccg
tcaagctcta 3840

aatcgggggc tccctttagg gttccgattt agtgctttac ggcacctcga
ccccaaaaaa 3900

cttgattagg gtgatggttc acgtagtggg ccatcgccct gatagacggt
ttttcgcctt 3960

tgacgttgga gtccacgttc tttaatagtg gactcttgtt ccaaactgga
acaacactca 4020

accctatctc ggtctattta taagggattt tgccgatttc ggcctattgg
ttaaaaaatg 4080

agctgattta acaaaattta acgcgaattt taacaaaata ttaacgctta
caatttaggt 4140

ggcacttttc ggggaaatgt gcgcggaacc cctatatttg tttatttttc
taaatacatt 4200

caaatatgta tccgctcatg agacaataac cctgataaat gcttcaataa
tattgaaaaa 4260

ggaagagtat gagtattcaa catttccgtg tcgcccttat tccctttttt
gcggcatttt 4320

gccttactgt ttttgctcac ccagaaacgc tggtgaaagt aaaagatgct
gaagatcagt 4380

tgggtgcacg agtgggttac atcgaactgg atctcaacag cggtaagatc
cttgagagtt 4440

ttcgccccga agaacgtttt ccaatgatga gcacttttaa agttctgcta
tgtggcgcgg 4500

tattatcccg tattgacgcc gggcaagagc aactcggtcg ccgcatacac
tattctcaga 4560

atgacttggt tgagtactca ccagtcacag aaaagcatat tacggatggc
atgacagtaa 4620

gagaattatg cagtgctgcc ataaccatga gtgataacac tgcggccaac
ttacttctga 4680

caacgatcgg aggaccgaag gagctaaccg ctttttttgca caacatgggg
gatcatgtaa 4740

ctcgccttga tcgttgggaa ccggagctga atgaagccat accaaacgac
gagcgtgaca 4800

ccacgatgcc tgtagcaatg gcaacaacgt tgcgcaaact attaactggc
gaactactta 4860

ctctagcttc ccggcaacaa ttaatagact ggatggaggc ggataaagtt
gcaggaccac 4920

ttctgcgctc ggcccttccg gctggctggt ttattgctga taaatctgga
gccggtgagc 4980

gtgggtctcg cggtatcatt gcagcactgg ggccagatgg taagccctcc
cgtatcgtag 5040

ttatctacac gacggggagt caggcaacta tggatgaacg aaatagacag
atcgctgaga 5100

taggtgcctc actgattaag cattggtaac tgtcagacca agtttactca
tatatacttt 5160

agattgattt aaaacttcat ttttaattta aaaggatcta ggtgaagatc
ctttttgata 5220

atctcatgac caaaatccct taacgtgagt tttcgttcca ctgagcgtca
gaccccgtag 5280

aaaagatcaa aggatgttct tgagatcctt tttttctgca cgtaatctgc
tgcttgcaaa 5340

caaaaaacca ccgctaccag cggtggtttg tttgccggat caagagctac
caactctttt 5400

tccgaaggta actggcttca gcagagcgca gataccaaat actgtccttc
tagtgtagcc 5460

gtagttaggc caccacttca agaactctgt agcaccgcct acatacctcg
ctctgctaat 5520

cctgttacca gtggctgctg ccagtggcga taagtcgtgt cttaccgggt
tggactcaag 5580

acgatagtta ccggataagg cgcagcggtc gggctgaacg gggggttcgt
gcacacagcc 5640

cagcttggag cgaacgacct acaccgaact gagataccta cagcgtgagc
tatgagaaag 5700

cgccacgctt cccgaaggga gaaaggcgga caggtatccg gtaagcggca
gggtcggaac 5760

aggagagcgc acgagggagc ttccaggggg aaacgcctgg tatctttata
gtcctgtcgg 5820

gtttcgccac ctctgacttg agcgtcgatt tttgtgatgc tcgtcagggg
ggcggagcct 5880

atggaaaaac gccagcaacg cggccttttt acggttcctg gccttttgct
ggccttttgc 5940

tcacatgttc tttcctgcgt tatcccctga ttctgtggat aaccgtatta

ccgcctttga 6000

gtgagctgat accgctcgcc gcagccgaac gaccgagcgc agcgagtcag
tgagcgagga 6060

agcggaagag cgcccaatac gcaaaccgcc tctccccgcg cgttggccga
ttcattaatg 6120

caggtatcac gaggcccttt cgtcttcac
6149

<210> 8
<211> 6625
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic vector

