SEQUENCE LISTING

<110> Strachan, Lorna
Sleeman, Matthew
Abernethy, Nevin
Onrust, Rene
Kumble, Anand
Murison, Greg

<120> Compositions isolated from stromal cells and methods for their use.

<130> 1037C1PCT

<160> 57

<170> FastSEQ for Windows Version 3.0

<210> 1
<211> 803
<212> DNA
<213> Mouse

<400> 1
gttctgaatg ggagcatcag ccctctctgg gctgttgccc cgacattaca ggtcctgtct 60
ctcagggacg tgggccttgg ttctggcgct gcagagatgg acttctctgc gtttgggaat 120
ctgcgggcgt tggatctgtc gggaaactcc ctgaccagct tccaaaagtt caagggcagt 180
ttggcccttc ggactctcga cctccgcaga aactctctca cggccctccc tcagagggtt 240
gtgtccgagc agcctctgag gggtctgcag accatctacc tcagccagaa cccttatgac 300
tgctgtgggg tggaaggatg gggggccctg cagcagcact tcaagactgt tgcggacttg 360
tccatggtca cttgcaacct ctcttccaag atcgtccgtg tggtggagct gcccgaaggc 420
ctgcctcagg gctgtaagtg ggaacaggtg gacactggtc tcttctacct tgtgctcatc 480
ctgcccagct gcctcaccct gctggtggcc tgtactgtcg tcttcctcac ttttaagaag 540
cctttgcttc aggtcatcaa gagccgctgc cactggtcct ccatatactg acccgtgtgc 600
caaggctaga gacttggttt ttcctcgagg atgcgtctct ccgctggatc tttacttttg 660
caggggtcga gtgtgatgca ttgaaggtta aaactgaaat ttgaaagagt tccatcctca 720
gtcccattaa cttctcctcc catccgtgtg atttatcctc attgtcctgg tgaaatattt 780
attaaacgac attctgtgag att 803



AMENDED SHEET
IPEA/AU

<210> 2
<211> 689
<212> DNA
<213> Mouse

<400> 2
gtcgcctgag gtccccgccg acgacgcact caccatggcg cctgctaacc ttgggctgac 60
gccgcactgg gtgatgctcc tcggtgccgt gctgctgttg cttctgtccg gagcctccgc 120
gcaggaacct ccgagagtgg gttgctctga gtacacaaac agatcctgtg aagagtgcct 180
caggaatgtc tcctgtctgt ggtgcaatga gaacaaggcg tgtatggact acccagtgag 240
gaaaatcttg ccccctgctt ctctctgtaa attgagttcc gctcgctggg gcgtatgctg 300
ggtgaacttc gaggccttga tcatcaccat gtcggtcctg gggggctctg tgctcctggg 360
catcactgtg tgctgctgct actgctgccg ccggaagaag agccggaagc cagacaagag 420
cgatgagcgg gccatgagag agcaggagga gaggagagtg cggcaggagg aaaggagggc 480
ggaaatgaag tcaagacatg atgaaatcag gaaaaaatac ggtctgttta aagaacaaaa 540
cccgtatgag aagttctaag gtggctggca cacacttgtg gtggatcgtg cagttccaga 600
gtttcctggg aatgcactcc ccagcagagc ctgcagagac ctcaccacca tggccaccct 660
tgacctgggt gatccctcag cctctactg 689

<210> 3
<211> 619
<212> DNA
<213> Mouse

<400> 3
ggcaccaggg aagccctgcc gcggcctgtc ccacagaacc tgcatcctca gatgccgccc 60
tatgcctttg ttcacccacc cttccccctg ccacctgtgc ggcccgtgtt caacaacttc 120
cccatcaaca tgggtcctgt gcccgctccc tatgtccccc ctctgcccaa cgtgcgtgtc 180
aactatgact ttggccacat gcacgtgccc ctggagcaca acctgcccat gcactttggc 240
ccccaaccac ggcatcgctt ctgacaccca aagccctgtc agccgtgccg agtctgtagg 300
agggcccagt ctcatcttct gagtaggggt gaaggcctcc attccctctc gaaagtggac 360
gcgtgtcctc ctgctcttac ctttgcaagg tccatgctcc ttcaggtctg atgccctctg 420
ggtgctgatt gtcactgggc caattatagg gcagctccct agtctgccat cttagcagcc 480
aatccagtgg ccctgaccat gaagcaaggc ctctaatcgt ttgccatact tcctccccag 540



AMENDED SHEET
IPEA/AU

cagcccaatg aaagcccagg gggaaatggc ctaccatccc taagccaggg ctctctcctt
600
gttgcccaag gcccactta
619

<210> 4
<211> 1630
<212> DNA
<213> Mouse

<400> 4
ggcgcgtgag cctcaggatg aaccctgtgt ttcctagcgg gctgtatggc tctcggtttt
60
tctcaacgct cccgtatggt ggccgcgggt gccggggtga cccggctgct agtgctcttg
120
ctgatggtag ccgcggctcc tagcagagcc cgaggcagcg gctgccgggt cggggcctcc
180
gcgcgtggga ccggggccga tggccgtgaa gctgagggct gtggcaccgt ggctttgctg
240
ctggagcatt catttgagct cggtgatgga gccaacttcc agaagcgagg cttgctgctc
300
tggaaccagc aggatggcac cctgtcggca acacagcgac agctcagtga ggaggagcgt
360
ggccgactcc gggatgtggc tgctgtcaat ggcctctaca gggtccgggt cccgaggcgg
420
cctgggacac ttgatggttc agaagctggc ggccatgtgt cttccttcgt cccagcgtgc
480
tccctggtgg agtcgcacct ttcggaccag ctgaccttgc acgtggatgt ggctggcaac
540
gtggtgggcc tgtctgtggt ggtgtaccct gggggctgcc ggggctccga ggtggaagat
600
gaggacctgg agctgttcaa tacatctgtg cagctgcggc ctcccagcac tgctccaggc
660
cccgagactg cagccttcat tgagcgcctg gagatggagc aggcccagaa ggccaagaac
720
ccacaggagc agaagtcttt ctttgccaaa tactggatgt acatcattcc agttgtgctg
780
ttcctcatga tgtcgggagc gccggacgct gggggccagg gcggcggtgg gggcgggggc
840
agcagccggt gagcagctgt gccacctaga gccccccca gagccagccc aagaaggagt
900
tcctgacccc acatttccct attgcatgaa tatggaaggc tgtcccttca gtgagccctc
960
tggccttcct gtaagccccc ctttctgtcc ctgagcctct ctctcatcct gttgactgag
1020
agcttgggtg gacctccctg tagccagctc actgcaactg tgtcccacca tgtggcactg
1080
tgctcctctg tctgctaaac acccaccagc ctgccccacc ccaccccacc atacactttg
1140
ggaacttgcc aagctctctc cagcctctgt gcctttgccc tgcaggcccc gtgcgccccc
1200
cactgtcact ctccagccct ttgccaagga tctgtggccc agaggcctct gctcttagtg
1260
gctaggtcag cctccagccc actgtccagg tggcatgctg tcttctttgc ccccctctct
1320



AMENDED SHEET

ggtgccccag aataccatgg tgacctacca ctatcctttc tgcctttgga tgtcatagcc
1380
tggatctgtc accaggagag gattgtgggc ctccacgtta gtctgtgaat gcacacttcg
1440
agtgacttgt gtgcaggttt tgagagccgg ttttgcacta gctgctcgac agctgctggc
1500
atggccgtgc tcttgcacat gcgccgctgt gggcatgggg attgctgtgc agcctcagct
1560
gtgttgtgtg gctgctgatt aaactgtccc ctaaacagca aaaaaaaaaa aaaaaaaaaa
1620
aaaaaaaaaa
1630

<210> 5
<211> 1197
<212> DNA
<213> Mouse

<400> 5
ggcaccagac gactggggcc ctaccccatg tggacaacct caccatgcgt ctggaccccg
60
gtgtgggcgc ctcagtgata ggcgtagtga cagtgacagt gacagctaga gggatgatag
120
acccccaaac tagtggactt tgaagttttc ttcccagccg gttccagcct cctggaacaa
180
ccatgtcgcc agttttgcgc gtgccaaatt cacggcgctg cccaagcgga gctgctatct
240
gaattctcct tggatgtggc aaagggaaat gaacgcaaaa ggtgccgctg gaagtgtccg
300
acctagagaa atatgtagac cggagccctg ttaccttcct ccagcatgga cttcctggtt
360
ctcttcttgt tctacttggc cttcttattg atttgtgttg tcctgatctg catcttcaca
420
aaaagccagc gtttgaaggc cgtggtcctt ggaggagcac aggtagcact ggtccttggg
480
tactgcccgg atgtgaatac tgtgttaggt gctagtctgg aaggctcaca agacaagggg
540
atgtgagtct tgtctttaat cctggcactt gggaggctga ggcttcgggg ccagttgggg
600
ctacatcgca agagcctgtg tccaaacaaa caaaacgttg tctttttgct ttgagatagg
660
tcgaataggt cgaattttca aggttggctt tttaaacagt gtgtaatgtc tgtatttggt
720
tgtgactcct gtttgcctag acatgcttgt agcaggtgtg aactcaggag gacacaagtg
780
accagaaagc tgagcatcta gctgtcaatc ttcccttcac attgtcccat ctgtcttccc
840
ttgggggtca aagcaaagtg ggggcaagta gccacgaagg ggttgacttg ggaggaccct
900
ggggatctgg aggccaatct tgagcatgga gcagacctga gggttaggga agcccacgtc
960
cacagcagcc tctgcacacc ccctttcccc acagactcca acagacacat tctgtgcagt
1020
caaggtagaa atggaggtgt tctctacacc tcctaaatcc tagcacttag gaagctgagg
1080



AMENDED SHEET
IPEA/AU

caggattatg aattccaggc tagctcgggt tatgtaatga gactgtttca aacacagagc
1140
ggagccgagg agatggctgg gcagtcacag agctgccgtg caaccagaac tggaggg
1197

<210> 6
<211> 1435
<212> DNA
<213> Mouse

<400> 6
catgggcgcc gtctggtcag ccctgctggt cggcgggggt ctagctggag cgctcatcct
60
gtggctgctg cggggagact ctggggcccc ggggaaagac ggggttgcgg agccgccgca
120
gaagggcgca cctcctgggg aggctgcggc cccgggagac ggtccgggtg gtggtggcag
180
tggcggcctg agccctgaac cttccgatcg ggagctggtc tccaaagcag agcatcttcg
240
agaaagcaac ggacatttga tttctgagag caaagatctt ggtaacctgc cggaagcaca
300
gcggctgcag aatgttggag cagactgggt caatgccaga gagtttgttc ctgttgggaa
360
gattccagac acacactcca gggccgactc tgaagcggca agaaatcaaa gcccaggatc
420
tcatggagga gaatggagac tcccaaaagg acaagaaaca gctgtcaaag tagctggcag
480
tgtggccgca aagctggcct ccagcagcct gcttgtggac agagctaaag cagtcagtca
540
ggaccaggca ggccacgagg actgggaagt ggtgtctagg cactcatctt gggggagtgt
600
tggtttgggt ggcagtcttg aggcttctag gttaagtcta aatcagagaa tggacgacag
660
cacaaacagt cttgtgggag gaagaggctg ggaagtagat gggaaagtgg catctctgaa
720
acctcaacag gtcagcatcc agttccaggt gcactacacc acaaacaccg atgtgcagtt
780
cattgcagtg actggagacc atgagagcct tgggagatgg aacacataca tcccactcca
840
ctactgcaaa gacgggctct ggtctcattc tgtcttcctg cctgcagaca cagtggtgga
900
gtggaagttc gtgttggtag agaataagga agttactcgt tgggaagaat gcagcaatag
960
attcctgcag actggccatg aggataaagt ggttcatggg tggtggggga ttcactgact
1020
cagttttcag agcatccaag aggctgcagc agaatgtgga caaggctaag gctttagagc
1080
gcactgcata gcttaaagta aaggcggtgt gattccaatt gtagccatca gggctctttc
1140
agatttgcta gtgtggcttt tgtccaaaat gtaggaagat gtatgcctgc agataatgct
1200
tcctgtaanc tggcacttgt cccttattgt attgactggt ttgtgctgac acatcaggac
1260
ttgaggaatt gatcatcctg ggtagttgca tcttgggtag tacacctgag gtatggacta
1320



AMENDED SHEET

catatgggca aggagcaact aagcaactgc acgggtacaa ggtagagcgc ccttagcagc
1380
tcttagacta gaaagactac aataagcccc atcaaacaca gctaaagcaa cactg
1435

<210> 7
<211> 1131
<212> DNA
<213> Mouse

<400> 7
ggcaccagcc cggcttctgt gctccgctca gtctccagcg atccctccct acctccgccc
60
tccatggcgt cgctcctgtg ctgtgggcct aagctggccg cctgtggcat cgtcctcagc
120
gcctggggag tgatcatgtt gataatgctc gggatatttt tcaatgtcca ttctgctgtg
180
ttaattgagg acgttccctt cacagagaaa gattttgaga acggtcctca gaacatatac
240
aacctgtacg agcaagtcag ctacaactgt ttcatcgccg cgggcctcta cctcctcctc
300
ggaggcttct ccttctgcca agttcgtctc aacaagcgca aggaatacat ggtgcgctag
360
agcgcggtcc gcctctccct ccccagcccc cttctctatt taaagactcc gcagactccg
420
tcccactcat ctggcgtcct ttgggacttg tgaccctagc gagacgtcat ccctggccct
480
gcaaaactgc gcccagcctc tggaggagac cgagggtgac cgcgccccgt tctgaactac
540
aataaaaaga agcggttccc cctaagcttg ctgtctgtgc tttcagggag gggcgggccc
600
gggctggaag gggctgagac cggcctcatc gaggagtccg gaccctccga cggaagtgga
660
atgaagctag ccggaagtga agcaacgtct tccacctcgt cttcctccgc gcggcgaggc
720
cccttgagtg actggggaga ggtcgggtct cggccaatca gctgcaggga gggcgggact
780
ttctgcgcgg gagcccgagc ggccggctgc cgggctctcc gtggtttcca gctcgcgtgg
840
tggtggtggc ggcggagcgt ctccgtgagg aggtgcgcgg ggccatgacg tcagcgtcca
900
ccaaggttgg agagatcttc tccgcggccg gcgccgcctt cacgaagctc ggggagttga
960
cgatgcagct gcatccagtc tcggactctt cccctgccgg tgccaagtgg acggagacgg
1020
agatagagat gctgagggct gctgtgaagc gctttgggga cgatcttaat cacatcagct
1080
gtgtcatcaa ggaacggaca gtggctcaga taaagaccac tgtgaagcga a
1131

<210> 8
<211> 1357
<212> DNA
<213> Mouse

<400> 8



AMENDED SHEET
IPEA/AU

gggagggcct ggaggccgag gcgggcaggc accagccaga gcagctggcg gcagacggca
60
ggcagacagt cagaccgtct agcgggcctg gcttgcctac ctggcagctg cacccggtcc
120
ttcacccaga gctggttcca tagctcaaca tggtcccctg gttcctcctg tctctgctgc
180
tacttgcgag gcctgtgcct ggggtggcct actctgtgtc actcccggcc tccttcctgg
240
aggatgtagc cggcagcggg gaagctgagg gttcttcagc ctcttccccg agcctgccgc
300
cgcctgggac tccagccttc agtcccacac cggagagacc ccagcccaca gctctggacg
360
gccccgtgcc acccaccaac ctcctggaag ggatcatgga tttcttccgg cagtacgtga
420
tgctcatcgc ggtggtgggc tcgctgacct tcctcatcat gttcatagtc tgcgccgccc
480
tcatcacgcg ccagaagcac aaggccacag cctactaccc atcctcgttc cctgaaaaga
540
agtatgtgga ccagagagac cgggctgggg gaccccgtac cttcagcgag gtccctgaca
600
gggcacctga cagccggcat gaagaaggcc tggacacctc ccatcagctc caggctgaca
660
ttctggctgc tacccagaac ctccggtctc cagctagagc cctgccaggc aatggggagg
720
gagcaaagcc tgtgaaggct gggtcggagg aggaggagga agaggtgctc agcggtcagg
780
aggaggccca ggaagcccca gtatgtgggg tcactgaaga gaagctgggg gtcccagagg
840
agtcggtctc agcagaggct gaaggggttc ctgccaccag tgagggccaa ggggaagcag
900
aagggtcttt ctccttagcc caggaatccc agggagcaac tggtcctcct gaaagtccct
960
gtgcctgcaa cagagtctcc cccagtgtct aacaggcccc agaactgctg ggacccgaat
1020
gttgggtcct tgagggtcac ctctttggtc aagaaaggca ttcagctcta actgctcctt
1080
gataccacgt ggcttggcca ttgctggtgc caaggctgac cccgaactgg cagagccgat
1140
gccctctggt gcaccccagg aaacatctcc ccaagttcca gcgcccttaa tgactcttgc
1200
caccctgggg gcttcaccct aacgcaccac ttctctggaa ggggaaggcc agacacatgc
1260
cagttggggc tgcatgaggc agtcctcaga gcagaagggg accaggccag aggccacctg
1320
tgacggggca aactgcatct cggctgtgga gaccaga
1357

<210> 9
<211> 815
<212> DNA
<213> Mouse

<400> 9
aggtcgacac tagtggatcc aaagaattcg gcacgagggg acgcggagcg gtcgcgtgcg
60



AMENDED SHEET
IPEA/AU

cggagagcag ctctgggcgc cgggcggttg ctgcgggcgc tcaggggccc tgggaacaat
120
ggcgctgtgc gcgcgggccg cgctgctgct gggcgtgctg caggtgctgg cgctgctagg
180
ggcggcgcag gacccgaccg acgctcaggg ctctgcaagt ggaaaccact cagtgctgac
240
ctccaatatt aacataacag agaataccaa ccagaccatg agtgtggttt ccaaccagac
300
cagtgaaatg cagagcaccg cgaagccttc cgtactgcca aaaactacga cacttatcac
360
tgtgaaacct gcaactattg ttaaaatatc aaccccagga gtcttaccac atgtgacgcc
420
tactgcctca aagtctacac ccaatgcaag tgcttctcca aactctaccc acacgtcagc
480
atccatgaca accccagccc acagtagttt attgacaact gtaacggttt cagcaactac
540
tcatcccacc aaaggcaaag gatccaagtt tgatgccggc agctttgttg gtggtatagg
600
tgttaacact gggagtttta tctattctct acattggatg caaaatgtat tattcaagaa
660
gaggcattcg gtaccgaagc attgacgaac atgatgccat catttaaagt acttcagtgg
720
tcaaggaaag aagaaagact gcagccttat caattatttt ggtttatatt agtttaaact
780
attattttct tggaagtagt ataaacaagt catgc
815

<210> 10
<211> 1129
<212> DNA
<213> Mouse

<400> 10
ccaacactcg ccatgcgttc tggggcactg tggccgctgc tttggggagc cctggtctgg
60
acagtgggat ccgtgggcgc cgtgatgggc tccgaggatt ctgtgcccgg tggcgtgtgc
120
tggctccagc agggcagaga ggccacctgc agtctggtgc tgaagactcg tgtcagccgg
180
gaggagtgct gtgcttccgg caacatcaac accgcctggt ccaacttcac ccacccaggc
240
aataaaatca gcctgctagg gttcctgggc ctcgtccact gcctcccctg caaagattcc
300
tgcgacggag tggagtgcgg ccccggcaag gcgtgccgca atgctggggg ggcgtccaac
360
aactgcgagt gcgtgcccaa ctgcgagggg tttcccgcgg gcttccaggt ctgcggctct
420
gatggcgcca cctaccggga cgaatgcgaa ctgcgcaccg cgcgctgtcg cggacaccca
480
gacttgcgcg tcatgtaccg cggccgctgt caaaagtctt gcgctcaggt agtgtgcccg
540
cgtccccagt cgtgccttgt ggatcagacc ggcagcgcac actgcgtggt gtgtcgcgct
600
gcgccctgcc cagtaccttc caaccccggc caagaactct gtggcaacaa caacgttacc
660



AMENDED SHEET
IPEA/AU

tacatctcgt cgtgtcacct gcgccaggcc acttgcttcc tgggccgctc cattggggtt
720
cggcacccag gcatctgcac aggtggcccc aagttcctga agtctggcga tgctgccatt
780
gttgatatgg tccctggcaa gcccatgtgt gttgagagct tctctgacta ccctccactt
840
ggtcgctttg ctgttcgtga catgaggcag acagttgctg tgggtgtcat caaagctgtg
900
gacaagaagg ctgctggagc tggcaaagtc accaagtctg cccagaaagc tcagaaggct
960
aaatgaatat tacccctaac acctgccacc ccagtcttaa tcagtggtgg aagaacggtc
1020
tcagaactgt ttgtctcaat tggccattta agtttaatag taaaagactg gttaatgata
1080
acaatgcatc gtaaaacctt cagaaggaaa gaatgttgtg gaccatttt
1129

<210> 11
<211> 196
<212> PRT
<213> Mouse

<400> 11

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

<210> 12
<211> 174
<212> PRT
<213> Mouse

<400> 12



AMENDED SHEET
IPEA/AU

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

<210> 13
<211> 106
<212> PRT
<213> Mouse

<400> 13

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

<210> 14
<211> 268
<212> PRT
<213> Mouse

<400> 14

```
Met Ala Leu Gly Phe Ser Gln Arg Ser Arg Met Val Ala Ala Gly Ala
 1               5                  10                  15
Gly Val Thr Arg Leu Leu Val Leu Leu Leu Met Val Ala Ala Ala Pro
            20                  25                  30
Ser Arg Ala Arg Gly Ser Gly Cys Arg Val Gly Ala Ser Ala Arg Gly
        35                  40                  45
```



AMENDED SHEET
IPEA/AU

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

<210> 15
<211> 66
<212> PRT
<213> Mouse

<400> 15

```
Met Asp Phe Leu Val Leu Phe Leu Phe Tyr Leu Ala Phe Leu Leu Ile
 1               5                  10                  15
Cys Val Val Leu Ile Cys Ile Phe Thr Lys Ser Gln Arg Leu Lys Ala
            20                  25                  30
Val Val Leu Gly Gly Ala Gln Val Ala Leu Val Leu Gly Tyr Cys Pro
        35                  40                  45
Asp Val Asn Thr Val Leu Gly Ala Ser Leu Glu Gly Ser Gln Asp Lys
    50                  55                  60
Gly Met
65
```

<210> 16
<211> 338
<212> PRT
<213> Mouse

<400> 16

```
Met Gly Ala Val Trp Ser Ala Leu Leu Val Gly Gly Gly Leu Ala Gly
 1               5                  10                  15
Ala Leu Ile Leu Trp Leu Leu Arg Gly Asp Ser Gly Ala Pro Gly Lys
            20                  25                  30
```



AMENDED SHEET

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

<210> 17
<211> 119
<212> PRT
<213> Mouse

<400> 17

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



AMENDED SHEET
IPEA/AU

65 70 75 80
Asn Leu Tyr Glu Gln Val Ser Tyr Asn Cys Phe Ile Ala Ala Gly Leu
85 90 95
Tyr Leu Leu Leu Gly Gly Phe Ser Phe Cys Gln Val Arg Leu Asn Lys
100 105 110
Arg Lys Glu Tyr Met Val Arg
115

<210> 18
<211> 280
<212> PRT
<213> Mouse

<400> 18
Met Val Pro Trp Phe Leu Leu Ser Leu Leu Leu Leu Ala Arg Pro Val
1 5 10 15
Pro Gly Val Ala Tyr Ser Val Ser Leu Pro Ala Ser Phe Leu Glu Asp
20 25 30
Val Ala Gly Ser Gly Glu Ala Glu Gly Ser Ser Ala Ser Ser Pro Ser
35 40 45
Leu Pro Pro Pro Gly Thr Pro Ala Phe Ser Pro Thr Pro Glu Arg Pro
50 55 60
Gln Pro Thr Ala Leu Asp Gly Pro Val Pro Pro Thr Asn Leu Leu Glu
65 70 75 80
Gly Ile Met Asp Phe Phe Arg Gln Tyr Val Met Leu Ile Ala Val Val
85 90 95
Gly Ser Leu Thr Phe Leu Ile Met Phe Ile Val Cys Ala Ala Leu Ile
100 105 110
Thr Arg Gln Lys His Lys Ala Thr Ala Tyr Tyr Pro Ser Ser Phe Pro
115 120 125
Glu Lys Lys Tyr Val Asp Gln Arg Asp Arg Ala Gly Gly Pro Arg Thr
130 135 140
Phe Ser Glu Val Pro Asp Arg Ala Pro Asp Ser Arg His Glu Glu Gly
145 150 155 160
Leu Asp Thr Ser His Gln Leu Gln Ala Asp Ile Leu Ala Ala Thr Gln
165 170 175
Asn Leu Arg Ser Pro Ala Arg Ala Leu Pro Gly Asn Gly Glu Gly Ala
180 185 190
Lys Pro Val Lys Gly Gly Ser Glu Glu Glu Glu Glu Glu Val Leu Ser
195 200 205
Gly Gln Glu Glu Ala Gln Glu Ala Pro Val Cys Gly Val Thr Glu Glu
210 215 220
Lys Leu Gly Val Pro Glu Glu Ser Val Ser Ala Glu Ala Glu Gly Val
225 230 235 240
Pro Ala Thr Ser Glu Gly Gln Gly Glu Ala Glu Gly Ser Phe Ser Leu
245 250 255
Ala Gln Glu Ser Gln Gly Ala Thr Gly Pro Pro Glu Ser Pro Cys Ala
260 265 270
Cys Asn Arg Val Ser Pro Ser Val
275 280

<210> 19
<211> 188
<212> PRT
<213> Mouse



AMENDED SHEET

<400> 19

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

<210> 20
<211> 317
<212> PRT
<213> Mouse

<400> 20

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



AMENDED SHEET
IPEA/AU

```
Val Cys Arg Ala Ala Pro Cys Pro Val Pro Ser Asn Pro Gly Gln Glu
        195                 200                 205
Leu Cys Gly Asn Asn Asn Val Thr Tyr Ile Ser Ser Cys His Leu Arg
    210                 215                 220
Gln Ala Thr Cys Phe Leu Gly Arg Ser Ile Gly Val Arg His Pro Gly
225                 230                 235                 240
Ile Cys Thr Gly Gly Pro Lys Phe Leu Lys Ser Gly Asp Ala Ala Ile
                245                 250                 255
Val Asp Met Val Pro Gly Lys Pro Met Cys Val Glu Ser Phe Ser Asp
            260                 265                 270
Tyr Pro Pro Leu Gly Arg Phe Ala Val Arg Asp Met Arg Gln Thr Val
        275                 280                 285
Ala Val Gly Val Ile Lys Ala Val Asp Lys Lys Ala Ala Gly Ala Gly
    290                 295                 300
Lys Val Thr Lys Ser Ala Gln Lys Ala Gln Lys Ala Lys
305                 310                 315
```

<210> 21
<211> 384
<212> DNA
<213> Mouse

<220>
<221> unsure
<222> (369)...(369)