<400> 8
ctcgagagcg ggcagtgagc gcaacgcaat taatgtgagt tagctcactc
attaggcacc 60

ccaggcttta cactttatgc tcccggctcg tatgttgtgt ggagattgtg
agcggataac 120

aatttcacac agaattcgtg aggctccggt gcccgtcagt gggcagagcg
cacatcgccc 180

acagtccccg agaagttggg gggaggggtc ggcaattgaa ccggtgccta
gagaaggtgg 240

cgcggggtaa actgggaaag tgatgtcgtg tactggctcc gccttttcc
cgagggtggg 300

ggagaaccgt atataagtgc agtagtcgcc gtgaacgttc tttttcgcaa
cgggtttgcc 360

gccagaacac aggtaagtgc cgtgtgtggt tcccgcgggc ctggcctctt
tacgggttat 420

ggcccttgcg tgccttgaat tacttccacg cccctggctg cagtacgtga
ttcttgatcc 480

cgagcttcgg gttggaagtg ggtgggagag ttcgaggcct tgcgcttaag
gagccccttc 540

gcctcgtgct tgagttgagg cctggcctgg gcgctggggc cgccgcgtgc
gaatctggtg 600

gcaccttcgc gcctgtctcg ctgctttcga taagtctcta gccatttaaa
atttttgatg 660

acctgctgcg acgcttttt tctggcaaga tagtcttgta aatgcgggcc
aagatctgca 720

cactggtatt tcggtttttg gggccgcggg cggcgacggg gcccgtgcgt
cccagcgcac 780

atgttcggcg aggcggggcc tgcgagcgcg gccaccgaga atcggacggg
ggtagtctca 840

agctggccgg cctgctctgg tgcctggcct cgcgccgccg tgtatcgccc
cgccctgggc 900

ggcaaggctg gcccggtcgg caccagttgc gtgagcggaa agatggccgc
ttcccggccc 960

tgctgcaggg agctcaaaat ggaggacgcg gcgctcggga gagcgggcgg
gtgagtcacc 1020

cacacaaagg aaaagggcct ttccgtcctc agccgtcgct tcatgtgact
ccacggagta 1080

ccgggcgccg tccaggcacc tcgattagtt ctcgagcttt tggagtacgt
cgtctttagg 1140

ttggggggag gggttttatg cgatggagtt tccccacact gagtgggtgg
agactgaagt 1200

taggccagct tggcacttga tgtaattctc cttggaattt gccctttttg
agtttggatc 1260

ttggttcatt ctcaagcctc agacagtggt tcaaagtttt tttcttccat
ttcaggtgta 1320

cgcgtctcgg gaagctttag tttaaacgcc gccaccatga gagtgctgat
tcttttgtgg 1380

ctgttcacag cctttcctgg tgtcctgtct gatgtgcagc ttcaggagtc
gggacctagc 1440

ctggtgaaac cttctcagac tctgtccctc acctgcactg tcactggcta
ctcaatcacc 1500

agtgattttg cctggaactg gatccggcag tttccaggaa acaagctgga
gtggatgggc 1560

tacataagtt atagtggtaa cactaggtac aacccatctc tcaaaagtcg
aatctctatc 1620

actcgagaca catccaagaa ccaattcttc ctgcagttga attctgtgac
tattgaggac 1680

acagccacat attactgtgt aacggcggga cgcgggtttc cttattgggg
ccaagggact 1740

ctggtcactg tctctgcaca gtgagtggat cctctgcgcc tgggcccagc
tctgtcccac 1800

accgcggtca catggcacca cctctcttgc agcctccacc aagggcccat

cggtcttccc 1860

cctggcaccc tcctccaaga gcacctctgg gggcacagcg gccctgggct gcctggtcaa 1920

ggactacttc cccgaaccgg tgacggtgtc gtggaactca ggcgccctga ccagcggcgt 1980

gcacaccttc ccggctgtcc tacagtcctc aggactctac tccctcagca gcgtggtgac 2040

cgtgccctcc agcagcttgg gcacccagac ctacatctgc aacgtgaatc acaagcccag 2100

caacaccaag gtggacaaga aagttgagcc caaatcttgt gacaaaactc acacatgccc 2160

accgtgccca gcacctgaac tcctgggggg accgtcagtc ttcctcttcc ccccaaaacc 2220

caaggacacc ctcatgatct cccggacccc tgaggtcaca tgcgtggtgg tggacgtgag 2280

ccacgaagac cctgaggtca agttcaactg gtacgtggac ggcgtggagg tgcataacgc 2340

caagacaaag ccgcgggagg agcagtacaa cagcacgtac cgggtggtca gcgtcctcac 2400

cgtcctgcac caggactggc tgaatggcaa ggagtacaag tgcaaggtct ccaacaaagc 2460

cctcccagcc cccatcgaga aaaccatctc caaagccaaa gggcagcccc gagaaccaca 2520

ggtgtacacc ctgcccccat cccgggagga gatgaccaag aaccaggtca gcctgacctg 2580

cctggtcaaa ggcttctatc ccagcgacat cgccgtggag tgggagagca atgggcagcc 2640

ggagaacaac tacaagacca cgcctcccgt gctggactcc gacggctcct tcttcctcta 2700

cagcaagctc accgtggaca agagcaggtg gcagcagggg aacgtcttct catgctccgt 2760

gatgcatgag gctctgcaca accactacac gcagaagagc ctctccctgt ctccgggtaa 2820

atgagctaga aactaactaa gctagcaacg gtttccctct agcgggatca attccgcccc 2880

ccccccctaa cgttactggc cgaagccgct tggaataagg ccggtgtgcg tttgtctata 2940

tgttattttc caccatattg ccgtcttttg gcaatgtgag ggcccggaaa
cctggccctg 3000

tcttcttgac gagcattcct aggggtcttt cccctctcgc caaaggaatg
caaggtctgt 3060

tgaatgtcgt gaaggaagca gttcctctgg aagcttcttg aagacaaaca
acgtctgtag 3120

cgacccttg caggcagcgg aacccccccac ctggcgacag gtgcctctgc
ggccaaaagc 3180

cacgtgtata agatacacct gcaaaggcgg cacaacccca gtgccacgtt
gtgagttgga 3240

tagttgtgga aagagtcaaa tggctctcct caagcgtatt caacaagggg
ctgaaggatg 3300

cccagaaggt accccattgt atgggatctg atctggggcc tcggtgcaca
tgctttacgt 3360

gtgtttagtc gaggttaaaa aacgtctagg ccccccgaac cacggggacg
tggttttcct 3420

ttgaaaaaca cgataatacc atggttcgac cattgaactg catcgtcgcc
gtgtcccaaa 3480

atatggggat tggcaagaac ggagacctac cctggcctcc gctcaggaac
gagttcaagt 3540

acttccaaag aatgaccaca acctcttcag tggaaggtaa acagaatctg
gtgattatgg 3600

gtaggaaaac ctggttctcc attcctgaga agaatcgacc tttaaaggac
agaattaatg 3660

gttcgatata gttctcagta gagaactcaa agaaccacca cgaggagctc
attttcttgc 3720

caaaagtttg gatgatgcct taagacttat tgaacaaccg gaattggcaa
gtaaagtaga 3780

catggtttgg atagtcggag gcagttctgt ttaccaggaa gccatgaatc
aaccaggcca 3840

cctcagactc tttgtgacaa ggatcatgca ggaatttgaa agtgacacgt
ttttcccaga 3900

aattgatttg gggaaatata aacttctccc agaataccca ggcgtcctct
ctgaggtcca 3960

ggaggaaaaa ggcatcaagt ataagtttga agtctacgag aagaaagact
aacaggaaga 4020

tgctttcaag ttctctgctc ccctcctaaa gctatgcatt tttataagac
catgggactt 4080

ttgctggtcg atcgacctgg cgtaatagcg aagaggcccg caccgatcgc
ccttcccaac 4140

agttgcgcag cctgaatggc gaatgggacg cgccctgtag cggcgcatta
agcgcggcgg 4200

gtgtggtggt tacgcgcagc gtgaccgcta cacttgccag cgccctagcg
cccgctcctt 4260

tcgctttctt cccttccttt ctcgccacgt tcgccggctt tccccgtcaa
gctctaaatc 4320

gggggctccc tttagggttc cgatttagtg ctttacggca cctcgacccc
aaaaaacttg 4380

attagggtga tggttcacgt agtgggccat cgccctgata gacggttttt
cgcctttgac 4440

gttggagtcc acgttcttta atagtggact cttgttccaa actggaacaa
cactcaaccc 4500

tatctcggtc tatttataag ggattttgcc gatttcggcc tattggttaa
aaaatgagct 4560

gatttaacaa aatttaacgc gaattttaac aaaatattaa cgcttacaat
ttaggtggca 4620

cttttcgggg aaatgtgcgc ggaaccccta tatttgttta ttttttctaaa
tacattcaaa 4680

tatgtatccg ctcatgagac aataaccctg ataaatgctt caataatatt
gaaaaaggaa 4740

gagtatgagt attcaacatt tccgtgtcgc ccttattccc ttttttgcgg
catttgcct 4800

tactgttttt gctcacccag aaacgctggt gaaagtaaaa gatgctgaag
atcagttggg 4860

tgcacgagtg ggttacatcg aactggatct caacagcggt aagatccttg
agagttttcg 4920

ccccgaagaa cgttttccaa tgatgagcac ttttaaagtt ctgctatgtg
gcgcggtatt 4980

atcccgtatt gacgccgggc aagagcaact cggtcgccgc atacactatt
ctcagaatga 5040

cttggttgag tactcaccag tcacagaaaa gcatattacg gatggcatga
cagtaagaga 5100

attatgcagt gctgccataa ccatgagtga taacactgcg gccaacttac
ttctgacaac 5160

gatcggagga ccgaaggagc taaccgcttt tttgcacaac atgggggatc

atgtaactcg 5220

ccttgatcgt tgggaaccgg agctgaatga agccatacca aacgacgagc
gtgacaccac 5280

gatgcctgta gcaatggcaa caacgttgcg caaactatta actggcgaac
tacttactct 5340

agcttcccgg caacaattaa tagactggat ggaggcggat aaagttgcag
gaccacttct 5400

gcgctcggcc cttccggctg gctggtttat tgctgataaa tctggagccg
gtgagcgtgg 5460

gtctcgcggt atcattgcag cactggggcc agatggtaag ccctcccgta
tcgtagttat 5520

ctacacgacg gggagtcagg caactatgga tgaacgaaat agacagatcg
ctgagatagg 5580

tgcctcactg attaagcatt ggtaactgtc agaccaagtt tactcatata
tactttagat 5640

tgatttaaaa cttcattttt aatttaaaag gatctaggtg aagatccttt
ttgataatct 5700

catgaccaaa atcccttaac gtgagttttc gttccactga gcgtcagacc
ccgtagaaaa 5760

gatcaaagga tgttcttgag atccttttt tctgcacgta atctgctgct
tgcaaacaaa 5820

aaaccaccgc taccagcggt ggtttgtttg ccggatcaag agctaccaac
tctttttccg 5880

aaggtaactg gcttcagcag agcgcagata ccaaatactg tccttctagt
gtagccgtag 5940

ttaggccacc acttcaagaa ctctgtagca ccgcctacat acctcgctct
gctaatcctg 6000

ttaccagtgg ctgctgccag tggcgataag tcgtgtctta ccgggttgga
ctcaagacga 6060

tagttaccgg ataaggcgca gcggtcgggc tgaacggggg gttcgtgcac
acagcccagc 6120

ttggagcgaa cgacctacac cgaactgaga tacctacagc gtgagctatg
agaaagcgcc 6180

acgcttcccg aagggagaaa ggcggacagg tatccggtaa gcggcagggt
cggaacagga 6240

gagcgcacga gggagcttcc agggggaaac gcctggtatc tttatagtcc
tgtcgggttt 6300

cgccacctct gacttgagcg tcgatttttg tgatgctcgt cagggggcg
gagcctatgg 6360

aaaaacgcca gcaacgcggc ctttttacgg ttcctggcct tttgctggcc
ttttgctcac 6420

atgttctttc ctgcgttatc ccctgattct gtggataacc gtattaccgc
ctttgagtga 6480

gctgataccg ctcgccgcag ccgaacgacc gagcgcagcg agtcagtgag
cgaggaagcg 6540

gaagagcgcc caatacgcaa accgcctctc cccgcgcgtt ggccgattca
ttaatgcagg 6600

tatcacgagg ccctttcgtc ttcac
6625

<210> 9
<211> 234
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic vector

<400> 9

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

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

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

Ile Asn Ser Asn Ile Gly Trp Leu Gln Gln Arg Pro Gly Lys Ser
Phe
50 55 60

Lys Gly Leu Ile Tyr His Gly Thr Asn Leu Asp Asp Glu Val Pro
Ser
65 70 75 80

Arg Phe Ser Gly Ser Gly Ser Gly Ala Asp Tyr Ser Leu Thr Ile
Ser

```
                85                  90                  95

Ser Leu Glu Ser Glu Asp Phe Ala Asp Tyr Tyr Cys Val Gln His
Ala
            100                 105                 110

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

Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
Gln
    130                 135                 140

Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
Tyr
145                 150                 155
160

Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
Ser
                165                 170                 175

Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
Thr
            180                 185                 190

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

His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
Pro
    210                 215                 220

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


<210>  10
<211>  463
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  synthetic vector
```

<400> 10

Met Arg Val Leu Ile Leu Leu Trp Leu Phe Thr Ala Phe Pro Gly
Val
1 5 10 15

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

Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Thr Gly Tyr Ser Ile
Thr
35 40 45

Ser Asp Phe Ala Trp Asn Trp Ile Arg Gln Phe Pro Gly Asn Lys
Leu
50 55 60

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

Ser Leu Lys Ser Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn
Gln
85 90 95

Phe Phe Leu Gln Leu Asn Ser Val Thr Ile Glu Asp Thr Ala Thr
Tyr
100 105 110

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

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

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly
Cys
145 150 155
160

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
Ser
165 170 175

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
Ser
180 185 190

Ser Gly Leu Tyr Ser Leu Ser Ser Val Tyr Ser Val Pro Ser Ser
Ser
195 200 205

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser
Asn
210 215 220

Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr
His
225 230 235
240

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
Val
245 250 255

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
Thr
260 265 270

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
Glu
275 280 285

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
Lys
290 295 300

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
Ser
305 310 315
320

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
Lys
325 330 335

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

340 345 350

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
355 360 365

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
370 375 380

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
385 390 395 400

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
405 410 415

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
420 425 430

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

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
450 455 460

<210> 11
<211> 116
<212> PRT
<213> Mus musculus

<400> 11

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

Ser Leu Ser Leu Thr Cys Thr Val Thr Gly Tyr Ser Ile Thr Ser Asp
20 25 30

Phe Ala Trp Asn Trp Ile Arg Gln Phe Pro Gly Asn Lys Leu Glu

Trp
        35   40   45

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

Lys Ser Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn Gln Phe
Phe
65   70   75   80

Leu Gln Leu Asn Ser Val Thr Ile Glu Asp Thr Ala Thr Tyr Tyr
Cys
                85   90   95

Val Thr Ala Gly Arg Gly Phe Pro Tyr Trp Gly Gln Gly Thr Leu
Val
            100   105   110

Thr Val Ser Ala
        115

<210> 12
<211> 108
<212> PRT
<213> Mus musculus

<400> 12

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

Asp Thr Val Ser Ile Thr Cys His Ser Ser Gln Asp Ile Asn Ser
Asn
            20   25   30

Ile Gly Trp Leu Gln Gln Arg Pro Gly Lys Ser Phe Lys Gly Leu
Ile
        35   40   45

Tyr His Gly Thr Asn Leu Asp Asp Glu Val Pro Ser Arg Phe Ser
Gly
    50   55   60

Ser Gly Ser Gly Ala Asp Tyr Ser Leu Thr Ile Ser Ser Leu Glu

Ser
65 70 75 80

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

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

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

<220>
<223> synthetic

<400> 13

Leu Glu Glu Lys Lys Gly Asn Tyr Val Val Thr Asp His
1 5 10

<210> 14
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 14

Cys Gly Ala Asp Ser Tyr Glu Met Glu Glu Asp Gly Val Arg Lys
Cys
1 5 10 15

<210> 15
<211> 6
<212> PRT
<213> Mus musculus

<400> 15

Ser Asp Phe Ala Trp Asn
1 5

<210> 16
<211> 16
<212> PRT

<213> Mus musculus

<400> 16

Tyr Ile Ser Tyr Ser Gly Asn Thr Arg Tyr Asn Pro Ser Leu Lys
Ser
1 5 10 15

<210> 17
<211> 9
<212> PRT
<213> Mus musculus

<400> 17

Val Thr Ala Gly Arg Gly Phe Pro Tyr
1 5

<210> 18
<211> 11
<212> PRT
<213> Mus musculus

<400> 18

His Ser Ser Gln Asp Ile Asn Ser Asn Ile Gly
1 5 10

<210> 19
<211> 7
<212> PRT
<213> Mus musculus

<400> 19

His Gly Thr Asn Leu Asp Asp
1 5

<210> 20
<211> 9
<212> PRT
<213> Mus musculus

<400> 20

Val Gln Tyr Ala Gln Phe Pro Trp Thr
1 5

<210> 21
<211> 348
<212> DNA

<213> Mus musculus

<400> 21
gatgtgcagc ttcaggagtc gggacctagc ctggtgaaac cttctcagtc
tctgtccctc 60

acctgcactg tcactggcta ctcaatcacc agtgactatg cctggaactg
gatccggcag 120

tttccaggaa acaaactgga gtggatgggc tacataagtt acagtgctaa
cactaggtac 180

aacccatctc tcaaaagtcg aatctctatc actcgagaca catccaagaa
ccaattcttc 240

ctgcagttga attctgtgac tactgaggac acagccacat attactgtgc
aacggcggga 300

cgcgggtttc cttactgggg ccaagggact ctggtcactg tctctgca
348

<210> 22
<211> 116
<212> PRT
<213> Mus musculus

<400> 22

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

Ser Leu Ser Leu Thr Cys Thr Val Thr Gly Tyr Ser Ile Thr Ser
Asp
20 25 30

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

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

Lys Ser Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn Gln Phe
Phe
65 70 75 80

Leu Gln Leu Asn Ser Val Thr Thr Glu Asp Thr Ala Thr Tyr Tyr
Cys

85 90 95

Ala Thr Ala Gly Arg Gly Phe Pro Tyr Trp Gly Gln Gly Thr Leu Val
100 105 110

Thr Val Ser Ala
115

<210> 23
<211> 6
<212> PRT
<213> Mus musculus

<400> 23

Ser Asp Tyr Ala Trp Asn
1 5

<210> 24
<211> 16
<212> PRT
<213> Mus musculus

<400> 24

Tyr Ile Ser Tyr Ser Ala Asn Thr Arg Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 25
<211> 7
<212> PRT
<213> Mus musculus

<400> 25

Ala Gly Arg Gly Phe Pro Tyr
1 5

<210> 26
<211> 324
<212> DNA
<213> Mus musculus

<400> 26
gacatcctga tgacccaatc tccatcctcc atgtctctat ctctgggaga cacagtcagt 60

atcacttgcc attcaagtca ggacattaac agtaatatag ggtggttgca

gcagaaacca 120

gggaaatcat ttaagggcct gatctatcat ggaaccaact tggacgatgg agttccatca 180

aggttcagtg gcagtggatc tggagccgat tattctctca ccatcagcag cctggaatct 240

gaagattttg tagactatta ctgtgtacag tatggtcagt ttccgtggac gttcggtgga 300

ggcaccaagc tggaaatcaa acgg 324

<210> 27
<211> 108
<212> PRT
<213> Mus musculus

<400> 27

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

Asp Thr Val Ser Ile Thr Cys His Ser Ser Gln Asp Ile Asn Ser Asn
20 25 30

Ile Gly Trp Leu Gln Gln Lys Pro Gly Lys Ser Phe Lys Gly Leu Ile
35 40 45

Tyr His Gly Thr Asn Leu Asp Asp Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Ala Asp Tyr Ser Leu Thr Ile Ser Ser Leu Glu Ser
65 70 75 80

Glu Asp Phe Val Asp Tyr Tyr Cys Val Gln Tyr Gly Gln Phe Pro Trp
85 90 95

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

<210> 28
<211> 11
<212> PRT
<213> Mus musculus

<400> 28

His Ser Ser Gln Asp Ile Asn Ser Asn Ile Gly
1 5 10

<210> 29
<211> 7
<212> PRT
<213> Mus musculus

<400> 29

His Gly Thr Asn Leu Asp Asp
1 5

<210> 30
<211> 9
<212> PRT
<213> Mus musculus

<400> 30

Val Gln Tyr Gly Gln Phe Pro Trp Thr
1 5

<210> 31
<211> 348
<212> DNA
<213> Mus musculus

<400> 31
gatgtgcagc ttcaggggtc gggacctagc ctggtgaaac cttctcagtc
tctgtccctc 60

acctgcactg tcactggcta ctcaatcacc agtgattatg cctggaactg
gatccggcag 120

tttccaggaa acaaactgga gtggatgggc tacataagct acagtggtaa
cactagatac 180

aacccatctc tcagaagtcg aatctctatc actcgagaca catccaagaa
ccaattcttc 240

ctgcagttga attctgtgac tactgaggac acagccacat attactgtgc
aacggcggga 300

cgcggatttc cttactgggg ccaagggact ctggtcactg tctctgca
348

<210> 32
<211> 116
<212> PRT
<213> Mus musculus

<400> 32

Asp Val Gln Leu Gln Gly Ser Gly Pro Ser Leu Val Lys Pro Ser Gln
1 5 10 15

Ser Leu Ser Leu Thr Cys Thr Val Thr Gly Tyr Ser Ile Thr Ser Asp
20 25 30

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

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

Arg Ser Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn Gln Phe Phe
65 70 75 80

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

Ala Thr Ala Gly Arg Gly Phe Pro Tyr Trp Gly Gln Gly Thr Leu Val
100 105 110

Thr Val Ser Ala
115

<210> 33
<211> 6
<212> PRT
<213> Mus musculus

<400> 33

Ser Asp Tyr Ala Trp Asn

1 5

<210> 34
<211> 16
<212> PRT
<213> Mus musculus

<400> 34

Tyr Ile Ser Tyr Ser Gly Asn Thr Arg Tyr Asn Pro Ser Leu Arg Ser
1 5 10 15

<210> 35
<211> 9
<212> PRT
<213> Mus musculus

<400> 35

Ala Thr Ala Gly Arg Gly Phe Pro Tyr
1 5

<210> 36
<211> 322
<212> DNA
<213> Mus musculus

<400> 36
gacatcctga tgacccaatc tccatcctcc atgtctgtgt ctctgggaga cacagtcaac 60

atcacttgcc attcaagtca ggacattaac agtaatatag ggtggttgca gcagaaacca 120

gggaaatcat ttaagggcct gatctatcat ggaaccaact tggacgatgg agttccatca 180

aggttcagtg gcagtggatc tggagccgat tattctctca ccatcagcag cctggaatct 240

gaggattttg cagactatta ctgtgtacag tatggtcagt ttccgtggac gttcggtgga 300

ggcaccaagc tggaaatcaa ac
322

<210> 37
<211> 108
<212> PRT
<213> Mus musculus

<400> 37

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

Asp Thr Val Asn Ile Thr Cys His Ser Ser Gln Asp Ile Asn Ser
Asn
20 25 30

Ile Gly Trp Leu Gln Gln Lys Pro Gly Lys Ser Phe Lys Gly Leu
Ile
35 40 45

Tyr His Gly Thr Asn Leu Asp Asp Gly Val Pro Ser Arg Phe Ser
Gly
50 55 60

Ser Gly Ser Gly Ala Asp Tyr Ser Leu Thr Ile Ser Ser Leu Glu
Ser
65 70 75 80

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

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

<210> 38
<211> 11
<212> PRT
<213> Mus musculus

<400> 38

His Ser Ser Gln Asp Ile Asn Ser Asn Ile Gly
1 5 10

<210> 39
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 39

His Gly Thr Asn Leu Asp Asp
1 5

<210> 40
<211> 9
<212> PRT
<213> Mus musculus

<400> 40

Val Gln Tyr Gly Gln Phe Pro Trp Thr
1 5

<210> 41
<211> 11891
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic vector

<400> 41
aagcttgccg ccaccatgga ttggacctgg cgcattctct ttctggtagc
agccgccaca 60

ggtaaggggc tgccaaatcc cagtgaggag gaagggatcg aaggtcacca
tcgaagccag 120

tcacccagtg aaggggggctt ccatccactc ctgtgtcttc tctacaggtg
tccacagcca 180

ggtgcagctc caagagagtg gacctgggct tgtcaagccg agtcaaactt
tgtccctaac 240

atgtactgtg tccggatact ctatctcatc agattttgcg tggaattgga
taaggcagcc 300

accagggaaa ggtttagaat ggatgggcta catatcatac tctgggaaca
ccagatatca 360

accttctctg aaaagccgga tcacaatctc aagggacacg tcgaagaatc
agttcttcct 420

gaaactgaac tccgttacag ccgcagacac agcaacatat tactgcgtaa
ccgctggcag 480

aggcttcccc tattggggac agggcaccct agtgacagtg agcagcggta
agatggcaca 540

ccgtggccgg cctctgcgcc tgggcccagc tctgtcccac accgcggtca
catggcacct 600

tttctcttcc agcctccacc aagggcccca gcgtgttccc cctggccccc

agcagcaaga 660

gcaccagcgg cggcacagcc gccctgggct gcctggtgaa ggactacttc
cccgagcccg 720

tgaccgtgag ctggaacagc ggagccctga cctccggcgt gcacaccttc
cccgccgtgc 780

tgcagagcag cggcctgtac agcctgagca gcgtggtgac cgtgcccagc
agcagcctgg 840

gcacccagac ctacatctgc aacgtgaacc acaagcccag caacaccaag
gtggacaaga 900

aggtggagcc caagagctgc gacaagaccc acacctgccc cccctgccca
gccccagagc 960

tgctgggcgg accctccgtg ttcctgttcc cccccaagcc caaggacacc
ctgatgatca 1020

gcaggacccc cgaggtgacc tgcgtggtgg tggacgtgag ccacgaggac
ccagaggtga 1080

agttcaattg gtatgtggac ggcgtggagg tgcacaacgc caagaccaag
cccagagaag 1140

agcagtacaa cagcacctac agggtggtgt ccgtgctgac cgtgctgcac
caggactggc 1200

tgaacggcaa ggaatacaaa tgcaaggtct ccaacaaggc cctgccagcc
cccatcgaaa 1260

agaccatcag caaggccaag ggccagccac gggagcccca ggtgtacacc
ctgccccccct 1320

cccgggacga gtgcaccaag aaccaggtgt ccctgacctg tctggtgaag
ggcttctacc 1380

ccagcgacat cgccgtggag tgggagagca acggccagcc cgagaacaac
tacaagacca 1440

ccccccccagt gctggacagc gacggcagct tcttcctgta cagcaagctg
accgtggaca 1500

agagcaggtg gcagcagggc aacgtgttca gctgcagcgt gatgcacgag
gccctgcaca 1560

accactacac ccagaagagc ctgagcctgt cccccggcaa gtgatgacga
cgcggccgtg 1620

cggacgaccg aattcattga tcataatcag ccataccaca tttgtagagg
ttttacttgc 1680

tttaaaaaac ctcccacacc tccccctgaa cctgaaacat aaaatgaatg
caattgttgt 1740

tgttaacttg tttattgcag cttataatgg ttacaaataa agcaatagca
tcacaaattt 1800

cacaaataaa gcatttttt cactgcattc tagttgtggt ttgtccaaac
tcatcaatgt 1860

atcttatcat gtctggcggc cgccgatatt tgaaaatatg gcatattgaa
aatgtcgccg 1920

atgtgagttt ctgtgtaact gatatcgcca tttttccaaa agtgattttt
gggcatacgc 1980

gatatctggc gatagcgctt atatcgttta cgggggatgg cgatagacga
ctttggtgac 2040

ttgggcgatt ctgtgtgtcg caaatatcgc agtttcgata taggtgacag
acgatatgag 2100

gctatatcgc cgatagaggc gacatcaagc tggcacatgg ccaatgcata
tcgatctata 2160

cattgaatca atattggcca ttagccatat tattcattgg ttatatagca
taaatcaata 2220

ttggctattg gccattgcat acgttgtatc catatcataa tatgtacatt
tatattggct 2280

catgtccaac attaccgcca tgttgacatt gattattgac tagttattaa
tagtaatcaa 2340

ttacggggtc attagttcat agcccatata tggagttccg cgttacataa
cttacggtaa 2400

atggcccgcc tggctgaccg cccaacgacc cccgcccatt gacgtcaata
atgacgtatg 2460

ttcccatagt aacgccaata gggactttcc attgacgtca atgggtggag
tatttacggt 2520

aaactgccca cttggcagta catcaagtgt atcatatgcc aagtacgccc
cctattgacg 2580

tcaatgacgg taaatggccc gcctggcatt atgcccagta catgacctta
tgggactttc 2640

ctacttggca gtacatctac gtattagtca tcgctattac catggtgatg
cggttttggc 2700

agtacatcaa tgggcgtgga tagcggtttg actcacgggg atttccaagt
ctccacccca 2760

ttgacgtcaa tgggagtttg ttttggcacc aaaatcaacg ggactttcca
aaatgtcgta 2820

acaactccgc cccattgacg caaatgggcg gtaggcgtgt acggtgggag
gtctatataa 2880

gcagagctcg tttagtgaac cgtcagatcg cctggagacg ccatccacgc
tgttttgacc 2940

tccatagaag acaccgggac cgatccagcc tccgcggccg ggaacggtgc
attggaacgc 3000

ggattccccg tgccaagagt gacgtaagta ccgcctatag agtctatagg
cccacccccct 3060

tggcttctta tgcatgctat actgtttttg gcttggggtc tatacacccc
cgcttcctca 3120

tgttataggt gatggtatag cttagcctat aggtgtgggt tattgaccat
tattgaccac 3180

tcccctattg gtgacgatac tttccattac taatccataa catggctctt
tgccacaact 3240

ctctttattg gctatatgcc aatacactgt ccttcagaga ctgacacgga
ctctgtattt 3300

ttacaggatg gggtctcatt tattatttac aaattcacat atacaacacc
accgtcccca 3360

gtgcccgcag tttttattaa acataacgtg ggatctccac gcgaatctcg
ggtacgtgtt 3420

ccggacatgg gctcttctcc ggtagcggcg gagcttctac atccgagccc
tgctcccatg 3480

cctccagcga ctcatggtcg ctcggcagct ccttgctcct aacagtggag
gccagactta 3540

ggcacagcac gatgcccacc accaccagtg tgccgcacaa ggccgtggcg
gtagggtatg 3600

tgtctgaaaa tgagctcggg gagcgggctt gcaccgctga cgcatttgga
agacttaagg 3660

cagcggcaga agaagatgca ggcagctgag ttgttgtgtt ctgataagag
tcagaggtaa 3720

ctcccgttgc ggtgctgtta acggtggagg gcagtgtagt ctgagcagta
ctcgttgctg 3780

ccgcgcgcgc caccagacat aatagctgac agactaacag actgttcctt
tccatgggtc 3840

ttttctgcag tcaccgtcct tgacacgaag cttgccgcca ccatggattg
gacttggaga 3900

atactgtttc ttgtagcagc cgcaacaggt aaggggctgc caaatcccag
tgaggaggaa 3960

gggatcgaag gtgaccatcg aagccagtca agggggcgga ccgcttccat

ccactcctgt 4020

gtcttctcta caggtgttca cagtgatatt cagatgactc agagtccatc
cagcatgtca 4080

gtctccgtgg gagatagggt gacgataacc tgtcattcaa gccaagacat
caactccaat 4140

attggatggc tccaacagaa gcctggtaag tccttcaaag gactaatcta
tcacggaaca 4200

aacttggacg acggcgtgcc atcgagattt tcagggtctg gcagcgggac
cgactataca 4260

ctgaccatct ctagcttaca accagaggac tttgccacat actactgcgt
ccagtacgct 4320

cagttcccct ggacattcgg cggcggcaca aaactggaaa tcaaacgtga
gtagcggtcc 4380

gttaattaaa gatccttcta aactctgagg gggtcggatg acgtggccat
tgttacttaa 4440

acaccatcct gtttgcttct ttcctcagga accgtcgcag ctccctccgt
gttcatcttc 4500

cccccatccg acgagcaact gaagtcaggc acagcctccg tggtgtgcct
ccttaataac 4560

ttttacccaa gagaggccaa agtccagtgg aaagtggaca acgcactaca
gagcgggaac 4620

tctcaggaaa gcgtgacaga gcaggactca aaagattcaa catacagcct
atcttctacc 4680

ctgacactgt caaaagctga ttatgaaaag cacaaagtat atgcctgtga
agtaactcat 4740

cagggactca gcagccctgt cactaaaagt tttaatagag gcgaatgctg
ataagcggcc 4800

gtgcggacga ccgaattcat tgatcataat cagccatacc acatttgtag
aggttttact 4860

tgctttaaaa aacctcccac acctcccccc gaacctgaaa cataaaatga
atgcaattgt 4920

tgttgttaac ttgtttattg cagcttataa tggttacaaa taaagcaata
gcatcacaaa 4980

tttcacaaat aaagcatttt tttcactgca ttctagttgt ggtttgtcca
aactcatcaa 5040

tgtatcttat catgtctgga tcctctacgc cggacgcatc gtggccggca
tcaccggcgc 5100

cacaggtgcg gttgctggcg cctatatcgc cgacatcacc gatggggaag
atcgggctcg 5160

ccacttcggg ctcatgagcg cttgtttcgg cgtgggtatg gtggcaggcc
ccgtggccgg 5220

gggactgttg ggcgccatct ccttgcatgc accattcctt gcggcggcgg
tgctcaacgg 5280

cctcaaccta ctactgggct gcttcctaat gcaggagtcg cataagggag
agcgtcgacc 5340

tcgggccgcg ttgctggcgt ttttccatag gctccgcccc cctgacgagc
atcacaaaaa 5400

tcgacgctca agtcagaggt ggcgaaaccc gacaggacta taaagatacc
aggcgtttcc 5460

ccctggaagc tccctcgtgc gctctcctgt tccgaccctg ccgcttaccg
gatacctgtc 5520

cgcctttctc ccttcgggaa gcgtggcgct ttctcatagc tcacgctgta
ggtatctcag 5580

ttcggtgtag gtcgttcgct ccaagctggg ctgtgtgcac gaacccccg
ttcagcccga 5640

ccgctgcgcc ttatccggta actatcgtct tgagtccaac ccggtaagac
acgacttatc 5700

gccactggca gcagccactg gtaacaggat tagcagagcg aggtatgtag
gcggtgctac 5760

agagttcttg aagtggtggc ctaactacgg ctacactaga agaacagtat
ttggtatctg 5820

cgctctgctg aagccagtta ccttcggaaa aagagttggt agctcttgat
ccggcaaaca 5880

aaccaccgct ggtagcggtg gtttttttgt ttgcaagcag cagattacgc
gcagaaaaaa 5940

aggatctcaa gaagatcctt tgatcttttc tacggggtct gacgctcagt
ggaacgaaaa 6000

ctcacgttaa gggattttgg tcatgagatt atcaaaaagg atcttcacct
agatcctttt 6060

aaattaaaaa tgaagtttta aatcaatcta aagtatatat gagtaaactt
ggtctgacag 6120

ttaccaatgc ttaatcagtg aggcacctat ctcagcgatc tgtctatttc
gttcatccat 6180

agttgcctga ctccccgtcg tgtagataac tacgatacgg gagggcttac
catctggccc 6240

cagtgctgca atgataccgc gagacccacg ctcaccggct ccagatttat
cagcaataaa 6300

ccagccagcc ggaagggccg agcgcagaag tggtcctgca actttatccg
cctccatcca 6360

gtctattaat tgttgccggg aagctagagt aagtagttcg ccagttaata
gtttgcgcaa 6420

cgttgttgcc attgctacag gcatcgtggt gtcacgctcg tcgtttggta
tggcttcatt 6480

cagctccggt tcccaacgat caaggcgagt tacatgatcc cccatgttgt
gcaaaaaagc 6540

ggttagctcc ttcggtcctc cgatcgttgt cagaagtaag ttggccgcag
tgttatcact 6600

catggttatg gcagcactgc ataattctct tactgtcatg ccatccgtaa
gatgcttttc 6660

tgtgactggt gagtactcaa ccaagtcatt ctgagaatag tgtatgcggc
gaccgagttg 6720

ctcttgcccg gcgtcaatac gggataatac cgcgccacat agcagaactt
taaaagtgct 6780

catcattgga aaacgttctt cggggcgaaa actctcaagg atcttaccgc
tgttgagatc 6840

cagttcgatg taacccactc gtgcacccaa ctgatcttca gcatctttta
ctttcaccag 6900

cgtttctggg tgagcaaaaa caggaaggca aaatgccgca aaaaagggaa
taagggcgac 6960

acggaaatgt tgaatactca tactcttcct ttttcaatat tattgaagca
tttatcaggg 7020

ttattgtctc atgagcggat acatatttga atgtatttag aaaaataaac
aaataggggt 7080

tccgcgcaca tttccccgaa aagtgccacc tgacgtctaa gaaaccatta
ttatcatgac 7140

attaacctat aaaaataggc gtatcacgag gccctgatgg ctctttgcgg
cacccatcgt 7200

tcgtaatgtt ccgtggcacc gaggacaacc ctcaagagaa aatgtaatca
cactggctca 7260

ccttcgggtg ggcctttctg cgtttataag gagacacttt atgtttaaga
aggttggtaa 7320

attccttgcg gctttggcag ccaagctaga tccggctgtg gaatgtgtgt

cagttagggt 7380

gtggaaagtc cccaggctcc ccagcaggca gaagtatgca aagcatgcat
ctcaattagt 7440

cagcaaccag gtgtggaaag tccccaggct ccccagcagg cagaagtatg
caaagcatgc 7500

atctcaatta gtcagcaacc atagtcccgc ccctaactcc gcccatcccg
cccctaactc 7560

cgcccagttc cgcccattct ccgccccatg gctgactaat ttttttatt
tatgcagagg 7620

ccgaggccgc ctcggcctct gagctattcc agaagtagtg aggaggcttt
tttggaggcc 7680

taggcttttg caaaaagcta gcttggggcc accgctcaga gcaccttcca
ccatggccac 7740

ctcagcaagt tcccacttga acaaaaacat caagcaaatg tacttgtgcc
tgccccaggg 7800

tgagaaagtc caagccatgt atatctgggt tgatggtact ggagaaggac
tgcgctgcaa 7860

aacccgcacc ctggactgtg agcccaagtg tgtagaagag ttacctgagt
ggaattttga 7920

tggctctagt acctttcagt ctgagggctc caacagtgac atgtatctca
gccctgttgc 7980

catgtttcgg gacccttcc gcagagatcc caacaagctg gtgttctgtg
aagttttcaa 8040

gtacaaccgg aagcctgcag agaccaattt aaggcactcg tgtaaacgga
taatggacat 8100

ggtgagcaac cagcacccct ggtttggaat ggaacaggag tatactctga
tgggaacaga 8160

tgggcaccct tttggttggc cttccaatgg ctttcctggg ccccaaggtc
cgtattactg 8220

tggtgtgggc gcagacaaag cctatggcag ggatatcgtg gaggctcact
accgcgcctg 8280

cttgtatgct ggggtcaaga ttacaggaac aaatgctgag gtcatgcctg
cccagtggga 8340

actccaaata ggaccctgtg aaggaatccg catgggagat catctctggg