<400> 21

```
ggtggacttc ggtgggacaa cgtccttcca gtgcaaggtg cgcagtgacg tgaagcctgt
60
gatccagtgg ctgaagcggg tggagtacgg ctccgaggga cgccacaact ccaccattga
120
tgtgggtggc cagaagtttg tggtgttgcc cacgggtgat gtgtggtcac ggcctgatgg
180
ctcctacctc aacaagctgc tcatctctcg ggcccgccag gatgatgctg gcatgtacat
240
ctgcctaggt gcaaatacca tgggctacag tttccgtagc gccttcctca ctgtattacc
300
agaccccaaa cctccagggc ctcctatggc ttcttcatcg tcatccacaa gcctgccatg
360
gcctgtggng atcggcatcc cagc
384
```

<210> 22
<211> 1967
<212> DNA
<213> Mouse

<400> 22

```
gctgcgcgcc cccgcgctga tccctgtcga gcgtctacgc gcctcgcttc ctttgcctgg
60
agctcggcgc cgaggggggc cggaccctgg ctctgcggcc gcgacctggg tcttgcgggc
120
ctgagccctg agtggcgtcc agtccagctc ccagtgaccg cgcccctgct tcaggtccga
180
ccggcgagat gacgcggagc cccgcgctgc tgctgctgct attgggggcc ctcccgtcgg
240
```



AMENDED SHEET
IPEA/AU

ctgaggcggc gcgaggaccc ccaagaatgg cagacaaagt ggtcccacgg caggtggccc 300
gcctgggccg cactgtgcgg ctacagtgcc cagtggaggg ggacccacca ccgttgacca 360
tgtggaccaa agatggccgc acaatccaca gtggctggag ccgcttccgt gtgctgcccc 420
agggtctgaa ggtgaaggag gtggaggccg aggatgccgg tgtttatgtg tgcaaggcca 480
ccaatggctt tggcagcctc agcgtcaact acactctcat catcatggat gatattagtc 540
cagggaagga gagccctggg ccaggtggtt cttcgggggg ccaggaggac ccagccagcc 600
agcagtgggc acggcctcgc ttcacacagc cctccaagat gaggcgccga gtgattgcac 660
ggcctgtggg tagctctgtg cggctcaagt gtgtggccag tgggcaccca cggccagaca 720
tcatgtggat gaaggatgac cagaccttga cgcatctaga ggctagtgaa cacagaaaga 780
agaagtggac actgagcttg aagaacctga agcctgaaga cagtggcaag tacacgtgcc 840
gtgtatctaa caaggccggt gccatcaacg ccacctacaa agtggatgta atccagcgga 900
ctcgttccaa gcctgtgctc acagggacac accctgtgaa cacaacggtg gacttcggtg 960
ggacaacgtc cttccagtgc aaggtgcgca gtgacgtgaa gcctgtgatc cagtggctga 1020
agcgggtgga gtacggctcc gagggacgcc acaactccac cattgatgtg ggtggccaga 1080
agtttgtggt gttgcccacg ggtgatgtgt ggtcacggcc tgatggctcc tacctcaaca 1140
agctgctcat ctctcgggcc cgccaggatg atgctggcat gtacatctgc ctaggtgcaa 1200
ataccatggg ctacagtttc cgtagcgcct tcctcactgt attaccagac cccaaacctc 1260
cagggcctcc tatggcttct tcatcgtcat ccacaagcct gccatggcct gtggtgatcg 1320
gcatcccagc tggtgctgtc ttcatcctag gcactgtgct gctctggctt tgccagacca 1380
agaagaagcc atgtgcccca gcatctacac ttcctgtgcc tgggcatcgt cccccaggga 1440
catcccgaga acgcagtggt gacaaggacc tgccctcatt ggctgtgggc atatgtgagg 1500
agcatggatc cgccatggcc ccccagcaca tcctggcctc tggctcaact gctggcccca 1560
agctgtaccc caagctatac acagatgtgc acacacacac acatacacac acctgcactc 1620
acacgctctc atgtggaggg caaggttcat caacaccagc atgtccacta tcagtgctaa 1680
atacagcgaa tctccaagca ctgtgtcctg aggtaggcat atgggggcca aggcaacagg 1740
ttgggagaat tgagaacaat ggaggaagag tatcttaggg tgccttatgg tggacactca 1800
caaacttggc catatagatg tatgtactac cagatgaaca gccagccaga ttcacacacg 1860
cacatgttta aacgtgtaaa cgtgtgcaca actgcacaca caacctgaga aaccttcagg 1920

aggatttggg gtgtgacttt gcagtgacat gtagcgatgg ctagttg
1967

<210> 23
<211> 1742
<212> DNA
<213> Mouse

<400> 23
gcgcggcgcc ccgggccccc cgccccgccg cccctcttcc ccgccctcgc caagcctcgc
60
cgtttatccg cgcggacagc gcgccccgcg ccccagcccg gccctagccg ccagcgccca
120
ggtagcgccg ccccgcccag gccgggcccg ggggcgcggg gggcgggatg cggcgcccgg
180
ggcagcgatg accgcgtcgc gctgctcagg ggcccggctc tgaccccgtt gcctgctgcg
240
cgcccccgcg ctgatccctg tcgagcgtct acgcgcctcg cttcctttgc ctggagctcg
300
gcgccgaggg gggccggacc ctggctctgc ggccgcgacc tgggtcttgc gggcctgagc
360
cctgagtggc gtccagtcca gctcccagtg accgcgcccc tgcttcaggt ccgaccggcg
420
agatgacgcg gagccccgcg ctgctgctgc tgctattggg ggccctcccg tcggctgagg
480
cggcgcgaga tgatattagt ccaggaaagg agagccctgg gccaggtggt tcttcggggg
540
gccaggagga cccagccagc cagcagtggg cacggcctcg cttcacacag ccctccaaga
600
tgaggcgccg agtgattgca cggcctgtgg gtagctctgt gcggctcaag tgtgtggcca
660
gtgggcaccc acggccagac atcatgtgga tgaaggatga ccagaccttg acgcatctag
720
aggctagtga acacagaaag aagaagtgga cactgagctt gaagaacctg aagcctgaag
780
acagtggcaa gtacacgtgc cgtgtatcta acaaggccgg tgccatcaac gccacctaca
840
aagtggatgt aatccagcgg actcgttcca agcctgtgct cacagggaca caccctgtga
900
acacaacggt ggacttcggt gggacaacgt ccttccagtg caaggtgcgc agtgacgtga
960
agcctgtgat ccagtggctg aagcgggtgg agtacggctc cgagggacgc cacaactcca
1020
ccattgatgt gggtggccag aagtttgtgg tgttgcccac gggtgatgtg tggtcacggc
1080
ctgatggctc ctacctcaac aagctgctca tctctcgggc ccgccaggat gatgctggca
1140
tgtacatctg cctaggtgca aataccatgg gctacagttt ccgtagcgcc ttcctcactg
1200
tattaccaga ccccaaacct cctccagggc ctcctatggc ttcttcatcg tcatccacaa
1260
gcctgccatg gcctgtggtg atcggcatcc cagctggtgc tgtcttcatc ctaggcactg
1320
tgctgctctg gctttgccag accaagaaga agccatgtgc cccagcatct acacttcctg
1380

tgcctgggca tcgtccccca gggacatccc gagaacgcag tggtgacaag gacctgccct
1440
cattggctgt gggcatatgt gaggagcatg gatccgccat ggcccccccag cacatcctgg
1500
cctctggctc aactgctggc cccaagctgt accccaagct atacacagat gtgcacacac
1560
acacacatac acacacctgc actcacacgc tctcatgtgg agggcaaggt tcatcaacac
1620
cagcatgtcc actatcagtg ctaaatacag cgaatctcca agcactgtgt cctgaggtag
1680
gcatatgggg gccaaggcaa caggttggga gaattgagaa caatggagga agagtatctt
1740
ag
1742

<210> 24
<211> 1004
<212> DNA
<213> Human

<400> 24
gcggccgcga ccccaggtcc ggacaggccg agatgacgcc gagccccctg ttgctgctcc
60
tgctgccgcc gctgctgctg ggggccttcc caccggccgc cgccgcccga ggccccccaa
120
agatggcgga caaggtggtc ccacggcagg tggccggctg ggccgcactg tgcggctgca
180
gtgccagtgg agggggaccc gccgccgctg accatgtgga ccaaggatgg ccgcaccatc
240
cacagcggct ggagccgctt ccgcgtgctg ccgcaggggc tgaaggtgaa gcaggtggag
300
cgggaggatg ccggcgtgta cgtgtgcaag gccaccaacg gcttcggcag ccttagcgtc
360
aactacaccc tcgtcgtgct ggatgacatt agcccaggga aggagagcct ggggcccgac
420
agctcctctg ggggtcaaga ggaccccgcc agccagcagt gggcacgacc gcgcttcaca
480
cagccctcca agatgaggcg ccgggtgatc gcacggcccg tgggtagctc cgtgcggctc
540
aagtgcgtgg ccagcgggca ccctcggccc gacatcacgt ggatgaagga cgaccaggcc
600
ttgacgcgcc cagaggccgc tgagcccagg aagaagaagt ggacactgag cctgaagaac
660
ctgcggccgg aggacagcgg caaatacacc tgccgcgtgt cgaaccgcgc gggcgccatc
720
aacgccacct acaaggtgga tgtgatccag cggacccgtt ccaagcccgt gctcacaggc
780
acgcaccccg tgaacacgac ggtggacttc ggggggacca cgtccttcca gtgcaaggtg
840
cgcagcgacg tgaagccggt gatccagtgg ctgaagcgcg tggagtacgg cgccgagggc
900
cgccacaact ccaccatcga tgtgggcggc cagaagtttg tggtgctgcc cacgggtgac
960
gtgtggtcgc ggcccgacgg ctcctacctc aataagccgc tccc
1004



AMENDED SHEET
IPEA/AU

<210> 25
<211> 478
<212> DNA
<213> Mouse

<400> 25
agaaaaaggc ctcgctaaag caacaaacct gatcattttc aagaaccata ggactgaggt
60
gaagccatga agttcttgct gatctcccta gccctatggc tgggcacagt gggcacacgt
120
gggacagagc ccgaactcag cgagacccag cgcaggagcc tacaggtggc tctggaggag
180
ttccacaaac acccacctgt gcagttggcc ttccaagaga tcggtgtgga cagagctgaa
240
gaagtgctct tctcagctgg caccttttgtg aggttggaat ttaagctcca gcagaccaac
300
tgccccaaga aggactggaa aaagccggag tgcacaatca aaccaaacgg ggcggaaatg
360
cctggcctgc attaaaatgg accccaaggg taaaattcta ggccggatag tccactgccc
420
aattctgaag caagggcctc aggatcctca ggagttgcaa tgcattaaga tagcacag
478

<210> 26
<211> 545
<212> DNA
<213> Mouse

<400> 26
agggaacaac tgccagggag ctgttccagg gaccacacag aaaaaggcct cgctaaagca
60
acaaacctga tcattttcaa gaaccatagg actgaggtga agccatgaag ttcttgctga
120
tctccctagc cctatggctg ggcacagtgg gcacacgtgg gacagagccc gaactcagcg
180
agacccagcg caggagccta caggtggctc tggaggagtt ccacaaacac ccacctgtgc
240
agttggcctt ccaagagatc ggtgtggaca gagctgaaga agtgctcttc tcagctggca
300
cctttgtgag gttggaattt aagctccagc agaccaactg ccccaagaag gactggaaaa
360
agccggagtg cacaatcaaa ccaaacggga gaaggcggaa atgcctggcc tgcattaaaa
420
tggaccccaa gggtaaaatt ctaggccgga tagtccactg cccaattctg aagcaagggc
480
ctcaggatcc tcaggagttg caatgcatta agatagcaca ggctggcgaa gacccccacg
540
gctac
545

<210> 27
<211> 2213
<212> DNA
<213> Mouse

<400> 27



AMENDED SHEET
IPEA/AU

gttgcaggcg ctcggagtca gcatggaaag tctctgcggg gtcctgggat ttctgctgct
60
ggctgcagga ctgcctctcc aggctgccaa gcgatttcgt gatgtgctgg gccatgaaca
120
gtatcccaat cacatgagag agcacaacca attacgtggc tggtcttcgg atgaaaatga
180
atgggatgaa cacctgtatc cagtgtggag gaggggagac ggcaggtgga aggactcctg
240
ggaaggaggc cgtgtgcagg cagtcctgac cagtgactca ccggctctgg tgggttccaa
300
tatcaccttt gtggtgaacc tggtgttccc cagatgccag aaggaagatg ctaatggcaa
360
tatcgtctat gagaagaact gcaggaatga tttgggactg acctctgacc tgcatgtcta
420
caactggact gcaggggcag atgatggtga ctgggaagat ggcaccagcc gaagccagca
480
tctcaggttc ccggacagga ggcccttccc tcgcccccat ggatggaaga aatggagctt
540
tgtctacgtc tttcacacac ttggccagta tttccaaaaa ctgggtcggt gttcagcacg
600
ggtttctata aacacagtca acttgacagc tggccctcag gtcatggaag tgactgtctt
660
tcgaagatac ggccgggcat acattcccat ctcgaaggtg aaagatgtgt atgtgataac
720
agatcagatc cctgtattcg tgaccatgtc ccagaagaat gacaggaact tgtctgatga
780
gatcttcctc agagacctcc ccatcgtctt cgatgtcctc attcatgatc ccagccactt
840
cctcaacgac tctgccattt cctacaagtg gaactttggg gacaacactg gcctgtttgt
900
ctccaacaat cacactttga atcacactta tgtgctcaat ggaaccttca accttaacct
960
caccgtgcaa actgcagtgc ccgggccatg ccctcccccc tcgccttcga ctccgcctcc
1020
accttcaact ccgccctcac ctccgccctc acctctgccc acattatcaa cacctagccc
1080
ctctttaatg cctactggtt acaaatccat ggagctgagt gacatttcca atgaaaactg
1140
ccgaataaac agatatggct acttcagagc caccatcaca attgtagagg ggatcctgga
1200
agtcagcatc atgcagatag cagatgtccc catgcccaca ccgcagcctg ccaactccct
1260
gatggacttc actgtgacct gcaaaggggc cacccccatg gaagcctgta cgatcatctc
1320
cgaccccacc tgccagatcg cccagaaccg ggtctgcagc cctgtggctg tggatgggct
1380
gtgcctgctg tctgtgagaa gagccttcaa tgggtctggc acctactgtg tgaatttcac
1440
tctgggagat gatgcaagcc tggccctcac cagcaccctg atctctatcc ctggcaaaga
1500
cccagactcc cctctgagag cagtgaatgg tgtcctgatc tccattggct gcctggctgt
1560
gcttgtcacc atggttacca tcttgctgta caaaaaacac aaggcgtaca agccaatagg
1620
aaactgcccc aggaacacgg tcaagggcaa aggcctgagt gttctcctca gccacgcgaa
1680