tggcccgttt 8400

catcttgcat cgagtatgtg aagactttgg ggtaatagca acctttgacc
ccaagcccat 8460

tcctgggaac tggaatggtg caggctgcca taccaacttt agcaccaagg
ccatgcggga 8520

ggagaatggt ctgaagcaca tcgaggaggc catcgagaaa ctaagcaagc
ggcaccggta 8580

ccacattcga gcctacgatc ccaaggggg cctggacaat gcccgtggtc
tgactgggtt 8640

ccacgaaacg tccaacatca acgacttttc tgctggtgtc gccaatcgca
gtgccagcat 8700

ccgcattccc cggactgtcg gccaggagaa gaaaggttac tttgaagacc
gcggcccctc 8760

tgccaattgt gacccctttg cagtgacaga agccatcgtc cgcacatgcc
ttctcaatga 8820

gactggcgac gagcccttcc aatacaaaaa ctaattagac tttgagtgat
cttgagcctt 8880

tcctagttca tcccaccccg ccccagagag atctttgtga aggaacctta
cttctgtggt 8940

gtgacataat tggacaaact acctacagag atttaaagct ctaaggtaaa
tataaaattt 9000

ttaagtgtat aatgtgttaa actactgatt ctaattgttt gtgtatttta
gattccaacc 9060

tatggaactg atgaatggga gcagtggtgg aatgccttta atgaggaaaa
cctgttttgc 9120

tcagaagaaa tgccatctag tgatgatgag gctactgctg actctcaaca
ttctactcct 9180

ccaaaaaaga agagaaaggt agaagacccc aaggactttc cttcagaatt
gctaagtttt 9240

ttgagtcatg ctgtgtttag taatagaact cttgcttgct ttgctattta
caccacaaag 9300

gaaaaagctg cactgctata caagaaaatt atggaaaaat attctgtaac
ctttataagt 9360

aggcataaca gttataatca taacatactg ttttttctta ctccacacag
gcatagagtg 9420

tctgctatta ataactatgc tcaaaaattg tgtaccttta gctttttaat
ttgtaaaggg 9480

gttaataagg aatatttgat gtatagtgcc ttgactagag atcataatca
gccataccac 9540

atttgtagag gttttacttg ctttaaaaaa cctcccacac ctccccctga
acctgaaaca 9600

taaaatgaat gcaattgttg ttgttaactt gtttattgca gcttataatg
gttacaaata 9660

aagcaatagc atcacaaatt tcacaaataa agcatttttt tcactgcatt
ctagttgtgg 9720

tttgtccaaa ctcatcaatg tatcttatca tgtctggatc tagcttcgtg
tcaaggacgg 9780

tgactgcagt gaataataaa atgtgtgttt gtccgaaata cgcgttttga
gatttctgtc 9840

gccgactaaa ttcatgtcgc gcgatagtgg tgtttatcgc cgatagagat
ggcgatattg 9900

gaaaaatcga tatttgaaaa tatggcatat tgaaaatgtc gccgatgtga
gtttctgtgt 9960

aactgatatc gccatttttc caaaagtgat ttttgggcat acgcgatatc
tggcgatagc 10020

gcttatatcg tttacggggg atggcgatag acgactttgg tgacttgggc
gattctgtgt 10080

gtcgcaaata tcgcagtttc gatataggtg acagacgata tgaggctata
tcgccgatag 10140

aggcgacatc aagctggcac atggccaatg catatcgatc tatacattga
atcaatattg 10200

gccattagcc atattattca ttggttatat agcataaatc aatattggct
attggccatt 10260

gcatacgttg tatccatatc ataatatgta catttatatt ggctcatgtc
caacattacc 10320

gccatgttga cattgattat tgactagtta ttaatagtaa tcaattacgg
ggtcattagt 10380

tcatagccca tatatggagt tccgcgttac ataacttacg gtaaatggcc
cgcctggctg 10440

accgcccaac gacccccgcc cattgacgtc aataatgacg tatgttccca
tagtaacgcc 10500

aatagggact ttccattgac gtcaatgggt ggagtattta cggtaaactg
cccacttggc 10560

agtacatcaa gtgtatcata tgccaagtac gccccctatt gacgtcaatg
acggtaaatg 10620

gcccgcctgg cattatgccc agtacatgac cttatgggac tttcctactt
ggcagtacat 10680

ctacgtatta gtcatcgcta ttaccatggt gatgcggttt tggcagtaca

tcaatgggcg 10740

tggatagcgg tttgactcac ggggatttcc aagtctccac cccattgacg
tcaatgggag 10800

tttgttttgg caccaaaatc aacgggactt tccaaaatgt cgtaacaact
ccgccccatt 10860

gacgcaaatg ggcggtaggc gtgtacggtg ggaggtctat ataagcagag
ctcgtttagt 10920

gaaccgtcag atcgcctgga gacgccatcc acgctgtttt gacctccata
gaagacaccg 10980

ggaccgatcc agcctccgcg gccgggaacg gtgcattgga acgcggattc
cccgtgccaa 11040

gagtgacgta agtaccgcct atagagtcta taggcccacc cccttggctt
cttatgcatg 11100

ctatactgtt tttggcttgg ggtctataca cccccgcttc ctcatgttat
aggtgatggt 11160

atagcttagc ctataggtgt gggttattga ccattattga ccactcccct
attggtgacg 11220

atactttcca ttactaatcc ataacatggc tctttgccac aactctcttt
attggctata 11280

tgccaataca ctgtccttca gagactgaca cggactctgt atttttacag
gatggggtct 11340

catttattat ttacaaattc acatatacaa caccaccgtc cccagtgccc
gcagttttta 11400

ttaaacataa cgtgggatct ccacgcgaat ctcgggtacg tgttccggac
atgggctctt 11460

ctccggtagc ggcggagctt ctacatccga gccctgctcc catgcctcca
gcgactcatg 11520

gtcgctcggc agctccttgc tcctaacagt ggaggccaga cttaggcaca
gcacgatgcc 11580

caccaccacc agtgtgccgc acaaggccgt ggcggtaggg tatgtgtctg
aaaatgagct 11640

cggggagcgg gcttgcaccg ctgacgcatt tggaagactt aaggcagcgg
cagaagaaga 11700

tgcaggcagc tgagttgttg tgttctgata agagtcagag gtaactcccg
ttgcggtgct 11760

gttaacggtg gagggcagtg tagtctgagc agtactcgtt gctgccgcgc
gcgccaccag 11820

acataatagc tgacagacta acagactgtt cctttccatg ggtcttttct
gcagtcaccg   11880

tccttgacac g
11891

<210> 42
<211> 135
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 42

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

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

Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser
Ile
        35   40   45

Ser Ser Asp Phe Ala Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys
Gly
    50   55   60

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

Pro Ser Leu Lys Ser Arg Ile Thr Ile Ser Arg Asp Thr Ser Lys
Asn
                85   90   95

Gln Phe Phe Leu Lys Leu Asn Ser Val Thr Ala Ala Asp Thr Ala
Thr
            100   105   110

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

Thr Leu Val Thr Val Ser Ser
130 135

<210> 43
<211> 330
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 43

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

Cys 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> 44
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 44

Ser Asp Phe Ala Trp Asn
1 5

<210> 45
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 45

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

<210> 46
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 46

Val Thr Ala Gly Arg Gly Phe Pro Tyr
1 5

<210> 47
<211> 127
<212> PRT

<213> Artificial Sequence

<220>
<223> synthetic

<400> 47

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

Val His Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Met Ser Val
20 25 30

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

Asn Ser Asn Ile Gly Trp Leu Gln Gln Lys Pro Gly Lys Ser Phe Lys
50 55 60

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

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

Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Val Gln Tyr Ala Gln
100 105 110

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

<210> 48
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 48

Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
Gln
1 5 10 15

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

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

Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
Thr
50 55 60

Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
Lys
65 70 75 80

His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
Pro
85 90 95

Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
100 105

<210> 49
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 49

His Ser Ser Gln Asp Ile Asn Ser Asn Ile Gly
1 5 10

<210> 50
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 50

His Gly Thr Asn Leu Asp Asp
1 5

<210> 51
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 51

Val Gln Tyr Ala Gln Phe Pro Trp Thr
1 5

<210> 52
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 52
gagaagcttg ccgccaccat ggattggacc tggcgcattc
40

<210> 53
<211> 79
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 53
cccttcctcc tcactgggat ttggcagccc cttacctgtg gcggctgcta
ccagaaagag 60

aatgcgccag gtccaatcc
79

<210> 54
<211> 79
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 54
cccagtgagg aggaagggat cgaaggtcac catcgaagcc agtcaagggg
gcttccatcc 60

actcctgtgt cttctctac
79

<210> 55
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 55
gactcggctt gacaagccca ggtccactct cttggagctg cacctggctg
tggacacctg 60

tagagaagac acaggagtgg
80

<210> 56
<211> 84
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 56
gggcttgtca agccgagtca aactttgtcc ctaacatgta ctgtgtccgg
atactctatc 60

tcatcagatt ttgcgtggaa ttgg
84

<210> 57
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 57
cccagagtat gatatgtagc ccatccattc taaacctttc cctggtggct
gccttatcca 60

attccacgca aaatctgatg
80

<210> 58
<211> 79
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 58
gggctacata tcatactctg ggaacaccag atatcaaccc tctctgaaaa
gccggatcac 60

aatcactagg gacacgtcg
79

<210> 59
<211> 83
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 59
gcagtaatat gttgctgtgt ctggggctgt aacggagttc agctgcagga
agaactggct 60

cttcgacgtg tccctagtga ttg
83

<210> 60
<211> 81
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 60
ccagacacag caacatatta ctgcgtaacc gctggcagag gcttccccta
ttggggacag 60

ggcaccctag tgacagtgag c
81

<210> 61
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 61
cacggatcca tcttaccgct gctcactgtc actagggtg
39

<210> 62
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 62
gagaagcttg ccgccaccat ggattg
26

<210> 63
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 63
ctgggatttg gcagcccctt acctgttgcg gctgctacaa gaaacagtat
tctccaagtc 60

caatccatgg tggcggcaag
80

<210> 64
<211> 78
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 64
ggggctgcca aatcccagtg aggaggaagg gatcgaaggt gaccatcgaa
gccagtcaag 60

ggggcttcca tccactcc
78

<210> 65
<211> 77
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 65
catgctggat ggactctgag tcatctgaat atcactgtga acacctgtag
agaagacaca   60

ggagtggatg gaagccc
77

<210> 66
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 66
ctcagagtcc atccagcatg tcagtctccg tgggagatag ggtgacgata
acctgtcatt   60

caagccaaga catcaactcc
80

<210> 67
<211> 82
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 67
gttccgtgat agattagtcc tttgaaggac ttaccaggct tctgttggag
ccatccaata   60

ttggagttga tgtcttggct tg
82

<210> 68
<211> 84
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 68
caaaggacta atctatcacg gaacaaactt ggacgacggc gtgccatcga
gattttcagg   60

gtctggcagc gggaccgact atac

84

<210> 69
<211> 76
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 69
gtgctggacg cagtagtatg tggcaaagtc ttctggctct aagctagaga
tggtcagtgt 60

atagtcggtc ccgctg
76

<210> 70
<211> 79
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 70
catactactg cgtccagcac gctcagttcc cctggacatt cggcggcggc
acaaaactgg 60

aaatcaaacg tgagtaggg
79

<210> 71
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 71
ctcggatccc tactcacgtt tgatttcc
28

<210> 72
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 72
gacggatcct tctaaactct gaggggtcg gatgacg
37

<210> 73
<211> 78
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 73
ggagctgcga cggttcctga ggaaagaagc aaacaggatg gtgtttaagt
aacaatggcc 60

acgtcatccg acccccctc
78

<210> 74
<211> 78
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 74
ggaaccgtcg cagctccctc cgtgttcatc ttcccccccat ccgacgagca
actgaagtca 60

ggcacagcct ccgtggtg
78

<210> 75
<211> 78
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 75
gtgcgttgtc cactttccac tggactttgg cctctcttgg gtaaaagtta
ttaaggaggc 60

acaccacgga ggctgtgc
78

<210> 76
<211> 83
<212> DNA

<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 76
gtggaaagtg gacaacgcac tacagagcgg gaactctcag gaaagcgtga
cagagcagga 60

ctcaaaagat tcaacataca gcc
83

<210> 77
<211> 88
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 77
cttcacaggc atataccttg tgcttttcat aatcagcttt tgacagtgtc
agggtagaag 60

ataggctgta tgttgaatct tttgagtc
88

<210> 78
<211> 71
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 78
gcacaaggta tatgcctgtg aagtaactca tcagggactc agcagccctg
tcactaaaag 60

ttttaataga g
71

<210> 79
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 79
cctgcggccg cttatcagca ttcgcctcta ttaaaacttt tggtgagagg g
51

<210> 80
<211> 1128
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 80
aagatggcac accgtggccg gcctctgcgc ctgggcccag ctctgtccca
caccgcggtc 60

acatggcacc ttttctcttc cagcctccac caagggcccc agcgtgttcc
ccctggcccc 120

cagcagcaag agcaccagcg gcggcacagc cgccctgggc tgcctggtga
aggactactt 180

ccccgagccc gtgaccgtga gctggaacag cggagccctg acctccggcg
tgcacacctt 240

ccccgccgtg ctgcagagca gcggcctgta cagcctgagc agcgtggtga
ccgtgcccag 300

cagcagcctg ggcacccaga cctacatctg caacgtgaac cacaagccca
gcaacaccaa 360

ggtggacaag aaggtggagc ccaagagctg cgacaagacc cacacctgcc
ccccctgccc 420

agccccagag ctgctgggcg gaccctccgt gttcctgttc ccccccaagc
ccaaggacac 480

cctgatgatc agcaggaccc ccgaggtgac ctgcgtggtg gtggacgtga
gccacgagga 540

cccagaggtg aagttcaatt ggtatgtgga cggcgtggag gtgcacaacg
ccaagaccaa 600

gcccagagaa gagcagtaca acagcaccta cagggtggtg tccgtgctga
ccgtgctgca 660

ccaggactgg ctgaacggca aggaatacaa atgcaaggtc tccaacaagg
ccctgccagc 720

ccccatcgaa aagaccatca gcaaggccaa gggccagcca cgggagcccc
aggtgtacac 780

cctgcccccc tcccgggacg agtgcaccaa gaaccaggtg tccctgacct
gtctggtgaa 840

gggcttctac cccagcgaca tcgccgtgga gtgggagagc aacggccagc
ccgagaacaa 900

ctacaagacc acccccccag tgctggacag cgacggcagc ttcttcctgt
acagcaagct 960

gaccgtggac aagagcaggt ggcagcaggg caacgtgttc agctgcagcg
tgatgcacga 1020

ggccctgcac aaccactaca cccagaagag cctgagcctg tcccccggca
agtgatgacg 1080

acgcggccgt gcggacgacc gaattcattg atcataatca gccatacc
1128

<210> 81
<211> 465
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 81

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

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

Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser
Ile
35 40 45

Ser Ser Asp Phe Ala Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys
Gly
50 55 60

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

Pro Ser Leu Lys Ser Arg Ile Thr Ile Ser Arg Asp Thr Ser Lys
Asn
85 90 95

Gln Phe Phe Leu Lys Leu Asn Ser Val Thr Ala Ala Asp Thr Ala
Thr
100 105 110

```
Tyr Tyr Cys Val Thr Ala Gly Arg Gly Phe Pro Tyr Trp Gly Gln
Gly
        115                 120                 125

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

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
Leu
145                 150                 155
160

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
Trp
                165                 170                 175

Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
Leu
            180                 185                 190

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
Ser
        195                 200                 205

Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
Pro
    210                 215                 220

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

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
Pro
                245                 250                 255

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
Ser
            260                 265                 270

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
Asp
```

275 280 285

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
290 295 300

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
305 310 315 320

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
325 330 335

Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
340 345 350

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
355 360 365

Leu Pro Pro Ser Arg Asp Glu Cys Thr Lys Asn Gln Val Ser Leu Thr
370 375 380

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
385 390 395 400

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
405 410 415

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
420 425 430

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
435 440 445

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro

Gly
450 455 460

Lys
465

<210> 82
<211> 209
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 82

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

Val His Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Met Ser
Val
20 25 30

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

Asn Ser Asn Ile Gly Trp Leu Gln Gln Lys Pro Gly Lys Ser Phe
Lys
50 55 60

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

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

Leu Glu Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Val Gln His Ala
Gln
100 105 110

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

Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
Leu
    130   135   140

Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
Pro
145   150   155
160

Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
Gly
                165   170   175

Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
Tyr
            180   185   190

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

Lys

<210> 83
<211> 233
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 83

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

Val His Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Met Ser
Val
            20   25   30

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

```
Asn Ser Asn Ile Gly Trp Leu Gln Gln Lys Pro Gly Lys Ser Phe
Lys
    50                  55                  60

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

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

Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Val Gln Tyr Ala
Gln
            100                 105                 110

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

Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
Leu
    130                 135                 140

Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
Pro
145                 150                 155
160

Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
Gly
                165                 170                 175

Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
Tyr
            180                 185                 190

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

Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
Val
    210                 215                 220
```

Thr Lys Ser Phe Asn Arg Gly Glu Cys
225 230

<210> 84
<211> 7
<212> PRT
<213> Mus musculus

<400> 84

Cys Val Gln His Ala Gln Phe
1 5

<210> 85
<211> 7
<212> PRT
<213> Mus musculus

<400> 85

Cys Val Gln Tyr Ala Gln Phe
1 5

<210> 86
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 86
ccacatacta ctgcgtccag tacgctcagt tcccctggac
40

<210> 87
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 87
ctggacgcag tagtatgtgg
20

<210> 88
<211> 26
<212> DNA

<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 88
gagaagcttg ccgccaccat ggattg
26

<210> 89
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 89
cactgggtga ctggcttcga tggtgacc
28

<210> 90
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 90
ggtcaccatc gaagccagtc acccagtgaa gggggcttcc atccactcc
49

<210> 91
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 91
ccaagatctg gccggccacg gtgtgccatc ttaccgctgc tcac
44

<210> 92
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 92
gagaagcttg ccgccaccat gg
22

<210> 93
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 93
cggtccgccc ccttgactgg cttcg
25

<210> 94
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 94
cgaagccagt caaggggggcg gaccgcttcc atccactcct gtgtc
45

<210> 95
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 95
ccaagatctt taattaacgg accgctactc acgtttgatt tccagttttg
50

<210> 96
<211> 7
<212> PRT
<213> Mus musculus

<400> 96

Ser Val Thr Ile Glu Asp Thr
1 5

<210> 97
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 97

Ser Val Thr Ala Pro Asp Thr
1 5

<210> 98
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 98

Ser Val Thr Ala Ala Asp Thr
1 5

<210> 99
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 99
ctgcagctga actccgttac agccgcagac acagcaacat attactgcg
49

<210> 100
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 100
cgcagtaata tgttgctgtg tctgcggctg taacggagtt cagctgcag
49

<210> 101
<211> 12

<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 101

Thr Arg Asp Thr Ser Lys Ser Gln Phe Phe Leu Gln
1 5 10

<210> 102
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 102

Ser Arg Asp Thr Ser Lys Asn Gln Phe Phe Leu Lys
1 5 10

<210> 103
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 103
ggtcaccatc gaagccagtc acccagtgaa gggggcttcc atccactcc
49

<210> 104
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 104
gattcttcga cgtgtccctt gagattgtga tccggctttt cagag
45

<210> 105
<211> 55
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 105
caagggacac gtcgaagaat cagttcttcc tgaaactgaa ctccgttaca gccgc
55

<210> 106
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 106
ccaagatctg gccggccacg gtgtgccatc ttaccgctgc tcac
44

<210> 107
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 107

Ser Ser Leu Glu Pro Glu
1 5

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

<220>
<223> synthetic

<400> 108

Ser Ser Leu Gln Pro Glu
1 5

<210> 109
<211> 45
<212> DNA
<213> Artificial Sequence

<220>

<223> synthetic primer

<400> 109
cgaagccagt caaggggcg gaccgcttcc atccactcct gtgtc
45

<210> 110
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 110
ctctggttgt aagctagaga tggtcagtgt atag
34

<210> 111
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 111
ccatctctag cttacaacca gaggactttg ccacatacta ctgcg
45

<210> 112
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 112
ccaagatctt taattaacgg accgctactc acgtttgatt tccagttttg
50

<210> 113
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 113

Val Tyr Ala Cys Glu Val Thr His
1 5

<210> 114
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 114
ggcggcacaa aactggaaat c
21

<210> 115
<211> 59
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 115
gatgagttac ttcacaggca tatactttgt gcttttcata atcagctttt
gacagtgtc 59

<210> 116
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 116
agtatatgcc tgtgaagtaa ctcatc
26

<210> 117
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 117
gccacgatgc gtccggc
17

<210> 118
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 118
gcacttgatg taattctcct tgg
23

<210> 119
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 119
gaagtagtcc ttgaccagg
19

<210> 120
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 120
gaagatgaag acagatggtg cag
23

<210> 121
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 121
cggtggaggg cagtgtagtc
20

<210> 122
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 122
gtgatgctat tgctttattt g
21

<210> 123
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 123
catacctacc agttctgcgc c
21

<210> 124
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 124
ccatcctgtt tgcttctttc c
21

<210> 125
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 125
gacagggctg ctgagtc
17

<210> 126
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 126
gtgcagctcc aagagagtgg ac
22

<210> 127
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic primer

<400> 127
cagagtccat ccagcatgtc
20

<210> 128
<211> 363
<212> DNA
<213> Mus musculus

<400> 128
ttagtcaagc tgcaggagtc tggacctagc ctggtgaaac cttctcagtc
tctgtccctc 60

acctgcactg tcactggcta ctcaatcacc agtgactatg cctggaactg
gatccggcag 120

tttccaggaa acaaactgga gtggatgggc tacataagtt acagtgctaa
cactaggtac 180

aacccatctc tcaaaagtcg aatctctatc actcgagaca catccaagaa
ccaattcttc 240

ctgcagttga attctgtgac tactgaggac acagccacat attactgtgc
aacggcggga 300

cgcgggtttc cttactgggg ccaagggact ctggtcactg tctctgcagc
caaaacgaca 360

ccc
363

<210> 129
<211> 116
<212> PRT
<213> Mus musculus

<400> 129

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

Ser Leu Ser Leu Thr Cys Thr Val Thr Gly Tyr Ser Ile Thr Ser
Asp
            20   25   30

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

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

Lys Ser Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn Gln Phe
Phe
65   70   75   80

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

Ala Thr Ala Gly Arg Gly Phe Pro Tyr Trp Gly Gln Gly Thr Leu
Val
            100   105   110

Thr Val Ser Ala
        115

<210> 130
<211> 6
<212> PRT
<213> Mus musculus

<400> 130

Ser Asp Tyr Ala Trp Asn
1   5

<210> 131
<211> 16
<212> PRT
<213> Mus musculus

<400> 131

Tyr Ile Ser Tyr Ser Ala Asn Thr Arg Tyr Asn Pro Ser Leu Lys
Ser

1 5 10 15

<210> 132
<211> 9
<212> PRT
<213> Mus musculus

<400> 132

Ala Thr Ala Gly Arg Gly Phe Pro Tyr
1 5

<210> 133
<211> 324
<212> DNA
<213> Mus musculus

<400> 133
gacattgtgc tgacccagtc tccatcctcc atgtctctat ctctgggaga
cacagtcagt 60

atcacttgcc attcaagtca ggacattaac agtaatatag ggtggttgca
gcagaaacca 120

gggaaatcat ttaagggcct gatctatcat ggaaccaact tggacgatgg
agttccatca 180

aggttcagtg gcagtggatc tggagccgat tattctctca ccatcagcag
cctggaatct 240

gaagattttg tagactatta ctgtgtacag tatggtcagt ttccgtggac
gttcggtgga 300

ggcaccaagc tggaaatcaa acgg
324

<210> 134
<211> 107
<212> PRT
<213> Mus musculus

<400> 134

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

Asp Thr Val Ser Ile Thr Cys His Ser Ser Gln Asp Ile Ser Asn
Ile
20 25 30

```
Gly Trp Leu Gln Gln Lys Pro Gly Lys Ser Phe Lys Gly Leu Ile
Tyr
        35                  40                  45


His Gly Thr Asn Leu Glu Asp Gly Val Pro Ser Arg Phe Ser Gly
Ser
    50                  55                  60


Gly Ser Gly Ala Asp Tyr Ser Leu Thr Ile Ser Ser Leu Glu Ser
Glu
65                  70                  75                  80


Asp Phe Val Asp Tyr Tyr Cys Val Gln Tyr Gly Gln Phe Pro Trp
Thr
                85                  90                  95


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


<210>  135
<211>  11
<212>  PRT
<213>  Mus musculus

<400>  135

His Ser Ser Gln Asp Ile Ser Ser Asn Ile Gly
1               5                   10


<210>  136
<211>  7
<212>  PRT
<213>  Mus musculus

<400>  136

His Gly Thr Asn Leu Glu Asp
1               5


<210>  137
<211>  10
<212>  PRT
<213>  Mus musculus

<400>  137

Cys Val Gln Tyr Gly Gln Phe Pro Trp Thr
1               5                   10
```