AMENDED SHEET
IPEA/AU

agccccgttc ttccgaggag accaggagaa ggatccattg ctccaggaca agccaaggac
1740
actctaagtc tttggccttc cctctgacca ggaacccact cttctgtgca tgtatgtgag
1800
ctgtgcagaa gtatgtggct gggaactgtt gttctctaag gattattgta aaatgtatat
1860
cgtggcttag ggagtgtggt taaatagcat tttagagaag acatgggaag acttagtgtt
1920
tcttcccatc tgtattgtgg tttttacact gttcgtgggg tggacacgct gtgtctgaag
1980
gggaggtggg gtcactgcta cttaaggtcc taggttaact gggggagata ccacagatgc
2040
ctcagctttc cacataacat gggcatgaac ccagctaatc accacctgaa ggccatgctt
2100
catctgcctt ccaactcact gagcatgcct gagctcctga caaaattata atgggcccgg
2160
gctttgtgta tggtgcgtgt gtgtacatat tctactcatt aaaaaggtag tct
2213

<210> 28
<211> 412
<212> DNA
<213> Mouse

<400> 28
gcggagtccc gcctcgccgc ccctcgagcg cccccagctt ctctgctggc cggaacctgc
60
accccgaacc aggaagcacc tggcggcggg cgcgggatgg ctgggcccag ctggggtctc
120
cctcggctgg acggtttcat ccttaccgag cgcctgggca gtggcacgta cgccacggtg
180
tacaaggcct acgccaagaa ggatactcgg gaagtggtag ccataaaatg cgtggccaag
240
aagagtctca acaaggcgtc agtggaaaac ctcctgactg agattgagat cctcaagggc
300
attcggcacc cccatatcgt gcagctgaaa gacttccagt gggacaatga caatatctac
360
ctcatcatgg agttctgtgc agggggtgac ctgtctcgct tcattcatac cc
412

<210> 29
<211> 437
<212> DNA
<213> Mouse

<400> 29
cacagtcttg tttctggtgg ctttgatcac tgtggggatg aacactacct atgtagtgtc
60
ttgccccaaa gaatttgaaa aacctggagc ttgtcccaag ccttcaccag aaagtgttgg
120
aatttgtgtt gatcaatgct caggagatgg atcctgcccc ggcaacatga agtgctgtag
180
caatagctgt ggtcatgtct gcaaaactcc tgtcttttaa atggttgaca gccatgtgga
240
agatggattc aatcttcata aacatgaatg atggccagcc ccagaagatt tcttctgaat
300



AMENDED SHEET
IPEA/AU

tcacagagcc tgtgcttggc tacttcctag ccctagaatt gcattcttgg acaaggaaga
360
tctatattgt ggtgacaatg ccctaatatg tctgtgtcca aaataaacta cccttagcat
420
tcaaaaaaaa aaaaaaa
437

<210> 30
<211> 126
<212> PRT
<213> Mouse

<220>
<221> UNSURE
<222> (123)...(123)

<400> 30

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

<210> 31
<211> 529
<212> PRT
<213> Mouse

<400> 31

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

```
Ser Gly Gly Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg Pro Arg
    130                 135                 140
Phe Thr Gln Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg Pro Val
145                 150                 155                 160
Gly Ser Ser Val Arg Leu Lys Cys Val Ala Ser Gly His Pro Arg Pro
                165                 170                 175
Asp Ile Met Trp Met Lys Asp Asp Gln Thr Leu Thr His Leu Glu Ala
            180                 185                 190
Ser Glu His Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn Leu Lys
        195                 200                 205
Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val Ser Asn Lys Ala Gly
    210                 215                 220
Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile Gln Arg Thr Arg Ser
225                 230                 235                 240
Lys Pro Val Leu Thr Gly Thr His Pro Val Asn Thr Thr Val Asp Phe
                245                 250                 255
Gly Gly Thr Thr Ser Phe Gln Cys Lys Val Arg Ser Asp Val Lys Pro
            260                 265                 270
Val Ile Gln Trp Leu Lys Arg Val Glu Tyr Gly Ser Glu Gly Arg His
        275                 280                 285
Asn Ser Thr Ile Asp Val Gly Gly Gln Lys Phe Val Val Leu Pro Thr
    290                 295                 300
Gly Asp Val Trp Ser Arg Pro Asp Gly Ser Tyr Leu Asn Lys Leu Leu
305                 310                 315                 320
Ile Ser Arg Ala Arg Gln Asp Asp Ala Gly Met Tyr Ile Cys Leu Gly
                325                 330                 335
Ala Asn Thr Met Gly Tyr Ser Phe Arg Ser Ala Phe Leu Thr Val Leu
            340                 345                 350
Pro Asp Pro Lys Pro Pro Gly Pro Pro Met Ala Ser Ser Ser Ser Ser
        355                 360                 365
Thr Ser Leu Pro Trp Pro Val Val Ile Gly Ile Pro Ala Gly Ala Val
    370                 375                 380
Phe Ile Leu Gly Thr Val Leu Leu Trp Leu Cys Gln Thr Lys Lys Lys
385                 390                 395                 400
Pro Cys Ala Pro Ala Ser Thr Leu Pro Val Pro Gly His Arg Pro Pro
                405                 410                 415
Gly Thr Ser Arg Glu Arg Ser Gly Asp Lys Asp Leu Pro Ser Leu Ala
            420                 425                 430
Val Gly Ile Cys Glu Glu His Gly Ser Ala Met Ala Pro Gln His Ile
        435                 440                 445
Leu Ala Ser Gly Ser Thr Ala Gly Pro Lys Leu Tyr Pro Lys Leu Tyr
    450                 455                 460
Thr Asp Val His Thr His Thr His Thr His Thr Cys Thr His Thr Leu
465                 470                 475                 480
Ser Cys Gly Gly Gln Gly Ser Ser Thr Pro Ala Cys Pro Leu Ser Val
                485                 490                 495
Leu Asn Thr Ala Asn Leu Gln Ala Leu Cys Pro Glu Val Gly Ile Trp
            500                 505                 510
Gly Pro Arg Gln Gln Val Gly Arg Ile Glu Asn Asn Gly Gly Arg Val
        515                 520                 525
Ser
```

<210> 32
<211> 439
<212> PRT



AMENDED SHEET

<213> Mouse

<400> 32

```
Met Thr Arg Ser Pro Ala Leu Leu Leu Leu Leu Leu Gly Ala Leu Pro
 1               5                  10                  15
Ser Ala Glu Ala Ala Arg Asp Asp Ile Ser Pro Gly Lys Glu Ser Pro
            20                  25                  30
Gly Pro Gly Gly Ser Ser Gly Gly Gln Glu Asp Pro Ala Ser Gln Gln
        35                  40                  45
Trp Ala Arg Pro Arg Phe Thr Gln Pro Ser Lys Met Arg Arg Arg Val
    50                  55                  60
Ile Ala Arg Pro Val Gly Ser Ser Val Arg Leu Lys Cys Val Ala Ser
65                  70                  75                  80
Gly His Pro Arg Pro Asp Ile Met Trp Met Lys Asp Asp Gln Thr Leu
                85                  90                  95
Thr His Leu Glu Ala Ser Glu His Arg Lys Lys Lys Trp Thr Leu Ser
            100                 105                 110
Leu Lys Asn Leu Lys Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val
        115                 120                 125
Ser Asn Lys Ala Gly Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile
    130                 135                 140
Gln Arg Thr Arg Ser Lys Pro Val Leu Thr Gly Thr His Pro Val Asn
145                 150                 155                 160
Thr Thr Val Asp Phe Gly Gly Thr Thr Ser Phe Gln Cys Lys Val Arg
                165                 170                 175
Ser Asp Val Lys Pro Val Ile Gln Trp Leu Lys Arg Val Glu Tyr Gly
            180                 185                 190
Ser Glu Gly Arg His Asn Ser Thr Ile Asp Val Gly Gly Gln Lys Phe
        195                 200                 205
Val Val Leu Pro Thr Gly Asp Val Trp Ser Arg Pro Asp Gly Ser Tyr
    210                 215                 220
Leu Asn Lys Leu Leu Ile Ser Arg Ala Arg Gln Asp Asp Ala Gly Met
225                 230                 235                 240
Tyr Ile Cys Leu Gly Ala Asn Thr Met Gly Tyr Ser Phe Arg Ser Ala
                245                 250                 255
Phe Leu Thr Val Leu Pro Asp Pro Lys Pro Pro Pro Gly Pro Pro Met
            260                 265                 270
Ala Ser Ser Ser Ser Ser Thr Ser Leu Pro Trp Pro Val Val Ile Gly
        275                 280                 285
Ile Pro Ala Gly Ala Val Phe Ile Leu Gly Thr Val Leu Leu Trp Leu
    290                 295                 300
Cys Gln Thr Lys Lys Lys Pro Cys Ala Pro Ala Ser Thr Leu Pro Val
305                 310                 315                 320
Pro Gly His Arg Pro Pro Gly Thr Ser Arg Glu Arg Ser Gly Asp Lys
                325                 330                 335
Asp Leu Pro Ser Leu Ala Val Gly Ile Cys Glu Glu His Gly Ser Ala
            340                 345                 350
Met Ala Pro Gln His Ile Leu Ala Ser Gly Ser Thr Ala Gly Pro Lys
        355                 360                 365
Leu Tyr Pro Lys Leu Tyr Thr Asp Val His Thr His Thr His Thr His
    370                 375                 380
Thr Cys Thr His Thr Leu Ser Cys Gly Gly Gln Gly Ser Ser Thr Pro
385                 390                 395                 400
Ala Cys Pro Leu Ser Val Leu Asn Thr Ala Asn Leu Gln Ala Leu Cys
                405                 410                 415
Pro Glu Val Gly Ile Trp Gly Pro Arg Gln Gln Val Gly Arg Ile Glu
```



AMENDED SHEET
IPEA/AU

420 425 430
Asn Asn Gly Gly Arg Val Ser
435

<210> 33
<211> 322
<212> PRT
<213> Human

<400> 33
Arg Arg Ala Pro Cys Cys Cys Ser Cys Cys Arg Arg Cys Cys Trp Gly
1 5 10 15
Pro Ser His Arg Pro Pro Pro Pro Glu Ala Pro Gln Arg Trp Arg Thr
20 25 30
Arg Trp Ser His Gly Arg Trp Pro Ala Gly Pro His Cys Ala Ala Ala
35 40 45
Val Pro Val Glu Gly Asp Pro Pro Pro Leu Thr Met Trp Thr Lys Asp
50 55 60
Gly Arg Thr Ile His Ser Gly Trp Ser Arg Phe Arg Val Leu Pro Gln
65 70 75 80
Gly Leu Lys Val Lys Gln Val Glu Arg Glu Asp Ala Gly Val Tyr Val
85 90 95
Cys Lys Ala Thr Asn Gly Phe Gly Ser Leu Ser Val Asn Tyr Thr Leu
100 105 110
Val Val Leu Asp Asp Ile Ser Pro Gly Lys Glu Ser Leu Gly Pro Asp
115 120 125
Ser Ser Ser Gly Gly Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg
130 135 140
Pro Arg Phe Thr Gln Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg
145 150 155 160
Pro Val Gly Ser Ser Val Arg Leu Lys Cys Val Ala Ser Gly His Pro
165 170 175
Arg Pro Asp Ile Thr Trp Met Lys Asp Asp Gln Ala Leu Thr Arg Pro
180 185 190
Glu Ala Ala Glu Pro Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn
195 200 205
Leu Arg Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val Ser Asn Arg
210 215 220
Ala Gly Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile Gln Arg Thr
225 230 235 240
Arg Ser Lys Pro Val Leu Thr Gly Thr His Pro Val Asn Thr Thr Val
245 250 255
Asp Phe Gly Gly Thr Thr Ser Phe Gln Cys Lys Val Arg Ser Asp Val
260 265 270
Lys Pro Val Ile Gln Trp Leu Lys Arg Val Glu Tyr Gly Ala Glu Gly
275 280 285
Arg His Asn Ser Thr Ile Asp Val Gly Gly Gln Lys Phe Val Val Leu
290 295 300
Pro Thr Gly Asp Val Trp Ser Arg Pro Asp Gly Ser Tyr Leu Asn Lys
305 310 315 320
Pro Leu

<210> 34
<211> 102
<212> PRT



AMENDED SHEET
IPEA/AU

<213> Mouse

<400> 34

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

<210> 35
<211> 147
<212> PRT
<213> Mouse

<400> 35

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

<210> 36
<211> 574
<212> PRT
<213> Mouse

<400> 36

```
Met Glu Ser Leu Cys Gly Val Leu Gly Phe Leu Leu Leu Ala Ala Gly
 1               5                  10                  15
Leu Pro Leu Gln Ala Ala Lys Arg Phe Arg Asp Val Leu Gly His Glu
            20                  25                  30
Gln Tyr Pro Asn His Met Arg Glu His Asn Gln Leu Arg Gly Trp Ser
```