<210> 138
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 138

Cys Gly Ala Asp Ser Tyr Glu Met Glu Glu Asp Gly Val Arg Lys
Cys
1 5 10 15

<210> 139
<211> 7
<212> PRT
<213> Mus musculus

<400> 139

His Gly Thr Asn Leu Asp Asp
1 5

<210> 140
<211> 7
<212> PRT
<213> Mus musculus

<400> 140

His Gly Thr Asn Leu Asp Asp
1 5

<210> 141
<211> 7
<212> PRT
<213> Mus musculus

<400> 141

His Gly Thr Asn Leu Glu Asp
1 5

<210> 142
<211> 7
<212> PRT
<213> Mus musculus

<400> 142

His Gly Thr Asn Leu Asp Asp
1 5

<210> 143
<211> 11
<212> PRT
<213> Mus musculus

<400> 143

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

<210> 144
<211> 17
<212> PRT
<213> Mus musculus

<400> 144

Gly Tyr Ile Ser Tyr Ser Gly Asn Thr Arg Tyr Asn Pro Ser Leu
Lys
1 5 10 15

Ser

<210> 145
<211> 11
<212> PRT
<213> Mus musculus

<400> 145

Gly Tyr Ser Ile Thr Ser Asp Tyr Ala Trp Asn
1 5 10

<210> 146
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 146

Gly Tyr Ile Ser Tyr Ser Ala Asn Thr Arg Tyr Asn Pro Ser Leu
Lys
1 5 10 15

Ser

<210> 147
<211> 11
<212> PRT
<213> Mus musculus

<400> 147

Gly Tyr Ser Ile Thr Ser Asp Tyr Ala Trp Asn
1 5 10

<210> 148
<211> 17
<212> PRT
<213> Mus musculus

<400> 148

Gly Tyr Ile Ser Tyr Ser Ala Asn Thr Arg Tyr Asn Pro Ser Leu
Lys
1 5 10 15

Ser

<210> 149
<211> 11
<212> PRT
<213> Mus musculus

<400> 149

Gly Tyr Ser Ile Thr Ser Asp Tyr Ala Trp Asn
1 5 10

<210> 150
<211> 17
<212> PRT
<213> Mus musculus

<400> 150

Gly Tyr Ile Ser Tyr Ser Gly Asn Thr Arg Tyr Asn Pro Ser Leu
Arg
1 5 10 15

Ser

<210> 151
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is an amino acid residue having an uncharged polar R group

<400> 151

His Ser Ser Gln Asp Ile Xaa Ser Asn Ile Gly
1 5 10

<210> 152
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> Xaa is an amino acid residue having a charged polar R group

<400> 152

His Gly Thr Asn Leu Xaa Asp
1 5

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

<220>
<223> synthetic

<220>
<221> MISC_FEATURE

<222> (4)..(4)
<223> Xaa is selected from the group consisting of Ala, Gly, and an
amino acid residue which is conservatively substituted for Ala or
Gly

<400> 153

Val Gln Tyr Xaa Gln Phe Pro Trp Thr
1 5

<210> 154
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> Xaa is selected from the group consisting of Phe, Tyr, and an
amino acid residue which is conservatively substituted for Phe or
Tyr

<400> 154

Ser Asp Xaa Ala Trp Asn
1 5

<210> 155
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> Xaa is an amino acid residue having an uncharged polar R group

<400> 155

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

1 5 10 15

<210> 156
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> Xaa is selected from the group consisting of Gly, Ala, and an amino acid residue which is conservatively substituted for Gly or Ala

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> Xaa is selected from the group consisting of Gly, Ala, and an amino acid residue which is conservatively substituted for Gly or Ala

<400> 156

Tyr Ile Ser Tyr Ser Xaa Asn Thr Arg Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 157
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<220>
<221> MISC_FEATURE
<222> (15)..(15)
<223> Xaa is a basic amino acid residue

<400> 157

Tyr Ile Ser Tyr Ser Gly Asn Thr Arg Tyr Asn Pro Ser Leu Xaa Ser
1 5 10 15

<210> 158
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa is selected from the group consisting of Val, Ala, and an
amino acid residue which is conservatively substituted for Val or
Ala

<400> 158

Xaa Thr Ala Gly Arg Gly Phe Pro Tyr
1 5

<210> 159
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> Xaa is an amino acid residue having an uncharged polar R group

<400> 159

Tyr Ile Ser Tyr Ser Gly Asn Thr Arg Tyr Xaa Pro Ser Leu Lys Ser
1 5 10 15

<210> 160
<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic vector

<400> 160

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

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

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

Ile Asn Ser Asn Ile Gly Trp Leu Gln Gln Arg Pro Gly Lys Ser Phe
50 55 60

Lys Gly Leu Ile Tyr His Gly Thr Asn Leu Asp Asp Glu Val Pro Ser
65 70 75 80

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

Ser Leu Glu Ser Glu Asp Phe Ala Asp Tyr Tyr Cys Val Gln His Ala
100 105 110

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

<210> 161
<211> 134
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic vector

<400> 161

Met Arg Val Leu Ile Leu Leu Trp Leu Phe Thr Ala Phe Pro Gly Val
1 5 10 15

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

Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Thr Gly Tyr Ser Ile
Thr
        35   40   45

Ser Asp Phe Ala Trp Asn Trp Ile Arg Gln Phe Pro Gly Asn Lys
Leu
    50   55   60

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

Ser Leu Lys Ser Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn
Gln
                85   90   95

Phe Phe Leu Gln Leu Asn Ser Val Thr Ile Glu Asp Thr Ala Thr
Tyr
            100   105   110