AMENDED SHEET
IPEA/AU

```
        35                  40                  45
Ser Asp Glu Asn Glu Trp Asp Glu His Leu Tyr Pro Val Trp Arg Arg
    50                  55                  60
Gly Asp Gly Arg Trp Lys Asp Ser Trp Glu Gly Gly Arg Val Gln Ala
65                  70                  75                  80
Val Leu Thr Ser Asp Ser Pro Ala Leu Val Gly Ser Asn Ile Thr Phe
                85                  90                  95
Val Val Asn Leu Val Phe Pro Arg Cys Gln Lys Glu Asp Ala Asn Gly
            100                 105                 110
Asn Ile Val Tyr Glu Lys Asn Cys Arg Asn Asp Leu Gly Leu Thr Ser
        115                 120                 125
Asp Leu His Val Tyr Asn Trp Thr Ala Gly Ala Asp Asp Gly Asp Trp
    130                 135                 140
Glu Asp Gly Thr Ser Arg Ser Gln His Leu Arg Phe Pro Asp Arg Arg
145                 150                 155                 160
Pro Phe Pro Arg Pro His Gly Trp Lys Lys Trp Ser Phe Val Tyr Val
                165                 170                 175
Phe His Thr Leu Gly Gln Tyr Phe Gln Lys Leu Gly Arg Cys Ser Ala
            180                 185                 190
Arg Val Ser Ile Asn Thr Val Asn Leu Thr Ala Gly Pro Gln Val Met
        195                 200                 205
Glu Val Thr Val Phe Arg Arg Tyr Gly Arg Ala Tyr Ile Pro Ile Ser
    210                 215                 220
Lys Val Lys Asp Val Tyr Val Ile Thr Asp Gln Ile Pro Val Phe Val
225                 230                 235                 240
Thr Met Ser Gln Lys Asn Asp Arg Asn Leu Ser Asp Glu Ile Phe Leu
                245                 250                 255
Arg Asp Leu Pro Ile Val Phe Asp Val Leu Ile His Asp Pro Ser His
            260                 265                 270
Phe Leu Asn Asp Ser Ala Ile Ser Tyr Lys Trp Asn Phe Gly Asp Asn
        275                 280                 285
Thr Gly Leu Phe Val Ser Asn Asn His Thr Leu Asn His Thr Tyr Val
    290                 295                 300
Leu Asn Gly Thr Phe Asn Leu Asn Leu Thr Val Gln Thr Ala Val Pro
305                 310                 315                 320
Gly Pro Cys Pro Pro Pro Ser Pro Ser Thr Pro Pro Pro Pro Ser Thr
                325                 330                 335
Pro Pro Ser Pro Pro Pro Ser Pro Leu Pro Thr Leu Ser Thr Pro Ser
            340                 345                 350
Pro Ser Leu Met Pro Thr Gly Tyr Lys Ser Met Glu Leu Ser Asp Ile
        355                 360                 365
Ser Asn Glu Asn Cys Arg Ile Asn Arg Tyr Gly Tyr Phe Arg Ala Thr
    370                 375                 380
Ile Thr Ile Val Glu Gly Ile Leu Glu Val Ser Ile Met Gln Ile Ala
385                 390                 395                 400
Asp Val Pro Met Pro Thr Pro Gln Pro Ala Asn Ser Leu Met Asp Phe
                405                 410                 415
Thr Val Thr Cys Lys Gly Ala Thr Pro Met Glu Ala Cys Thr Ile Ile
            420                 425                 430
Ser Asp Pro Thr Cys Gln Ile Ala Gln Asn Arg Val Cys Ser Pro Val
        435                 440                 445
Ala Val Asp Gly Leu Cys Leu Leu Ser Val Arg Arg Ala Phe Asn Gly
    450                 455                 460
Ser Gly Thr Tyr Cys Val Asn Phe Thr Leu Gly Asp Asp Ala Ser Leu
465                 470                 475                 480
Ala Leu Thr Ser Thr Leu Ile Ser Ile Pro Gly Lys Asp Pro Asp Ser
```



AMENDED SHEET

```
                485                 490                 495
Pro Leu Arg Ala Val Asn Gly Val Leu Ile Ser Ile Gly Cys Leu Ala
            500                 505                 510
Val Leu Val Thr Met Val Thr Ile Leu Leu Tyr Lys Lys His Lys Ala
        515                 520                 525
Tyr Lys Pro Ile Gly Asn Cys Pro Arg Asn Thr Val Lys Gly Lys Gly
    530                 535                 540
Leu Ser Val Leu Leu Ser His Ala Lys Ala Pro Phe Phe Arg Gly Asp
545                 550                 555                 560
Gln Glu Lys Asp Pro Leu Leu Gln Asp Lys Pro Arg Thr Leu
                565                 570
```

<210> 37
<211> 137
<212> PRT
<213> Mouse

<400> 37

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

<210> 38
<211> 72
<212> PRT
<213> Mouse

<400> 38

```
Thr Val Leu Phe Leu Val Ala Leu Ile Thr Val Gly Met Asn Thr Thr
 1               5                  10                  15
Tyr Val Val Ser Cys Pro Lys Glu Phe Glu Lys Pro Gly Ala Cys Pro
            20                  25                  30
Lys Pro Ser Pro Glu Ser Val Gly Ile Cys Val Asp Gln Cys Ser Gly
        35                  40                  45
Asp Gly Ser Cys Pro Gly Asn Met Lys Cys Cys Ser Asn Ser Cys Gly
    50                  55                  60
His Val Cys Lys Thr Pro Val Phe
65                  70
```

<210> 39
<211> 1587



AMENDED SHEET
IPEA/AU

<212> DNA
<213> Mouse

<400> 39

gcggcgcggg tagagggcgg tgggcggcga gcggcgatgg gccgcgcctg gggcttgctc
60
gttggactcc tgggcgtcgt gtggctgctg cgcttgggcc acggcgagga gcggcggccg
120
gagacagcgg cacagcgctg cttctgccag gttagtggtt acctggacga ctgtacctgt
180
gatgtcgaga ccatcgataa gtttaataac tacagacttt tcccaagact acaaaagctt
240
cttgaaagtg actactttag atattacaag gtgaacttga agaagccttg tcctttctgg
300
aatgacatca accagtgtgg aagaagagac tgtgccgtca aaccctgcca ttctgatgaa
360
gttcctgatg gaattaagtc tgcgagctac aagtattctg aggaagccaa ccgcattgaa
420
gaatgtgagc aagctgagcg acttggagcc gtggatgagt ctctgagtga ggagacccag
480
aaagctgtac ttcagtggac caagcatgat gattcgtcag acagcttctg cgaaattgac
540
gatatacagt cccccgatgc tgagtatgtg gacttactcc ttaaccctga gcgctacaca
600
ggctacaagg ggccagacgc ttggaggata tggagtgtca tctatgaaga aaactgtttt
660
aagccacaga caattcaaag gcctttggct tctgggcgag gaaaaagtaa agagaacaca
720
ttttacaact ggctagaagg cctctgtgta gaaaagagag cattctacag acttatatct
780
ggcctgcacg caagcattaa tgtgcatttg agtgcaaggt atcttttaca agatacttgg
840
ctggaaaaga aatggggtca caatgtcaca gagttccagc agcgctttga tgggattctg
900
actgaaggag aaggcccacg aaggctgagg aacttgtact tcctgtacct gatagagtta
960
agggctctct ccaaagtgct tccatttttt gagcgtccag attttcagct cttcactggg
1020
aataaagttc aggatgcaga aaacaaagcg ttacttctgg agatacttca tgaaatcaag
1080
tcatttcctt tgcacttcga tgagaattct ttttttgctg gggataaaaa cgaagcacat
1140
aaactaaagg aggacttccg gctacacttt aggaacattt caagaatcat ggactgtgtt
1200
ggctgcttca agtgccgcct gtggggcaag cttcagacgc aggggctggg cactgctctg
1260
aagatcttgt tttccgaaaa actgatcgca aatatgccgg aaagcggacc aagttatgag
1320
ttccagctaa ccagacaaga aatagtatca ctgtttaatg catttggaag gatttccaca
1380
agtgtgagag aactagagaa cttcaggcac ttgttacaga atgttcactg aggaggacgg
1440
ttggaatgtg cctgtttctg cacaggggaa tttgaagggc aaaatctctt ttagccccat
1500
ggttgcaatg tactgtccta agcccaacgt ttatataaac ctgcttttgt taaagaaaaa
1560



AMENDED SHEET
IPEA/AU

aaaaaaaaaa aaaaaaaaaa aaaaaaa
1587

<210> 40
<211> 2435
<212> DNA
<213> Mouse

<400> 40
ggaggaggct cggcgccccc ctcctggccc cctccccccc ggtgctggct ccatgtctgt
60
gtgaccggcc gcaggggtag gattcaggcc cgacgcgggg cgggcgggcg acggcggctg
120
aggtgagagg cggcggcggc ggcgcggctc gggcaccggc cccccagcgg gaggatgaag
180
cggcggaacg ccgactgcag taagctccgc cgccccctga agcggaaccg gatcaccgag
240
ggtatctacg gcagtacatt tttatacctg aaattcctgg tagtgtgggc acttgtcctc
300
cttgccgact ttgtcctgga gttccgattt gaatacctgt ggccgttctg gcttttcatc
360
agaagcgtct atgattcctt cagataccaa ggactggcct tctcagtatt ttttgtttgt
420
gtagcattca cttcaaatat catatgtctc ctcttcattc ccatacaatg gctttttttc
480
gctgctagca catatgtatg ggtccagtac gtatggcaca cagaaagggg agtgtgtttg
540
cctacagtgt cactctggat cctctttgtt tatattgaag cagcaattag atttaaagat
600
ctgaaaaact ttcatgtaga cctttgtcga ccgtttgctg ctcactgcat tggataccct
660
gtggtgactt tgggctttgg cttcaaaagt tatgtgagct acaaaatgcg gttaaggaag
720
cagaaggaag ttcagaagga gaacgagttt tacatgcagc ttcttcagca ggccctccct
780
ccagagcagc aaatgttgca gaagcaggag aaggaggctg aggaagcagc caagggattg
840
ccggacatgg attcctcgat ccttatacac cacaacggag gcatcccagc caacaaaaaa
900
ctgtccacaa cgttgccaga gatagaatat cgagaaaaag ggaaagagaa ggacaaggat
960
gccaagaaac acaaccttgg aataaataac aacaacattc tacaacctgt agactctaag
1020
atacaagaga ttgagtatat ggaaaaccat atcaatagta aaagattaaa caatgatctt
1080
gtgggaagta cagaaaatct cttaaaagag gactcatgca ctgcttcctc aaaaaattac
1140
aaaaatgcca gtggagttgt gaactcctcg cctcgaagtc acagcgctac aaatggaagc
1200
attccttcct cgtctagtaa aaacgagaag aagcagaagt gcaccagcaa gggcccgagt
1260
gcacacaagg acttaatgga gaactgtatt cctaacaacc agctgagcaa accagacgcg
1320
ctggtaaggc tggaacaaga cattaaaaag ctaaaggctg acctgcaagc cagccggcaa
1380



AMENDED SHEET
IPEA/AU

gtggagcaag agctgcgcag tcagatcagc gccctctcaa gcacagagcg aggcatccgc
1440
tcagaaatgg gccagctccg gcaggagaac gagctgctgc agaacaagtt acacaatgcc
1500
gtgcaaatga agcaaaaaga caagcagaat atcagccagc tagagaagaa gctaaaggct
1560
gagcaggaag cccgaagctt tgtagaaaag cagctaatgg aggagaaaaa aaggaagaag
1620
ttagaagaag ccacagctgc acgggctgtt gcctttgctg ctgcatctag gggagagtgc
1680
acggaaacct tacggagtcg gatcagagag ctagaagctg agggcaagaa gctcacaatg
1740
gacatgaaag tgaaggagga gcagatcagg gaactggaac tgaaggttca ggagcttcgg
1800
aagtacaaag aaaacgagaa ggacaccgag gtattgatgt cagccctctc cgccatgcaa
1860
gacaaaacgc aacacctaga gaacagtctc agcgcagaga cgaggatcaa gctggacctc
1920
ttctctgcac ttggtgatgc aaagcggcag ctggagattg cccaggggca aattcttcag
1980
aaagaccagg aaatcaagga cctaaaacag aaaatagctg aagtcatggc tgtcatgccc
2040
agcataacat acagtgctgc caccagtccc ctgagccccg tgtccccca ctactcttcc
2100
aagtttgtgg agaccagccc ctctggactt gaccctaatg cctctgtcta ccagcccttg
2160
aagaagtgaa ggccaactgt gtgctcgccc aacatttgca accaggaggc ttcgaaaagc
2220
agcgtctctg gcagtcaaga taaaaaagtt gatattgtgt tttgtgggac tgtatatgtt
2280
gtcattttta aaggggggaa ataacatcca agtctgatta gaaccgccca tcagttgttc
2340
ttggaagttt ttagaagacc tcacggactt tgcagtttat ttttgttggc caacacatta
2400
aacccattct tggatttcaa gtaaaaaaaa aaaaa
2435

<210> 41
<211> 1720
<212> DNA
<213> Mouse

<400> 41
gtgacgcgca ggcccaggcg gaagtgcggg cggaggatcc cgagccggat cccgagccgg
60
gcgcggggct cggggctcgc aggagcggct ggctcccgcg atggcgagcc tatggtgcgg
120
aaacctgctg cggctgggct cggggctcaa catgtcctgc ctggcgctgt cggtgctgct
180
gctcgcgcag ctgacaggcg ccgccaagaa ttttgaagat gtgagatgta aatgcatctg
240
ccctccctat aaagagaatc ctgggcacat ttataataag aatatatctc agaaagattg
300
tgattgcctt catgtcgtgg agcccatgcc tgtacgggga cctgatgtag aagcatactg
360