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

Leu Val Thr Val Ser Ala
    130

<210> 162
<211> 11891
<212> DNA
<213> Artificial Sequence

<220>
<223> plasmid

<400> 162
ttcgaacggc ggtggtacct aacctggacc gcgtaagaga aagaccatcg
tcggcggtgt   60

ccattccccg acggtttagg gtcactcctc cttccctagc ttccagtggt
agcttcggtc   120

agtgggtcac ttcccccgaa ggtaggtgag gacacagaag agatgtccac

aggtgtcggt 180

ccacgtcgag gttctctcac ctggacccga acagttcggc tcagtttgaa
acagggattg 240

tacatgacac aggcctatga gatagagtag tctaaaacgc accttaacct
attccgtcgg 300

tggtcccttt ccaaatctta cctacccgat gtatagtatg agacccttgt
ggtctatagt 360

tggaagagac ttttcggcct agtgttagag ttccctgtgc agcttcttag
tcaagaagga 420

ctttgacttg aggcaatgtc ggcgtctgtg tcgttgtata atgacgcatt
ggcgaccgtc 480

tccgaagggg ataacccctg tcccgtggga tcactgtcac tcgtcgccat
tctaccgtgt 540

ggcaccggcc ggagacgcgg acccgggtcg agacagggtg tggcgccagt
gtaccgtgga 600

aaagagaagg tcggaggtgg ttcccggggt cgcacaaggg ggaccggggg
tcgtcgttct 660

cgtggtcgcc gccgtgtcgg cgggacccga cggaccactt cctgatgaag
gggctcgggc 720

actggcactc gaccttgtcg cctcgggact ggaggccgca cgtgtggaag
gggcggcacg 780

acgtctcgtc gccggacatg tcggactcgt cgcaccactg gcacgggtcg
tcgtcggacc 840

cgtgggtctg gatgtagacg ttgcacttgg tgttcgggtc gttgtggttc
cacctgttct 900

tccacctcgg gttctcgacg ctgttctggg tgtggacggg ggggacgggt
cggggtctcg 960

acgacccgcc tgggaggcac aaggacaagg gggggttcgg gttcctgtgg
gactactagt 1020

cgtcctgggg gctccactgg acgcaccacc acctgcactc ggtgctcctg
ggtctccact 1080

tcaagttaac catacacctg ccgcacctcc acgtgttgcg gttctggttc
gggtctcttc 1140

tcgtcatgtt gtcgtggatg tcccaccaca ggcacgactg gcacgacgtg
gtcctgaccg 1200

acttgccgtt ccttatgttt acgttccaga ggttgttccg ggacggtcgg
gggtagcttt 1260

tctggtagtc gttccggttc ccggtcggtg ccctcggggt ccacatgtgg
gacgggggga 1320

gggccctgct cacgtggttc ttggtccaca gggactggac agaccacttc
ccgaagatgg 1380

ggtcgctgta gcggcacctc accctctcgt tgccggtcgg gctcttgttg
atgttctggt 1440

ggggggggtca cgacctgtcg ctgccgtcga agaaggacat gtcgttcgac
tggcacctgt 1500

tctcgtccac cgtcgtcccg ttgcacaagt cgacgtcgca ctacgtgctc
cgggacgtgt 1560

tggtgatgtg ggtcttctcg gactcggaca gggggccgtt cactactgct
gcgccggcac 1620

gcctgctggc ttaagtaact agtattagtc ggtatggtgt aaacatctcc
aaaatgaacg 1680

aaatttttg gagggtgtgg agggggactt ggactttgta ttttacttac
gttaacaaca 1740

acaattgaac aaataacgtc gaatattacc aatgtttatt tcgttatcgt
agtgtttaaa 1800

gtgtttattt cgtaaaaaaa gtgacgtaag atcaacacca aacaggtttg
agtagttaca 1860

tagaatagta cagaccgccg gcggctataa acttttatac cgtataactt
ttacagcggc 1920

tacactcaaa gacacattga ctatagcggt aaaaaggttt tcactaaaaa
cccgtatgcg 1980

ctatagaccg ctatcgcgaa tatagcaaat gccccctacc gctatctgct
gaaaccactg 2040

aacccgctaa gacacacagc gtttatagcg tcaaagctat atccactgtc
tgctatactc 2100

cgatatagcg gctatctccg ctgtagttcg accgtgtacc ggttacgtat
agctagatat 2160

gtaacttagt tataaccggt aatcggtata ataagtaacc aatatatcgt
atttagttat 2220

aaccgataac cggtaacgta tgcaacatag gtatagtatt atacatgtaa
atataaccga 2280

gtacaggttg taatggcggt acaactgtaa ctaataactg atcaataatt
atcattagtt 2340

aatgccccag taatcaagta tcgggtatat acctcaaggc gcaatgtatt
gaatgccatt 2400

taccgggcgg accgactggc gggttgctgg gggcgggtaa ctgcagttat
tactgcatac 2460

aagggtatca ttgcggttat ccctgaaagg taactgcagt tacccacctc
ataaatgcca 2520

tttgacgggt gaaccgtcat gtagttcaca tagtatacgg ttcatgcggg
ggataactgc 2580

agttactgcc atttaccggg cggaccgtaa tacgggtcat gtactggaat
accctgaaag 2640

gatgaaccgt catgtagatg cataatcagt agcgataatg gtaccactac
gccaaaaccg 2700

tcatgtagtt acccgcacct atcgccaaac tgagtgcccc taaaggttca
gaggtggggt 2760

aactgcagtt accctcaaac aaaaccgtgg ttttagttgc cctgaaaggt
tttacagcat 2820

tgttgaggcg gggtaactgc gtttacccgc catccgcaca tgccaccctc
cagatatatt 2880

cgtctcgagc aaatcacttg gcagtctagc ggacctctgc ggtaggtgcg
acaaaactgg 2940

aggtatcttc tgtggccctg gctaggtcgg aggcgccggc ccttgccacg
taaccttgcg 3000

cctaaggggc acggttctca ctgcattcat ggcggatatc tcagatatcc
gggtggggga 3060

accgaagaat acgtacgata tgacaaaaac cgaaccccag atatgtgggg
gcgaaggagt 3120

acaatatcca ctaccatatc gaatcggata tccacaccca ataactggta
ataactggtg 3180

aggggataac cactgctatg aaaggtaatg attaggtatt gtaccgagaa
acggtgttga 3240

gagaaataac cgatatacgg ttatgtgaca ggaagtctct gactgtgcct
gagacataaa 3300

aatgtcctac cccagagtaa ataataaatg tttaagtgta tatgttgtgg
tggcaggggt 3360

cacgggcgtc aaaaataatt tgtattgcac cctagaggtg cgcttagagc
ccatgcacaa 3420

ggcctgtacc cgagaagagg ccatcgccgc ctcgaagatg taggctcggg
acgagggtac 3480

ggaggtcgct gagtaccagc gagccgtcga ggaacgagga ttgtcacctc

cggtctgaat 3540

ccgtgtcgtg ctacgggtgg tggtggtcac acggcgtgtt ccggcaccgc catcccatac 3600

acagactttt actcgagccc ctcgcccgaa cgtggcgact gcgtaaacct tctgaattcc 3660

gtcgccgtct tcttctacgt ccgtcgactc aacaacacaa gactattctc agtctccatt 3720

gagggcaacg ccacgacaat tgccacctcc cgtcacatca gactcgtcat gagcaacgac 3780

ggcgcgcgcg gtggtctgta ttatcgactg tctgattgtc tgacaaggaa aggtacccag 3840

aaaagacgtc agtggcagga actgtgcttc gaacggcggt ggtacctaac ctgaacctct 3900

tatgacaaag aacatcgtcg gcgttgtcca ttccccgacg gtttagggtc actcctcctt 3960

ccctagcttc cactggtagc ttcggtcagt tcccccgcct ggcgaaggta ggtgaggaca 4020

cagaagagat gtccacaagt gtcactataa gtctactgag tctcaggtag gtcgtacagt 4080

cagaggcacc ctctatccca ctgctattgg acagtaagtt cggttctgta gttgaggtta 4140

taacctaccg aggttgtctt cggaccattc aggaagtttc ctgattagat agtgccttgt 4200

ttgaacctgc tgccgcacgg tagctctaaa agtcccagac cgtcgccctg gctgatatgt 4260

gactggtaga gatcgaatgt tggtctcctg aaacggtgta tgatgacgca ggtcatgcga 4320

gtcaagggga cctgtaagcc gccgccgtgt tttgaccttt agtttgcact catcgccagg 4380

caattaattt ctaggaagat ttgagactcc cccagcctac tgcaccggta acaatgaatt 4440

tgtggtagga caaacgaaga aaggagtcct tggcagcgtc gagggaggca caagtagaag 4500

gggggtaggc tgctcgttga cttcagtccg tgtcggaggc accacacgga ggaattattg 4560

aaaatgggtt ctctccggtt tcaggtcacc tttcacctgt tgcgtgatgt ctcgcccttg 4620

agagtccttt cgcactgtct cgtcctgagt tttctaagtt gtatgtcgga
tagaagatgg 4680

gactgtgaca gttttcgact aatacttttc gtgtttcata tacggacact
tcattgagta 4740

gtccctgagt cgtcgggaca gtgattttca aaattatctc cgcttacgac
tattcgccgg 4800

cacgcctgct ggcttaagta actagtatta gtcggtatgg tgtaaacatc
tccaaaatga 4860

acgaaatttt ttggagggtg tggaggggga cttggacttt gtattttact
tacgttaaca 4920

acaacaattg aacaaataac gtcgaatatt accaatgttt atttcgttat
cgtagtgttt 4980

aaagtgttta tttcgtaaaa aaagtgacgt aagatcaaca ccaaacaggt
ttgagtagtt 5040

acatagaata gtacagacct aggagatgcg gcctgcgtag caccggccgt
agtggccgcg 5100

gtgtccacgc caacgaccgc ggatatagcg gctgtagtgg ctacccccttc
tagcccgagc 5160

ggtgaagccc gagtactcgc gaacaaagcc gcacccatac caccgtccgg
ggcaccggcc 5220

ccctgacaac ccgcggtaga ggaacgtacg tggtaaggaa cgccgccgcc
acgagttgcc 5280

ggagttggat gatgacccga cgaaggatta cgtcctcagc gtattccctc
tcgcagctgg 5340

agcccggcgc aacgaccgca aaaaggtatc cgaggcgggg ggactgctcg
tagtgttttt 5400

agctgcgagt tcagtctcca ccgctttggg ctgtcctgat atttctatgg
tccgcaaagg 5460

gggaccttcg agggagcacg cgagaggaca aggctgggac ggcgaatggc
ctatggacag 5520

gcggaaagag ggaagccctt cgcaccgcga aagagtatcg agtgcgacat
ccatagagtc 5580

aagccacatc cagcaagcga ggttcgaccc gacacacgtg cttgggggggc
aagtcgggct 5640

ggcgacgcgg aataggccat tgatagcaga actcaggttg ggccattctg
tgctgaatag 5700

cggtgaccgt cgtcggtgac cattgtccta atcgtctcgc tccatacatc
cgccacgatg 5760

tctcaagaac ttcaccaccg gattgatgcc gatgtgatct tcttgtcata
aaccatagac 5820

gcgagacgac ttcggtcaat ggaagccttt ttctcaacca tcgagaacta
ggccgtttgt 5880

ttggtggcga ccatcgccac caaaaaaaca aacgttcgtc gtctaatgcg
cgtctttttt 5940

tcctagagtt cttctaggaa actagaaaag atgccccaga ctgcgagtca
ccttgctttt 6000

gagtgcaatt ccctaaaacc agtactctaa tagttttcc tagaagtgga
tctaggaaaa 6060

tttaattttt acttcaaaat ttagttagat ttcatatata ctcatttgaa
ccagactgtc 6120

aatggttacg aattagtcac tccgtggata gagtcgctag acagataaag
caagtaggta 6180

tcaacggact gaggggcagc acatctattg atgctatgcc ctcccgaatg
gtagaccggg 6240

gtcacgacgt tactatggcg ctctgggtgc gagtggccga ggtctaaata
gtcgttattt 6300

ggtcggtcgg ccttcccggc tcgcgtcttc accaggacgt tgaaataggc
ggaggtaggt 6360

cagataatta acaacggccc ttcgatctca ttcatcaagc ggtcaattat
caaacgcgtt 6420

gcaacaacgg taacgatgtc cgtagcacca cagtgcgagc agcaaaccat
accgaagtaa 6480

gtcgaggcca agggttgcta gttccgctca atgtactagg gggtacaaca
cgtttttcg 6540

ccaatcgagg aagccaggag gctagcaaca gtcttcattc aaccggcgtc
acaatagtga 6600

gtaccaatac cgtcgtgacg tattaagaga atgacagtac ggtaggcatt
ctacgaaaag 6660

acactgacca ctcatgagtt ggttcagtaa gactcttatc acatacgccg
ctggctcaac 6720

gagaacgggc cgcagttatg ccctattatg gcgcggtgta tcgtcttgaa
attttcacga 6780

gtagtaacct tttgcaagaa gccccgcttt tgagagttcc tagaatggcg
acaactctag 6840

gtcaagctac attgggtgag cacgtgggtt gactagaagt cgtagaaaat

gaaagtggtc 6900

gcaaagaccc actcgttttt gtccttccgt tttacggcgt tttttccctt attcccgctg 6960

tgcctttaca acttatgagt atgagaagga aaaagttata ataacttcgt aaatagtccc 7020

aataacagag tactcgccta tgtataaact tacataaatc tttttatttg tttatcccca 7080

aggcgcgtgt aaaggggctt ttcacggtgg actgcagatt ctttggtaat aatagtactg 7140

taattggata tttttatccg catagtgctc cgggactacc gagaaacgcc gtgggtagca 7200

agcattacaa ggcaccgtgg ctcctgttgg gagttctctt ttacattagt gtgaccgagt 7260

ggaagcccac ccggaaagac gcaaatattc ctctgtgaaa tacaaattct tccaaccatt 7320

taaggaacgc cgaaaccgtc ggttcgatct aggccgacac cttacacaca gtcaatccca 7380

caccttcag gggtccgagg ggtcgtccgt cttcatacgt ttcgtacgta gagttaatca 7440

gtcgttggtc cacacctttc aggggtccga ggggtcgtcc gtcttcatac gtttcgtacg 7500

tagagttaat cagtcgttgg tatcagggcg gggattgagg cgggtagggc ggggattgag 7560

gcgggtcaag gcgggtaaga ggcggggtac cgactgatta aaaaaaataa atacgtctcc 7620

ggctccggcg gagccggaga ctcgataagg tcttcatcac tcctccgaaa aaacctccgg 7680

atccgaaaac gtttttcgat cgaaccccgg tggcgagtct cgtggaaggt ggtaccggtg 7740

gagtcgttca agggtgaact tgtttttgta gttcgtttac atgaacacgg acggggtccc 7800

actctttcag gttcggtaca tatagaccca actaccatga cctcttcctg acgcgacgtt 7860

ttgggcgtgg gacctgacac tcgggttcac acatcttctc aatggactca ccttaaaact 7920

accgagatca tggaaagtca gactcccgag gttgtcactg tacatagagt cgggacaacg 7980

gtacaaagcc ctggggaagg cgtctctagg gttgttcgac cacaagacac
ttcaaaagtt 8040

catgttggcc ttcggacgtc tctggttaaa ttccgtgagc acatttgcct
attacctgta 8100

ccactcgttg gtcgtgggga ccaaacctta ccttgtcctc atatgagact
acccttgtct 8160

acccgtggga aaaccaaccg gaaggttacc gaaaggaccc ggggttccag
gcataatgac 8220

accacacccg cgtctgtttc ggataccgtc cctatagcac ctccgagtga
tggcgcggac 8280

gaacatacga ccccagttct aatgtccttg tttacgactc cagtacggac
gggtcaccct 8340

tgaggtttat cctgggacac ttccttaggc gtaccctcta gtagagaccc
accgggcaaa 8400

gtagaacgta gctcatacac ttctgaaacc ccattatcgt tggaaactgg
ggttcgggta 8460

aggacccttg accttaccac gtccgacggt atggttgaaa tcgtggttcc
ggtacgccct 8520

cctcttacca gacttcgtgt agctcctccg gtagctcttt gattcgttcg
ccgtggccat 8580

ggtgtaagct cggatgctag ggttcccccc ggacctgtta cgggcaccag
actgacccaa 8640

ggtgctttgc aggttgtagt tgctgaaaag acgaccacag cggttagcgt
cacggtcgta 8700

ggcgtaaggg gcctgacagc cggtcctctt ctttccaatg aaacttctgg
cgccggggag 8760

acggttaaca ctggggaaac gtcactgtct tcggtagcag gcgtgtacgg
aagagttact 8820

ctgaccgctg ctcgggaagg ttatgttttt gattaatctg aaactcacta
gaactcggaa 8880

aggatcaagt agggtggggc ggggtctctc tagaaacact tccttggaat
gaagacacca 8940

cactgtatta acctgtttga tggatgtctc taaatttcga gattccattt
atattttaaa 9000

aattcacata ttacacaatt tgatgactaa gattaacaaa cacataaaat
ctaaggttgg 9060

ataccttgac tacttaccct cgtcaccacc ttacggaaat tactcctttt
ggacaaaacg 9120

agtcttcttt acggtagatc actactactc cgatgacgac tgagagttgt
aagatgagga 9180

ggtttttct tctctttcca tcttctgggg ttcctgaaag gaagtcttaa
cgattcaaaa 9240

aactcagtac gacacaaatc attatcttga gaacgaacga aacgataaat
gtggtgtttc 9300

ctttttcgac gtgacgatat gttcttttaa tacctttta taagacattg
gaaatattca 9360

tccgtattgt caatattagt attgtatgac aaaaaagaat gaggtgtgtc
cgtatctcac 9420

agacgataat tattgatacg agtttttaac acatggaaat cgaaaaatta
aacatttccc 9480

caattattcc ttataaacta catatcacgg aactgatctc tagtattagt
cggtatggtg 9540

taaacatctc caaaatgaac gaaatttttt ggagggtgtg gaggggact
tggactttgt 9600

attttactta cgttaacaac aacaattgaa caaataacgt cgaatattac
caatgtttat 9660

ttcgttatcg tagtgtttaa agtgtttatt tcgtaaaaaa agtgacgtaa
gatcaacacc 9720

aaacaggttt gagtagttac atagaatagt acagacctag atcgaagcac
agttcctgcc 9780

actgacgtca cttattattt tacacacaaa caggctttat gcgcaaaact
ctaaagacag 9840

cggctgattt aagtacagcg cgctatcacc acaaatagcg gctatctcta
ccgctataac 9900

ctttttagct ataaactttt ataccgtata acttttacag cggctacact
caaagacaca 9960

ttgactatag cggtaaaaag gttttcacta aaaacccgta tgcgctatag
accgctatcg 10020

cgaatatagc aaatgccccc taccgctatc tgctgaaacc actgaacccg
ctaagacaca 10080

cagcgtttat agcgtcaaag ctatatccac tgtctgctat actccgatat
agcggctatc 10140

tccgctgtag ttcgaccgtg taccggttac gtatagctag atatgtaact
tagttataac 10200

cggtaatcgg tataataagt aaccaatata tcgtatttag ttataaccga

taaccggtaa 10260

cgtatgcaac ataggtatag tattatacat gtaaatataa ccgagtacag
gttgtaatgg 10320

cggtacaact gtaactaata actgatcaat aattatcatt agttaatgcc
ccagtaatca 10380

agtatcgggt atatacctca aggcgcaatg tattgaatgc catttaccgg
gcggaccgac 10440

tggcgggttg ctgggggcgg gtaactgcag ttattactgc atacaagggt
atcattgcgg 10500

ttatccctga aaggtaactg cagttaccca cctcataaat gccatttgac
gggtgaaccg 10560

tcatgtagtt cacatagtat acggttcatg cgggggataa ctgcagttac
tgccatttac 10620

cgggcggacc gtaatacggg tcatgtactg gaataccctg aaaggatgaa
ccgtcatgta 10680

gatgcataat cagtagcgat aatggtacca ctacgccaaa accgtcatgt
agttacccgc 10740

acctatcgcc aaactgagtg cccctaaagg ttcagaggtg gggtaactgc
agttaccctc 10800

aaacaaaacc gtggttttag ttgccctgaa aggttttaca gcattgttga
ggcggggtaa 10860

ctgcgtttac ccgccatccg cacatgccac cctccagata tattcgtctc
gagcaaatca 10920

cttggcagtc tagcggacct ctgcggtagg tgcgacaaaa ctggaggtat
cttctgtggc 10980

cctggctagg tcggaggcgc cggcccttgc cacgtaacct tgcgcctaag
gggcacggtt 11040

ctcactgcat tcatggcgga tatctcagat atccgggtgg gggaaccgaa
gaatacgtac 11100

gatatgacaa aaaccgaacc ccagatatgt gggggcgaag gagtacaata
tccactacca 11160

tatcgaatcg gatatccaca cccaataact ggtaataact ggtgagggga
taaccactgc 11220

tatgaaaggt aatgattagg tattgtaccg agaaacggtg ttgagagaaa
taaccgatat 11280

acggttatgt gacaggaagt ctctgactgt gcctgagaca taaaaatgtc
ctaccccaga 11340

gtaaataata aatgtttaag tgtatatgtt gtggtggcag gggtcacggg
cgtcaaaaat 11400

aatttgtatt gcaccctaga ggtgcgctta gagcccatgc acaaggcctg
tacccgagaa 11460

gaggccatcg ccgcctcgaa gatgtaggct cgggacgagg gtacggaggt
cgctgagtac 11520

cagcgagccg tcgaggaacg aggattgtca cctccggtct gaatccgtgt
cgtgctacgg 11580

gtggtggtgg tcacacggcg tgttccggca ccgccatccc atacacagac
ttttactcga 11640

gcccctcgcc cgaacgtggc gactgcgtaa accttctgaa ttccgtcgcc
gtcttcttct 11700

acgtccgtcg actcaacaac acaagactat tctcagtctc cattgagggc
aacgccacga 11760

caattgccac ctcccgtcac atcagactcg tcatgagcaa cgacggcgcg
cgcggtggtc 11820

tgtattatcg actgtctgat tgtctgacaa ggaaaggtac ccagaaaaga
cgtcagtggc 11880

aggaactgtg c
11891

<210> 163
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 163

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

Val His Ser

<210> 164
<211> 116
<212> PRT
<213> Artificial Sequence

<220>

<223> synthetic

<400> 164

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Ser Ser Asp
20 25 30

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

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

Lys Ser Arg Ile Thr Ile Ser Arg Asp Thr Ser Lys Asn Gln Phe Phe
65 70 75 80

Leu Lys Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Thr Tyr Tyr Cys
85 90 95

Val Thr Ala Gly Arg Gly Phe Pro Tyr Trp Gly Gln Gly Thr Leu Val
100 105 110

Thr Val Ser Ser
115

<210> 165
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 165

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

Val His Ser

<210> 166
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 166

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

Asp Arg Val Thr Ile Thr Cys His Ser Ser Gln Asp Ile Asn Ser Asn
20 25 30

Ile Gly Trp Leu Gln Gln Lys Pro Gly Lys Ser Phe Lys Gly Leu Ile
35 40 45

Tyr His Gly Thr Asn Leu Asp Asp Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

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

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

<210> 167
<211> 116
<212> PRT
<213> Mus musculus

<400> 167

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

Thr Leu Ser Leu Thr Cys Thr Val Thr Gly Tyr Ser Ile Thr Ser
Asp
20 25 30

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

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

Lys Ser Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn Gln Phe
Phe
65 70 75 80

Leu Gln Leu Asn Ser Val Thr Ile Glu Asp Thr Ala Thr Tyr Tyr
Cys
85 90 95

Val Thr Ala Gly Arg Gly Phe Pro Tyr Trp Gly Gln Gly Thr Leu
Val
100 105 110

Thr Val Ser Ala
115

<210> 168
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 168

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Ser Ser

Asp
20 25 30

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

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

Lys Ser Arg Ile Thr Ile Thr Arg Asp Thr Ser Lys Ser Gln Phe
Phe
65 70 75 80

Leu Gln Leu Asn Ser Val Thr Ala Pro Asp Thr Ala Thr Tyr Tyr
Cys
85 90 95

Val Thr Ala Gly Arg Gly Phe Pro Tyr Trp Gly Gln Gly Thr Leu
Val
100 105 110

Thr Val Ser Ser
115

<210> 169
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 169
acctaacctg gaccgcgtaa gagaaagacc atcgtcggcg gtgtccattc
cccgacggtt 60

tagggtcact cctccttccc
80

<210> 170
<211> 81
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 170
atcccagtga ggaggaaggg atcgaaggtc accatcgaag ccagtcaagg
gggcttccat 60

ccactcctgt gtcttctcta c
81

<210> 171
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 171
ggtgaggaca cagaagagat gtccacaggt gtcggtccac gtcgaggttc
tctcacctgg 60

acccgaacag ttcggctcag
80

<210> 172
<211> 85
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 172
tgggcttgtc aagccgagtc aaactttgtc cctaacatgt actgtgtccg
gatactctat 60

ctcatcagat tttgcgtgga attgg
85

<210> 173
<211> 82
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 173
gagtagtcta aaacgcacct taacctattc cgtcggtggt ccctttccaa
atcttaccta 60

cccgatgtat agtatgagac cc
82

<210> 174
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 174
gggctacata tcatactctg ggaacaccag atatcaaccc tctctgaaaa
gccggatcac 60

aatcactagg gacacgtcga
80

<210> 175
<211> 83
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 175
gttagtgatc cctgtgcagc ttctcggtca agaaggacgt cgacttgagg
caatgtcggg 60

gtctgtgtcg ttgtataatg acg
83

<210> 176
<211> 82
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 176
ccagacacag caacatatta ctgcgtaacc gctggcagag gcttccccta
ttggggacag 60

ggcaccctag tgacagtgag ca
82

<210> 177
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 177
gtgggatcac tgtcactcgt cgccattcta cctaggcac
39

<210> 178
<211> 1128
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 178
ttctaccgtg tggcaccggc cggagacgcg gacccgggtc gagacagggt
gtggcgccag 60

tgtaccgtgg aaaagagaag gtcggaggtg gttcccgggg tcgcacaagg
gggaccgggg 120

gtcgtcgttc tcgtggtcgc cgccgtgtcg gcgggacccg acggaccact
tcctgatgaa 180

ggggctcggg cactggcact cgaccttgtc gcctcgggac tggaggccgc
acgtgtggaa 240

ggggcggcac gacgtctcgt cgccggacat gtcggactcg tcgcaccact
ggcacgggtc 300

gtcgtcggac ccgtgggtct ggatgtagac gttgcacttg gtgttcgggt
cgttgtggtt 360

ccacctgttc ttccacctcg ggttctcgac gctgttctgg gtgtggacgg
gggggacggg 420

tcggggtctc gacgacccgc ctgggaggca caaggacaag ggggggttcg
ggttcctgtg 480

ggactactag tcgtcctggg ggctccactg gacgcaccac cacctgcact
cggtgctcct 540

gggtctccac ttcaagttaa ccatacacct gccgcacctc cacgtgttgc
ggttctggtt 600

cgggtctctt ctcgtcatgt tgtcgtggat gtcccaccac aggcacgact
ggcacgacgt 660

ggtcctgacc gacttgccgt tccttatgtt tacgttccag aggttgttcc
gggacggtcg 720

ggggtagctt ttctggtagt cgttccggtt cccggtcggt gccctcgggg
tccacatgtg 780

ggacgggggg agggccctgc tcacgtggtt cttggtccac agggactgga
cagaccactt 840

cccgaagatg gggtcgctgt agcggcacct caccctctcg ttgccggtcg
ggctcttgtt 900

gatgttctgg tgggggggtc acgacctgtc gctgccgtcg aagaaggaca
tgtcgttcga 960

ctggcacctg ttctcgtcca ccgtcgtccc gttgcacaag tcgacgtcgc
actacgtgct 1020

ccgggacgtg ttggtgatgt gggtcttctc ggactcggac agggggccgt
tcactactgc 1080

tgcgccggca cgcctgctgg cttaagtaac tagtattagt cggtatgg
1128

<210> 179
<211> 107
<212> PRT
<213> Mus musculus

<400> 179

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

Asp Thr Val Ser Ile Thr Cys His Ser Ser Gln Asp Ile Asn Ser
Asn
20 25 30

Ile Gly Trp Leu Gln Gln Arg Pro Gly Lys Ser Phe Lys Gly Leu
Ile
35 40 45

Tyr His Gly Thr Asn Leu Asp Asp Glu Val Pro Ser Arg Phe Ser
Gly
50 55 60

Ser Gly Ser Gly Ala Asp Tyr Ser Leu Thr Ile Ser Ser Leu Glu
Ser
65 70 75 80

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

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

<210> 180
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 180

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

Asp Thr Val Ser Ile Thr Cys His Ser Ser Gln Asp Ile Asn Ser
Asn
20 25 30

Ile Gly Trp Leu Gln Gln Arg Pro Gly Lys Ser Phe Lys Gly Leu
Ile
35 40 45

Tyr His Gly Thr Asn Leu Asp Asp Glu Val Pro Ser Arg Phe Ser
Gly
50 55 60

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

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

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

<210> 181
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 181
gaacggcggt ggtacctaac ctgaacctct tatgacaaag aacatcgtcg

gcgttgtcca 60

ttccccgacg gtttagggtc
80

<210> 182
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 182
aaggggctgc caaatcccag tgaggaggaa gggatcgaag gtgaccatcg
aagccagtca 60

aggggggcttc catccactcc
80

<210> 183
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 183
tcccccgaag gtaggtgagg acacagaaga gatgtccaca agtgtcacta
taagtctact 60

gagtctcagg taggtcgtac
80

<210> 184
<211> 82
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 184
gttcggttct gtagttgagg ttataaccta ccgaggttgt cttcggacca
ttcaggaagt 60

ttcctgatta gatagtgcct tg
82

<210> 185
<211> 80

<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 185
gaccgtcgcc ctggctgata tgtgactggt agagatcgaa tctcggtctt
ctgaaacggt 60

gtatgatgac gcaggtcgtg
80

<210> 186
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 186
catactactg cgtccagcac gctcagttcc cctggacatt cggcggcggc
acaaaactgg 60

aaatcaaacg tgagtaggga
80

<210> 187
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligonucleotide

<400> 187
cctttagttt gcactcatcc ctaggctc
28

<210> 188
<211> 233
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic

<400> 188

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

```
Val His Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Met Ser
Val
            20                  25                  30

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

Asn Ser Asn Ile Gly Trp Leu Gln Gln Lys Pro Gly Lys Ser Phe
Lys
    50                  55                  60

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

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

Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Val Gln Tyr Ala
Gln
            100                 105                 110

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

Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
Leu
    130                 135                 140

Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Val Tyr
Pro
145                 150                 155
160

Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
Gly
                165                 170                 175

Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
Tyr
            180                 185                 190
```

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

Lys Val Tyr Ala Cys Glu Val Thr His Gln His Leu Ser Ser Pro Val
210 215 220

Thr Lys Ser Phe Asn Arg Gly Glu Cys
225 230

<210> 189
<211> 704
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 189
atggtgtcca cagctcagtt ccttgcattc ttgttgcttt ggtttccagg tgcaagatgt 60

gacatcctga tgacccaatc tccatcctcc atgtctgtat ctctgggaga cacagtcagc 120

atcacttgcc attcaagtca ggacattaac agtaatatag ggtggttgca gcagagacca 180

gggaaatcat ttaagggcct gatctatcat ggaaccaact tggacgatga agttccatca 240

aggttcagtg gcagtggatc tggagccgat tattctctca ccatcagcag cctggaatct 300

gaagattttg cagactatta ctgtgtacag tatgctcagt ttccgtggac gttcggtgga 360

ggcaccaagc tggaaatcaa acgaactgtg gctgcaccat ctgtcttcat cttcccgcca 420

tctgatgagc agttgaaatc tggaactgcc tctgttgtgt gcctgctgaa taacttctat 480

cccagagagg ccaaagtaca gtggaaggtg gataacgccc tccaatcggg taactcccag 540

gagagtgtca cagagcagga cagcaaggac agcacctaca gcctcagcag caccctgacg 600

ctgagcaaag cagactacga gaaacacaaa gtctacgcct gcgaagtcac

ccatcagggc 660

ctgagctcgc ccgtcacaaa gagcttcaac aggggagagt gttg
704

<210> 190
<211> 702
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 190
atggattgga cttggagaat actgtttctt gtagcagccg caacaggtgt
tcacagtgat 60

attcagatga ctcagagtcc atccagcatg tcagtctccg tgggagatag
ggtgacgata 120

acctgtcatt caagccaaga catcaactcc aatattggat ggctccaaca
gaagcctggt 180

aagtccttca aaggactaat ctatcacgga acaaacttgg acgacggcgt
gccatcgaga 240

ttttcagggt ctggcagcgg gaccgactat acactgacca tctctagctt
acaaccagag 300

gactttgcca catactactg cgtccagtac gctcagttcc cctggacatt
cggcggcggc 360

acaaaactgg aaatcaaacg aaccgtcgca gctccctccg tgttcatctt
ccccccatcc 420

gacgagcaac tgaagtcagg cacagcctcc gtggtgtgcc tccttaataa
cttttaccca 480

agagaggcca aagtccagtg gaaagtggac aacgcactac agagcgggaa
ctctcaggaa 540

agcgtgacag agcaggactc aaaagattca acatacagcc tatcttctac
cctgacactg 600

tcaaaagctg attatgaaaa gcacaaagta tatgcctgtg aagtaactca
tcagggactc 660

agcagccctg tcactaaaag ttttaataga ggcgaatgct ga
702

<210> 191
<211> 408
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 191
gccaccatga gagtgctgat tcttttgtgg ctgttcacag cctttcctgg
tgtcctgtct   60

gatgtgcagc ttcaggagtc gggacctagc ctggtgaaac cttctcagac
tctgtccctc   120

acctgcactg tcactggcta ctcaatcacc agtgattttg cctggaactg
gatccggcag   180

tttccaggaa acaagctgga gtggatgggc tacataagtt atagtggtaa
cactaggtac   240

aacccatctc tcaaaagtcg aatctctatc actcgagaca catccaagaa
ccaattcttc   300

ctgcagttga attctgtgac tattgaggac acagccacat attactgtgt
aacggcggga   360

cgcgggtttc cttattgggg ccaagggact ctggtcactg tctctgca
408

<210> 192
<211> 405
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 192
atggattgga cctggcgcat tctctttctg gtagcagccg ccacaggtgt
ccacagccag   60

gtgcagctcc aagagagtgg acctgggctt gtcaagccga gtcaaacttt
gtccctaaca   120

tgtactgtgt ccggatactc tatctcatca gattttgcgt ggaattggat
aaggcagcca   180

ccagggaaag gtttagaatg gatgggctac atatcatact ctgggaacac
cagatatcaa   240

ccttctctga aaagccggat cacaatctca agggacacgt cgaagaatca
gttcttcctg   300

aaactgaact ccgttacagc cgcagacaca gcaacatatt actgcgtaac
cgctggcaga   360

ggcttcccct attggggaca gggcacccta gtgacagtga gcagc
405

<210> 193
<211> 8
<212> PRT
<213> Mus musculus

<400> 193

Tyr His Gly Thr Asn Leu Asp Asp
1 5

<210> 194
<211> 8
<212> PRT
<213> Mus musculus

<400> 194

Tyr His Gly Thr Asn Leu Glu Asp
1 5

<210> 195
<211> 9
<212> PRT
<213> Mus musculus

<400> 195

Val Gln Tyr Ala Gln Phe Pro Trp Thr
1 5