AMENDED SHEET

tctacgctgt gaatgcaaat acgaagagag aagctctgtc acaatcaagg ttaccattat
420
aatttatctc tctattttgg gccttctgct tctgtacatg gtatatctta ccttagttga
480
gcccatcctg aagaggcgcc tctttggaca ctcccagctg ttgcagagcg atgatgacgt
540
tggggatcac cagccttttg caaatgccca tgatgtgctg gcccgctctc gcagccgagc
600
caatgttcta aacaaggtgg agtacgctca gcagcgctgg aagctccagg tccaggagca
660
gcgaaagtct gtcttcgacc gacacgttgt cctcagctaa ctgggaactg gaatcaggtg
720
actaggaaga acacgcagac aactgggaag aattgtctgg gtgtccgtgc gttttaatgc
780
catgtttgtt tttacaaatc cttgctggat ggaggaagac tccaaactgg aagcaaaccc
840
catgcttggt attttcctgt taatatatta atagagacat ttttacagca cacagttcca
900
agtcaaccag taagtctttt cctacttgtg acttttacta ataaaattaa gctgcctgtg
960
agttatcttg aagccccgtg cctggaacaa gctctctctt tcttgccaca cagttctaac
1020
ttggtgttca agataacttc caggtgtgtt tttgcttctc tttcttgtgg tgggagagag
1080
agggaaggat gccttgggag tgcttgagta gcttctcaag tgtcttttcc agacagactt
1140
atgaatactt cagaccctct acttcacact tgttaatgtc ccagtgtagc tggcttgtca
1200
gcgtgctggc ctccccactt gacttttgca ctgactacat tacctaagat tctggttagc
1260
ctgtggctgc atttcatgac cagttggatc tgaaatgcct gggggctcct cacaaaatga
1320
agatttgttt catgcactgt gatgtctgac gcaacatgtt ctagaacaga ctggccatct
1380
gctagtttac actgatacct aaacacagtc tcagtgtgtg tggtcttcct catcttcttc
1440
tagtagctct aaggacttga acatttagaa taaagacatt ttctcttaag cccaagcctc
1500
cctggatgat tgacgtacaa atactgatca gccttttctg tcttgctgag aggcagttct
1560
ttgaactgat gtgggcagct ttgaacaagg actagagttc agattgcctc tctctgagaa
1620
gtctaacagt tattggataa ctggcttttt tcttcctaca tcctctttgg aatgtaacaa
1680
taaaataatt tacaaaaccc aaaaaaaaaa aaaaaaaaaa
1720

<210> 42
<211> 1008
<212> DNA
<213> Mouse

<400> 42
gggaaaagca agatcttgca caaggtcccc tccggctggc tgctggcaaa ggaaaggtgc
60



AMENDED SHEET
IPEA/AU

catgggacct ctccaccagt ttctcctgct gctgatcaca gccctgtccc aagccctcaa
120
caccacggtg ctgcagggca tggccggcca gtccttgagg gtgtcatgta cttatgacgc
180
cttgaagcac tgggggagac gcaaggcctg gtgtcggcag ctgggtgagg agggcccatg
240
ccagcgtgtg gtgagcacac acggtgtgtg gctgctggcc ttcctgaaga agcggaatgg
300
gagcacagtc atcgcagatg acacccttgc tggaaccgtc accatcactc tgaagaacct
360
ccaagccggt gacgcgggcc tctaccagtg tcagagtctc cgaggccgag aggctgaggt
420
cctgcagaaa gtactggtgg aggtgctgga ggaccctcta gatgaccaag atgctggaga
480
tctctgggtc cccgaggagt catcgagttt cgagggtgcc caagtggaac acagcacctc
540
caggaatcaa gagacctcct tcccacccac ctccattctt ctcctcctgg cctgcgttct
600
cctgagcaag tttcttgcag ccagcatcct ctgggctgtg gccaggggca ggcagaagcc
660
gggaacacct gtggtcagag ggctggactg tggccaagat gctgggcacc aacttcagat
720
cctcactgga cccggaggta cgtgagagaa ttctgagtgg gaggagaact acagcttaag
780
tccagccagg agtcaatcca gcctgcatgc tctcccctcc tccaccaaga cttctgtttc
840
tgctactttt gcttcagagg ccgcctctgc ctcaagccca cctatcctgg gagcaggaat
900
actggtgtgt acatctgtgt tgagtgggga agacagctgg atggttgtct gtcaagttct
960
gcactttgga cattaaacat tctccacaca ccaaaaaaaa aaaaaaaa
1008

<210> 43
<211> 1871
<212> DNA
<213> Mouse

<400> 43
ggcagcggca gtgtagagcc gggccgggag gccgatcctg cgggtctgga gtccggcggg
60
accatgggga ccggggctgg tgggccgagt gtcctggcgc tgctgttcgc cgtgtgtgct
120
ccgctccggt tgcaggcgga ggagctgggt gatggctgtg ggcacatagt gacctctcag
180
gacagtggca caatgacatc taagaattat ccagggactt accccaatta cactgtgtgt
240
gaaaagatca tcacagtccc aaaggggaag agacttattc tgaggttggg agatttgaac
300
attgagtcca agacctgcgc ttctgactat ctcctcttca gcagtgcaac agatcagtat
360
ggtccatatt gtgggagttg ggctgttccc aaagaactcc ggctgaactc aaacgaagtg
420
actgtcctct tcaagagtgg atctcacatt tctggccggg gctttctgct gacctacgcc
480



AMENDED SHEET
IPEA/AU

agcagtgacc atccagattt aataacctgt ttggaacgag gcagccatta tttcgaggaa
540
aaatacagca aattctgccc agctggctgt agagacatag cacgagatat ttctgggaat
600
acaaaagatg gttacagaga tacctcttta ttgtgcaaag ctgccatcca cgcagggatc
660
atcacagatg aactaggtgg ccacatcaac ttgcttcaga gcaaagggat aagtcactat
720
gaaggactcc tggccaatgg cgtgctctcc cggcatggtt ctttgtcgga aaagcgattt
780
ctttttacaa ccccaggaat gaatattaca actgtggcga ttccatcagt gatcttcatc
840
gccctccttc tgactggaat ggggatcttt gcaatctgta gaaagaggaa aaagaaagga
900
aatccatatg tgtcagctga cgctcagaaa acaggctgtt ggaagcagat taaatatccc
960
tttgccaggc atcagtcgac ggaatttacc atcagctatg acaatgaaaa agagatgaca
1020
caaaagttgg atctcatcac tagtgatatg gcagattatc agcagcctct catgattggc
1080
acaggcacag tcgcgagaaa gggctctacc ttccgaccca tggacacaga cactgaggag
1140
gtcagagtga acactgaggc cagcggccac tatgactgtc ctcaccgccc gggccgccat
1200
gagtacgcac tgcctttgac gcactcagaa cctgagtatg ccacacctat cgtggagcgg
1260
cacctgctgc gagctcacac cttctccaca cagagcggct accgagtccc tgggcccagg
1320
cccactcacg aacactccca ttcctctgga ggctttcctc ctgctacagg agccacccag
1380
gttgaaagct atcagaggcc agcaagcccc aagcctgtgg gtggtggcta tgacaagcct
1440
gctgctagca gcttcttgga cagcagagac ccagcctctc agtcacagat gacttccggg
1500
ggagatgatg gttattcggc acccagaaac ggtcttgcgc ccctcaacca gacggccatg
1560
actgctcttt tgtgaaccca atgtgaaaga aacctgctgt ggtactgagc gcgcaccgct
1620
gcgagtcact ggaagaaatg tgcaagcgtg catgtgtgac tcttcaggat cctagagacg
1680
acctcactta ctgtttacag aactgtgcag ctggtttagt tccaaccctt cctgcagagc
1740
cagttggttt ctgttgtgct agaacaaggg gacttttctc atttgtctta actgtgatgc
1800
tgtgctgtaa aatgtgcaat ttgtacagtt atatttaaca cgaattaaca ttaaaaaaaa
1860
aaaaaaaaaa a
1871

<210> 44
<211> 3767
<212> DNA
<213> Mouse

<400> 44



AMENDED SHEET
IPEA/AU

cggacttggg gcgggaggct ggcggataaa aagcccccag ggcgccccgg gaggcccgtt
60
agcgctgctc tgccgcggcg cccggcccag ccccgacctc cacatcctgc cggcgctctg
120
aaatcaccat gatgtggccc caaccaccca ccttctccct gttcctgcta ctgctgctaa
180
gccaagcccc ttccagtagg ccacagtcat caggcaccaa gaagctcagg cttgtggggc
240
cagcggacag accaaaggag ggccgcttgg aggtgctgca ccagggccag tggggcacgg
300
tgtgtgatga tgatttcgct ctccaggagg ctactgtggc ctgccgacag ctgggctttg
360
agtcagcctt gacctgggca cacagtgcca agtatggtca aggagagggt cccatctggc
420
tggacaatgt tcgttgtttg ggcaccgaga agaccctaga tcagtgtggc tctaacggct
480
ggggtatcag tgactgcaga cactcagaag atgttggggt ggtatgtcac ccacggcgcc
540
agcacggata tcactctgag aaggtctcca atgccctcgg gcctcagggc cggcggctag
600
aagaggtacg gctgaaaccc atcctcgcca gtgccaaaag gcacagccca gtgactgaag
660
gggctgtgga agtacggtac gacggccact ggaggcaggt gtgtgaccag ggctggacca
720
tgaacaacag cagggttgta tgcgggatgc tgggctttcc cagtcagaca tctgtcaaca
780
gccactacta cagaaaagtc tggaatctga agatgaagga tcccaagtct aggctcaaca
840
gcctgacaaa aaagaattcc ttctggattc accgggttga ctgtttcggg acagagcccc
900
acttggccaa gtgccaggta caggtggctc caggaagggg caagcttcgg gcagcctgtc
960
caggcggcat gcacgctgtg gtcagctgtg tggcagggcc ccacttccgc cgacagaagc
1020
caaagcccac gcgcaaggag tcccatgcag aggagctgaa agtgcgcctg cgctctgggg
1080
ctcaggtggg tgagggccgt gtggaagtgc tcatgaaccg ccagtggggc acagtctgtg
1140
accacaggtg gaacctcatc tcagccagcg tcgtgtgtcg ccagcttggc tttggctctg
1200
cccgggaggc ccttttggg gcccagttgg gtcaagggct aggacccatc cacctgagtg
1260
aggtgcgctg ccgggggtat gagcggaccc tgggtgactg ccttgccctg gaagggtccc
1320
agaatggttg tcaacatgca aacgacgctg ctgtcaggtg caacatccca gacatgggct
1380
tccagaacaa ggtgcgcttg gctggtgggc gcaactccga agagggagtg gtggaggtgc
1440
aggtggaggt gaatggggtc ccacgatggg ggactgtatg cagtgaccac tgggggctca
1500
ccgaagccat ggtgacctgt cggcaacttg gtctgggatt tgccaacttt gctctcaagg
1560
acacctggta ctggcagggg acaccagagg ccaaagaagt ggtgatgagt ggagttcgct
1620
gctccggcac agaaatggcc ctgcagcagt gtcagaggca tgggccggtg cactgttccc
1680



AMENDED SHEET
IPEA/AU

acggcccagg gcgcttctcg gctggcgttg cttgtatgaa cagtgctcca gacctcgtga
1740
tgaacgccca gctggtacaa gagacggcgt acttggagga tcgtccactc agcatgctgt
1800
actgtgctca cgaggaaaac tgcctctcca agtccgctga tcacatggac tggccctacg
1860
ggtaccggcg cttgctgcgc ttctcctcac agatctacaa ccttggccgg gccgacttcc
1920
gtcccaaggc tggacgccac agctggattt ggcaccagtg ccacaggcac taccacagca
1980
tcgaagtctt cactcattat gacctgctca cgctcaatgg ctccaaggtg gccgagggac
2040
acaaggccag cttctgtcta gaagatacaa actgcccctc aggagtgcag cggcgctatg
2100
catgtgccaa ctttggggaa cagggagtgg ctgtaggctg ctgggacacc taccggcatg
2160
acatcgattg ccagtgggtg gatatcacag atgtgggtcc aggggactat atcttccagg
2220
tggttgtgaa ccccacaaac gatgttgcag agtccgattt ctccaataac atgatacggt
2280
gccgctgcaa gtatgatgga cagcgagtct ggttgcacaa ctgccacaca ggagattcct
2340
accgagccaa tgcagagctc tccctggagc aggaacagcg actcaggaac aacttgatct
2400
gaagccatta ctgcactccc agctctgctc acacaccaga tacctcagct gactggagcc
2460
atgcccttca caaagccctg actcacagga caaggggcta gtgacaagga gcaccaagaa
2520
gctgctcagg aggcctttca gtggccagat catcacccgg gatggcagtt ctctcaggat
2580
ggctctgggc cagctcaacc ttctcttcct tcaggagact cgatcttctt tacaacttga
2640
tgcacagttc ccagtttcag gagctctaag ttcctcaggg atgaactgtg accaaggccc
2700
cctctaagtg gtgctttgca aatgtcttgg aggaccaaag gacagacgac ccgagaacac
2760
aagctgtgga tggagtcgtt ttctctgcta tacgctccac gcaaaaggac catgtcaaag
2820
tcacacctgg cagagacgct ggtgaacaca gtccctcagc ttaccctcac ttagaactcg
2880
catctcaggc tctgaagcct ctccttgcat ctttaccttc attcggtcac acatggtgtt
2940
tccaatatcc ctgaaccctc aggcctcctc catttcctga tgggtcaaca cctcgattat
3000
tggggctggg gagcaagttt cacagaatga cgagacaggg cctttcctgc agagtagtca
3060
gaaagcaaga cgaaggctga ggtcacatga attcagcctc ggaggacctc tgcccaggga
3120
ggtgccatat ctggcaggca ggccagtctc ttagaatcac ccacattgta gggttagcct
3180
aaatttcaga tttaaccaaa gccacttcac cttaaacttt tgcaattgag aagaaattgg
3240
tcagccaagc ccctctgcag gaacaccaag acaggtccag tagagttagg aacagaagac
3300
ggagttaaca agaagtgaga aggaaacctg ggagaggcca ccatccagtg aggcggctgt
3360

gctctgttct tgctcaggtg gtataagacc tggagtcttc cagggcatgc ctggaccttt
3420
tctccactga catacacaca gatgatcctt ctaggtctta taatgccaac aaaggttgct
3480
cactatgggc tgccacaaag gccagaccag ctgagcttct gcagcttcca ctgcactaca
3540
ctctgccctc ttccctccag agctggatga cgctcggaac acaatccttg gcacagccca
3600
ccctagtaca tttcttgggt ctcacactaa cctgcttcac cgttacgctg cccaaggtca
3660
acagtgaatc ttgggtcagg aaggctgaga ggtgaagggg aggaatgaga aggtgtgacc
3720
cagactttag acttttataa cagaggctac aaaaaaaaaa aaaaaaa
3767

<210> 45
<211> 925
<212> DNA
<213> Mouse

<400> 45
gcgcgcgcgg cgatggaggc ggcggcgacc gtggttttgg ccctggcgct gctcggggcc
60
gcggcgcggg gcgcggcgag tgacgacttc aacctgggcg acgccctgga ggaccccaac
120
atgaagccaa cccccaaggc cccaacgccc aagaagccgt caggaggctt cgacctggag
180
gacgccctgc ccggcggcgg cggaggaggc gcaggagaga agccgggaaa ccggccccag
240
ccggacccga agccgccaag gccacacgga gactcaggcg gcatctcgga cagcgacctg
300
gcagacgccg cgggccaggg aggcggagcc gggcgacgcg ggagcggaga cgaaggcggc
360
catggcggcg ctggcggggc ggagccggaa gggacgcccc agggcttggt gccgggcgtg
420
gtggcggccg tggtggccgc cgtggcgggc gcggtgtcga gcttcgtggc ctatcagcgg
480
cggcgcctgt gcttccgcga gggcggctcc gcccccgtgt agatgacgcc atggccccgc
540
ccctccgggc atcatcgccc cctccagggc cccgatgaca tcactgacgc tgctcatttg
600
catacgcgct ccgccccgct gtgacgtcac tgaccccgcc cccggcctcg cctgaatatg
660
caaatagtcg gccccgcctc ccgccgtgaa atcaccgcct gcaccgcccc tcgccgctgc
720
atcagtgatg tcactactgc caaagactcc gcccacaact gacctctgac cccggtgaca
780
tcataacctc cactcacaag gagccatcat gggcagcccc ctgtctcagc tcagcatccc
840
ctccaggaca ggaaggggcg gagcctgaag gccgggggcg ggaccggaaa taaaggcgga
900
gttttgtaaa aaaaaaaaaa aaaaa
925

<210> 46
<211> 1423



AMENDED SHEET
IPEA/AU

<212> DNA
<213> Mouse

<400> 46
tctgtgcggc tcaagtgtgt ggccagtggg cacccacggc cagacatcat gtggatgaag
60
gatgaccaga ccttgacgca tctagaggct agtgaacaca gaaagaagaa gtggacactg
120
agcttgaaga acctgaagcc tgaagacagt ggcaagtaca cgtgccgtgt atctaacaag
180
gccggtgcca tcaacgccac ctacaaagtg gatgtaatcc gtgagtggtg ggtctgtggt
240
aggacagggg cccgtggtgc ctaaaactgt gctgacatgt ttgtttttcc ttggcttaga
300
gcggactcgt tccaagcctg tgctcacagg gacacaccct gtgaacacaa cggtggactt
360
cggtgggaca acgtccttcc agtgcaaggt gcgcagtgac gtgaagcctg tgatccagtg
420
gctgaagcgg gtggagtacg gctccgaggg acgccacaac tccaccattg atgtgggtgg
480
ccagaagttt gtggtgttgc ccacgggtga tgtgtggtca cggcctgatg gctcctacct
540
caacaagctg ctcatctctc gggcccgcca ggatgatgct ggcatgtaca tctgcctagg
600
tgcaaatacc atgggctaca gtttccgtag cgccttcctc actgtattac caggtgtgtg
660
tgtgggctgc ccaccccatg tttactctca gtctctacca ttggtctggg ctgtcctggg
720
gttccccaat gtccacttag caagtggggc ctccctatcc ttttcccttc gttgtgggtt
780
atccttgcct catagggagt tcaggggtgc tgcccatata gttcacattt gggctggttg
840
ccccattaat atagggacat tctgtccccc actcttcttc ttaatctctc ttgcagaccc
900
caaacctcca gggcctccta tggcttcttc atcgtcatcc acaagcctgc catggcctgt
960
ggtgatcggc atcccagctg gtgctgtctt catcctaggc actgtgctgc tctggctttg
1020
ccagaccaag aagaagccat gtgccccagc atctacactt cctgtgcctg ggcatcgtcc
1080
cccagggaca tcccgagaac gcagtggtga caaggacctg ccctcattgg ctgtgggcat
1140
atgtgaggag catggatccg ccatggcccc ccagcacatc ctggcctctg gctcaactgc
1200
tggccccaag ctgtacccca agctatacac agatgtgcac acacacacac atacacacac
1260
ctgcactcac acgctctcat gtggagggca aggttcatca acaccagcat gtccactatc
1320
agtgctaaat acagcgaatc tccaagcact gtgtcctgag gtaggcatat gggggccaag
1380
gcaacaggtt gggagaattg agaacaatgg aggaagagta tct
1423

<210> 47
<211> 464
<212> PRT



AMENDED SHEET

<213> Mouse

<400> 47

```
Met Gly Arg Ala Trp Gly Leu Leu Val Gly Leu Leu Gly Val Val Trp
 1               5                  10                  15
Leu Leu Arg Leu Gly His Gly Glu Glu Arg Arg Pro Glu Thr Ala Ala
            20                  25                  30
Gln Arg Cys Phe Cys Gln Val Ser Gly Tyr Leu Asp Asp Cys Thr Cys
        35                  40                  45
Asp Val Glu Thr Ile Asp Lys Phe Asn Asn Tyr Arg Leu Phe Pro Arg
    50                  55                  60
Leu Gln Lys Leu Leu Glu Ser Asp Tyr Phe Arg Tyr Tyr Lys Val Asn
65                  70                  75                  80
Leu Lys Lys Pro Cys Pro Phe Trp Asn Asp Ile Asn Gln Cys Gly Arg
                85                  90                  95
Arg Asp Cys Ala Val Lys Pro Cys His Ser Asp Glu Val Pro Asp Gly
            100                 105                 110
Ile Lys Ser Ala Ser Tyr Lys Tyr Ser Glu Glu Ala Asn Arg Ile Glu
        115                 120                 125
Glu Cys Glu Gln Ala Glu Arg Leu Gly Ala Val Asp Glu Ser Leu Ser
    130                 135                 140
Glu Glu Thr Gln Lys Ala Val Leu Gln Trp Thr Lys His Asp Asp Ser
145                 150                 155                 160
Ser Asp Ser Phe Cys Glu Ile Asp Asp Ile Gln Ser Pro Asp Ala Glu
                165                 170                 175
Tyr Val Asp Leu Leu Leu Asn Pro Glu Arg Tyr Thr Gly Tyr Lys Gly
            180                 185                 190
Pro Asp Ala Trp Arg Ile Trp Ser Val Ile Tyr Glu Glu Asn Cys Phe
        195                 200                 205
Lys Pro Gln Thr Ile Gln Arg Pro Leu Ala Ser Gly Arg Gly Lys Ser
    210                 215                 220
Lys Glu Asn Thr Phe Tyr Asn Trp Leu Glu Gly Leu Cys Val Glu Lys
225                 230                 235                 240
Arg Ala Phe Tyr Arg Leu Ile Ser Gly Leu His Ala Ser Ile Asn Val
                245                 250                 255
His Leu Ser Ala Arg Tyr Leu Leu Gln Asp Thr Trp Leu Glu Lys Lys
            260                 265                 270
Trp Gly His Asn Val Thr Glu Phe Gln Gln Arg Phe Asp Gly Ile Leu
        275                 280                 285
Thr Glu Gly Glu Gly Pro Arg Arg Leu Arg Asn Leu Tyr Phe Leu Tyr
    290                 295                 300
Leu Ile Glu Leu Arg Ala Leu Ser Lys Val Leu Pro Phe Phe Glu Arg
305                 310                 315                 320
Pro Asp Phe Gln Leu Phe Thr Gly Asn Lys Val Gln Asp Ala Glu Asn
                325                 330                 335
Lys Ala Leu Leu Leu Glu Ile Leu His Glu Ile Lys Ser Phe Pro Leu
            340                 345                 350
His Phe Asp Glu Asn Ser Phe Phe Ala Gly Asp Lys Asn Glu Ala His
        355                 360                 365
Lys Leu Lys Glu Asp Phe Arg Leu His Phe Arg Asn Ile Ser Arg Ile
    370                 375                 380
Met Asp Cys Val Gly Cys Phe Lys Cys Arg Leu Trp Gly Lys Leu Gln
385                 390                 395                 400
Thr Gln Gly Leu Gly Thr Ala Leu Lys Ile Leu Phe Ser Glu Lys Leu
                405                 410                 415
Ile Ala Asn Met Pro Glu Ser Gly Pro Ser Tyr Glu Phe Gln Leu Thr
```



AMENDED SHEET
IPEA/AU

```
            420                 425                 430
Arg Gln Glu Ile Val Ser Leu Phe Asn Ala Phe Gly Arg Ile Ser Thr
        435                 440                 445
Ser Val Arg Glu Leu Glu Asn Phe Arg His Leu Leu Gln Asn Val His
    450                 455                 460
```

<210> 48
<211> 664
<212> PRT
<213> Mouse

<400> 48

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



AMENDED SHEET
IPEA/AU

```
Lys Gln Lys Cys Thr Ser Lys Gly Pro Ser Ala His Lys Asp Leu Met
        355                 360                 365
Glu Asn Cys Ile Pro Asn Asn Gln Leu Ser Lys Pro Asp Ala Leu Val
    370                 375                 380
Arg Leu Glu Gln Asp Ile Lys Lys Leu Lys Ala Asp Leu Gln Ala Ser
385                 390                 395                 400
Arg Gln Val Glu Gln Glu Leu Arg Ser Gln Ile Ser Ala Leu Ser Ser
                405                 410                 415
Thr Glu Arg Gly Ile Arg Ser Glu Met Gly Gln Leu Arg Gln Glu Asn
            420                 425                 430
Glu Leu Leu Gln Asn Lys Leu His Asn Ala Val Gln Met Lys Gln Lys
        435                 440                 445
Asp Lys Gln Asn Ile Ser Gln Leu Glu Lys Lys Leu Lys Ala Glu Gln
    450                 455                 460
Glu Ala Arg Ser Phe Val Glu Lys Gln Leu Met Glu Glu Lys Lys Arg
465                 470                 475                 480
Lys Lys Leu Glu Glu Ala Thr Ala Ala Arg Ala Val Ala Phe Ala Ala
                485                 490                 495
Ala Ser Arg Gly Glu Cys Thr Glu Thr Leu Arg Ser Arg Ile Arg Glu
            500                 505                 510
Leu Glu Ala Glu Gly Lys Lys Leu Thr Met Asp Met Lys Val Lys Glu
        515                 520                 525
Glu Gln Ile Arg Glu Leu Glu Leu Lys Val Gln Glu Leu Arg Lys Tyr
    530                 535                 540
Lys Glu Asn Glu Lys Asp Thr Glu Val Leu Met Ser Ala Leu Ser Ala
545                 550                 555                 560
Met Gln Asp Lys Thr Gln His Leu Glu Asn Ser Leu Ser Ala Glu Thr
                565                 570                 575
Arg Ile Lys Leu Asp Leu Phe Ser Ala Leu Gly Asp Ala Lys Arg Gln
            580                 585                 590
Leu Glu Ile Ala Gln Gly Gln Ile Leu Gln Lys Asp Gln Glu Ile Lys
        595                 600                 605
Asp Leu Lys Gln Lys Ile Ala Glu Val Met Ala Val Met Pro Ser Ile
    610                 615                 620
Thr Tyr Ser Ala Ala Thr Ser Pro Leu Ser Pro Val Ser Pro His Tyr
625                 630                 635                 640
Ser Ser Lys Phe Val Glu Thr Ser Pro Ser Gly Leu Asp Pro Asn Ala
                645                 650                 655
Ser Val Tyr Gln Pro Leu Lys Lys
            660
```

<210> 49
<211> 199
<212> PRT
<213> Mouse

<400> 49

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



AMENDED SHEET
IPEA/AU

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

<210> 50
<211> 227
<212> PRT
<213> Mouse

<400> 50
Met Gly Pro Leu His Gln Phe Leu Leu Leu Leu Ile Thr Ala Leu Ser
1 5 10 15
Gln Ala Leu Asn Thr Thr Val Leu Gln Gly Met Ala Gly Gln Ser Leu
20 25 30
Arg Val Ser Cys Thr Tyr Asp Ala Leu Lys His Trp Gly Arg Arg Lys
35 40 45
Ala Trp Cys Arg Gln Leu Gly Glu Glu Gly Pro Cys Gln Arg Val Val
50 55 60
Ser Thr His Gly Val Trp Leu Leu Ala Phe Leu Lys Lys Arg Asn Gly
65 70 75 80
Ser Thr Val Ile Ala Asp Asp Thr Leu Ala Gly Thr Val Thr Ile Thr
85 90 95
Leu Lys Asn Leu Gln Ala Gly Asp Ala Gly Leu Tyr Gln Cys Gln Ser
100 105 110
Leu Arg Gly Arg Glu Ala Glu Val Leu Gln Lys Val Leu Val Glu Val
115 120 125
Leu Glu Asp Pro Leu Asp Asp Gln Asp Ala Gly Asp Leu Trp Val Pro
130 135 140
Glu Glu Ser Ser Ser Phe Glu Gly Ala Gln Val Glu His Ser Thr Ser
145 150 155 160
Arg Asn Gln Glu Thr Ser Phe Pro Pro Thr Ser Ile Leu Leu Leu Leu
165 170 175
Ala Cys Val Leu Leu Ser Lys Phe Leu Ala Ala Ser Ile Leu Trp Ala
180 185 190
Val Ala Arg Gly Arg Gln Lys Pro Gly Thr Pro Val Val Arg Gly Leu
195 200 205
Asp Cys Gly Gln Asp Ala Gly His Gln Leu Gln Ile Leu Thr Gly Pro
210 215 220
Gly Gly Thr
225

<210> 51



AMENDED SHEET
IPEA/AU

<211> 503
<212> PRT
<213> Mouse

<400> 51

```
Met Gly Thr Gly Ala Gly Gly Pro Ser Val Leu Ala Leu Leu Phe Ala
 1               5                  10                  15
Val Cys Ala Pro Leu Arg Leu Gln Ala Glu Glu Leu Gly Asp Gly Cys
            20                  25                  30
Gly His Ile Val Thr Ser Gln Asp Ser Gly Thr Met Thr Ser Lys Asn
        35                  40                  45
Tyr Pro Gly Thr Tyr Pro Asn Tyr Thr Val Cys Glu Lys Ile Ile Thr
    50                  55                  60
Val Pro Lys Gly Lys Arg Leu Ile Leu Arg Leu Gly Asp Leu Asn Ile
65                  70                  75                  80
Glu Ser Lys Thr Cys Ala Ser Asp Tyr Leu Leu Phe Ser Ser Ala Thr
                85                  90                  95
Asp Gln Tyr Gly Pro Tyr Cys Gly Ser Trp Ala Val Pro Lys Glu Leu
            100                 105                 110
Arg Leu Asn Ser Asn Glu Val Thr Val Leu Phe Lys Ser Gly Ser His
        115                 120                 125
Ile Ser Gly Arg Gly Phe Leu Leu Thr Tyr Ala Ser Ser Asp His Pro
    130                 135                 140
Asp Leu Ile Thr Cys Leu Glu Arg Gly Ser His Tyr Phe Glu Glu Lys
145                 150                 155                 160
Tyr Ser Lys Phe Cys Pro Ala Gly Cys Arg Asp Ile Ala Arg Asp Ile
                165                 170                 175
Ser Gly Asn Thr Lys Asp Gly Tyr Arg Asp Thr Ser Leu Leu Cys Lys
            180                 185                 190
Ala Ala Ile His Ala Gly Ile Ile Thr Asp Glu Leu Gly Gly His Ile
        195                 200                 205
Asn Leu Leu Gln Ser Lys Gly Ile Ser His Tyr Glu Gly Leu Leu Ala
    210                 215                 220
Asn Gly Val Leu Ser Arg His Gly Ser Leu Ser Glu Lys Arg Phe Leu
225                 230                 235                 240
Phe Thr Thr Pro Gly Met Asn Ile Thr Thr Val Ala Ile Pro Ser Val
                245                 250                 255
Ile Phe Ile Ala Leu Leu Leu Thr Gly Met Gly Ile Phe Ala Ile Cys
            260                 265                 270
Arg Lys Arg Lys Lys Lys Gly Asn Pro Tyr Val Ser Ala Asp Ala Gln
        275                 280                 285
Lys Thr Gly Cys Trp Lys Gln Ile Lys Tyr Pro Phe Ala Arg His Gln
    290                 295                 300
Ser Thr Glu Phe Thr Ile Ser Tyr Asp Asn Glu Lys Glu Met Thr Gln
305                 310                 315                 320
Lys Leu Asp Leu Ile Thr Ser Asp Met Ala Asp Tyr Gln Gln Pro Leu
                325                 330                 335
Met Ile Gly Thr Gly Thr Val Ala Arg Lys Gly Ser Thr Phe Arg Pro
            340                 345                 350
Met Asp Thr Asp Thr Glu Glu Val Arg Val Asn Thr Glu Ala Ser Gly
        355                 360                 365
His Tyr Asp Cys Pro His Arg Pro Gly Arg His Glu Tyr Ala Leu Pro
    370                 375                 380
Leu Thr His Ser Glu Pro Glu Tyr Ala Thr Pro Ile Val Glu Arg His
385                 390                 395                 400
Leu Leu Arg Ala His Thr Phe Ser Thr Gln Ser Gly Tyr Arg Val Pro
```



AMENDED SHEET
IPEA/AU

405 410 415
Gly Pro Arg Pro Thr His Glu His Ser His Ser Ser Gly Gly Phe Pro
420 425 430
Pro Ala Thr Gly Ala Thr Gln Val Glu Ser Tyr Gln Arg Pro Ala Ser
435 440 445
Pro Lys Pro Val Gly Gly Gly Tyr Asp Lys Pro Ala Ala Ser Ser Phe
450 455 460
Leu Asp Ser Arg Asp Pro Ala Ser Gln Ser Gln Met Thr Ser Gly Gly
465 470 475 480
Asp Asp Gly Tyr Ser Ala Pro Arg Asn Gly Leu Ala Pro Leu Asn Gln
485 490 495
Thr Ala Met Thr Ala Leu Leu
500

<210> 52
<211> 757
<212> PRT
<213> Mouse

<400> 52
Met Met Trp Pro Gln Pro Pro Thr Phe Ser Leu Phe Leu Leu Leu Leu
1 5 10 15
Leu Ser Gln Ala Pro Ser Ser Arg Pro Gln Ser Ser Gly Thr Lys Lys
20 25 30
Leu Arg Leu Val Gly Pro Ala Asp Arg Pro Lys Glu Gly Arg Leu Glu
35 40 45
Val Leu His Gln Gly Gln Trp Gly Thr Val Cys Asp Asp Asp Phe Ala
50 55 60
Leu Gln Glu Ala Thr Val Ala Cys Arg Gln Leu Gly Phe Glu Ser Ala
65 70 75 80
Leu Thr Trp Ala His Ser Ala Lys Tyr Gly Gln Gly Glu Gly Pro Ile
85 90 95
Trp Leu Asp Asn Val Arg Cys Leu Gly Thr Glu Lys Thr Leu Asp Gln
100 105 110
Cys Gly Ser Asn Gly Trp Gly Ile Ser Asp Cys Arg His Ser Glu Asp
115 120 125
Val Gly Val Val Cys His Pro Arg Arg Gln His Gly Tyr His Ser Glu
130 135 140
Lys Val Ser Asn Ala Leu Gly Pro Gln Gly Arg Arg Leu Glu Glu Val
145 150 155 160
Arg Leu Lys Pro Ile Leu Ala Ser Ala Lys Arg His Ser Pro Val Thr
165 170 175
Glu Gly Ala Val Glu Val Arg Tyr Asp Gly His Trp Arg Gln Val Cys
180 185 190
Asp Gln Gly Trp Thr Met Asn Asn Ser Arg Val Val Cys Gly Met Leu
195 200 205
Gly Phe Pro Ser Gln Thr Ser Val Asn Ser His Tyr Tyr Arg Lys Val
210 215 220
Trp Asn Leu Lys Met Lys Asp Pro Lys Ser Arg Leu Asn Ser Leu Thr
225 230 235 240
Lys Lys Asn Ser Phe Trp Ile His Arg Val Asp Cys Phe Gly Thr Glu
245 250 255
Pro His Leu Ala Lys Cys Gln Val Gln Val Ala Pro Gly Arg Gly Lys
260 265 270
Leu Arg Ala Ala Cys Pro Gly Gly Met His Ala Val Val Ser Cys Val
275 280 285

```
Ala Gly Pro His Phe Arg Arg Gln Lys Pro Lys Pro Thr Arg Lys Glu
    290                 295                 300
Ser His Ala Glu Glu Leu Lys Val Arg Leu Arg Ser Gly Ala Gln Val
305                 310                 315                 320
Gly Glu Gly Arg Val Glu Val Leu Met Asn Arg Gln Trp Gly Thr Val
                325                 330                 335
Cys Asp His Arg Trp Asn Leu Ile Ser Ala Ser Val Val Cys Arg Gln
            340                 345                 350
Leu Gly Phe Gly Ser Ala Arg Glu Ala Leu Phe Gly Ala Gln Leu Gly
        355                 360                 365
Gln Gly Leu Gly Pro Ile His Leu Ser Glu Val Arg Cys Arg Gly Tyr
    370                 375                 380
Glu Arg Thr Leu Gly Asp Cys Leu Ala Leu Glu Gly Ser Gln Asn Gly
385                 390                 395                 400
Cys Gln His Ala Asn Asp Ala Ala Val Arg Cys Asn Ile Pro Asp Met
                405                 410                 415
Gly Phe Gln Asn Lys Val Arg Leu Ala Gly Gly Arg Asn Ser Glu Glu
            420                 425                 430
Gly Val Val Glu Val Gln Val Glu Val Asn Gly Val Pro Arg Trp Gly
        435                 440                 445
Thr Val Cys Ser Asp His Trp Gly Leu Thr Glu Ala Met Val Thr Cys
    450                 455                 460
Arg Gln Leu Gly Leu Gly Phe Ala Asn Phe Ala Leu Lys Asp Thr Trp
465                 470                 475                 480
Tyr Trp Gln Gly Thr Pro Glu Ala Lys Glu Val Val Met Ser Gly Val
                485                 490                 495
Arg Cys Ser Gly Thr Glu Met Ala Leu Gln Gln Cys Gln Arg His Gly
            500                 505                 510
Pro Val His Cys Ser His Gly Pro Gly Arg Phe Ser Ala Gly Val Ala
        515                 520                 525
Cys Met Asn Ser Ala Pro Asp Leu Val Met Asn Ala Gln Leu Val Gln
    530                 535                 540
Glu Thr Ala Tyr Leu Glu Asp Arg Pro Leu Ser Met Leu Tyr Cys Ala
545                 550                 555                 560
His Glu Glu Asn Cys Leu Ser Lys Ser Ala Asp His Met Asp Trp Pro
                565                 570                 575
Tyr Gly Tyr Arg Arg Leu Leu Arg Phe Ser Ser Gln Ile Tyr Asn Leu
            580                 585                 590
Gly Arg Ala Asp Phe Arg Pro Lys Ala Gly Arg His Ser Trp Ile Trp
        595                 600                 605
His Gln Cys His Arg His Tyr His Ser Ile Glu Val Phe Thr His Tyr
    610                 615                 620
Asp Leu Leu Thr Leu Asn Gly Ser Lys Val Ala Glu Gly His Lys Ala
625                 630                 635                 640
Ser Phe Cys Leu Glu Asp Thr Asn Cys Pro Ser Gly Val Gln Arg Arg
                645                 650                 655
Tyr Ala Cys Ala Asn Phe Gly Glu Gln Gly Val Ala Val Gly Cys Trp
            660                 665                 670
Asp Thr Tyr Arg His Asp Ile Asp Cys Gln Trp Val Asp Ile Thr Asp
        675                 680                 685
Val Gly Pro Gly Asp Tyr Ile Phe Gln Val Val Val Asn Pro Thr Asn
    690                 695                 700
Asp Val Ala Glu Ser Asp Phe Ser Asn Asn Met Ile Arg Cys Arg Cys
705                 710                 715                 720
Lys Tyr Asp Gly Gln Arg Val Trp Leu His Asn Cys His Thr Gly Asp
                725                 730                 735
```

```
Ser Tyr Arg Ala Asn Ala Glu Leu Ser Leu Glu Gln Glu Gln Arg Leu
            740                 745                 750
Arg Asn Asn Leu Ile
        755

      <210> 53
      <211> 169
      <212> PRT
      <213> Mouse

      <400> 53
Met Glu Ala Ala Ala Thr Val Val Leu Ala Leu Ala Leu Leu Gly Ala
 1               5                  10                  15
Ala Ala Arg Gly Ala Ala Ser Asp Asp Phe Asn Leu Gly Asp Ala Leu
            20                  25                  30
Glu Asp Pro Asn Met Lys Pro Thr Pro Lys Ala Pro Thr Pro Lys Lys
        35                  40                  45
Pro Ser Gly Gly Phe Asp Leu Glu Asp Ala Leu Pro Gly Gly Gly Gly
    50                  55                  60
Gly Gly Ala Gly Glu Lys Pro Gly Asn Arg Pro Gln Pro Asp Pro Lys
65                  70                  75                  80
Pro Pro Arg Pro His Gly Asp Ser Gly Gly Ile Ser Asp Ser Asp Leu
                85                  90                  95
Ala Asp Ala Ala Gly Gln Gly Gly Gly Ala Gly Arg Arg Gly Ser Gly
            100                 105                 110
Asp Glu Gly Gly His Gly Gly Ala Gly Gly Ala Glu Pro Glu Gly Thr
        115                 120                 125
Pro Gln Gly Leu Val Pro Gly Val Val Ala Ala Val Val Ala Ala Val
    130                 135                 140
Ala Gly Ala Val Ser Ser Phe Val Ala Tyr Gln Arg Arg Arg Leu Cys
145                 150                 155                 160
Phe Arg Glu Gly Gly Ser Ala Pro Val
                165

      <210> 54
      <211> 30
      <212> DNA
      <213> Artificial Sequence

      <220>
      <223> Made in a lab

      <400> 54
 cccaagctta tgacgcggag ccccgcgctg
30

      <210> 55
      <211> 35
      <212> DNA
      <213> Artificial Sequence

      <220>
      <223> Made in a lab

      <400> 55
```



AMENDED SHEET
IPEA/AU

cgggatccag gccatggcag gcttgtggat gacga
35

<210> 56
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Made in a lab

<400> 56
ccgctcgagt agatactctt cctccattgt tctcatt
37

<210> 57
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Made in a lab

<400> 57
ctgtgcggct caagtgtg
18