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NATIONAL UNIVERSITY OF SINGAPORE

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caagaggcta ccgctcctga ggaagtgacc aagtcccagc ccgagaagtg ggacgaggaa	780
gctcaggacg ctgctggcga ggaagagaag gaacaagaaa aggaaaagga cgccgagaac	840
aaggtcaaga actccaaggg cacc	864

<210> 13
 <211> 1737
 <212> DNA
 <213> Homo sapiens

<400> 13	
atgaacaagc tgtacatcgg caacctgtcc gagaacgctg ctccctccga cctcgagtcc	60
atcttcaagg acgctaagat ccccggtgcc ggacccttcc tggtaagac cggttacgct	120
ttcgtggact gccccgacga gtcctgggct ctgaaggcta tcgaggctct gtccggcaag	180
atcgagctgc acggcaagcc catcgaggtc gagcactccg tgcccaagcg tcagcgtatc	240
cgcaagctgc agatccgtaa catccccca cacctccagt gggagggtgct ggactccctg	300
ctgggtgcagt acgggtgtcgt cgagtcctgc gagcaagtga acaccgactc cgagactgct	360
gtgggtcaacg tgacctactc ctccaaggac caggctcgtc aggctctgga caagctgaac	420
ggtttccagc tcgagaactt caccctgaag gtggcctaca tccccgacga gatggctgct	480
cagcagaacc ccctgcagca gccccgtggt cgtcgtggac tgggacagcg tggtagctcc	540
cgtcagggtt cccccggttc cgtgtccaag cagaagccct gcgacctgcc cctgcgtctg	600
ctgggtgccta cccagttcgt ggggtgctatc atcggcaagg aagggtgctac catccgcaac	660
atcaccaagc agaccagtc caagatcgac gtccaccgca aggaaaacgc tggcgctgct	720
gagaagtcca tcaccatcct gtccaccccc gagggcacct ccgctgcttg caagtccatc	780
ctcgagatca tgcacaagga agcccaggac atcaagttca ccgaggaaat ccccctgaag	840
atcctggctc acaacaactt cgtgggtcgt ctgatcggaa aggaaggccg taacctgaag	900
aagatcgagc aggacaccga caccaagatc accatctccc cactgcaaga gctgaccctg	960
tacaaccccg agcgtaccat caccgtgaag ggcaacgtgg aaacctgcgc taaggctgaa	1020

600 ggtacaccaa gcccgcgcc acccgaggga gcccaggag atgggtgcaa aggtgtgcgc
 540 gaggggcaga aagtagaga tctcagaaca cccaacaca aggtctcaga acagagacct
 480 gacagggaag gcgtgggcg gatgagggtg gtgggttggg ggttggtatc cgcctccccg
 420 gcgtttcga aggaattcac cgtgtccggc aacctactgt ttatgtcagt tcgggaccaa
 360 gaagcggagc tggctccgag gatccctgtcc cgggatggcg caccgtcccc cgaacagggg
 300 aggaaggccgg acagccgctt gcttgagttg cacatcacga tgcctttctc gtcgcccattg
 240 ccgcgggtc cgcattggcg tgcgcttct gcgagagatg gaaggtgccc ctgcggggcc
 180 ggcgagag gtccccgggg cgaggggca gcaagggctt cggggccgag aggaaggccg
 120 cctggcattc ctgatggccc agggggcaat gctggcgccc caggagaggc gggtgccaag
 60 atgcaggccc aagggccggg cacagggggt tcgacggggc atgctgatgg ccaaggaggc
 <400> 14

<210> 14
 <211> 630
 <212> DNA
 <213> Homo sapiens

1737 aagcagcacc agcagcagaa ggctctgcag tccgggtccc ctcatgtccc tcgcaag
 1680 ggtcacttct acgcttgcca ggtggcccaa gcgaagatcc aagagatcct gaccccaagtg
 1620 gtgtgtgtgc cccgtgacca gacccctgac gagaacgacc aggtgtgtgt caagatcacc
 1560 cgtgttatcg gcaagggtgg caagaccgtg aacgagctgc agaacctgtc ctccgtgag
 1500 agccccaaagg aagaagtga gctcgaggtc ccatccgtg tgcctcctt cgtgtgtgt
 1440 gaggctcagt tcaaggctca ggttcgtatc taggcagaaga tcaagggaaga gaattcgtc
 1380 atcgtctccc ctgaggctcc gtagctaaag gttccgatgg tcatcatcac cgttcccccc
 1320 atcggaaagc agggccagca catcaagcag ctgtccctgt tgcgtgtgtg ttccatcaag
 1260 gagcagtcgg agactgagac tgtgcacctg ttcatccccg ctctgtccgt cgggtgccatc
 1200 ggcatgcttc ctccaactc tgggtcccc tccgtatga ccccccata ccccgattc
 1140 caggctcacg tgatccccgg cctgaaacctg aacgtcttgg gctgtttccc cctacctcc
 1080 gaggaataca tgaagaagat ccgcgagtc tagagaaag atatcgcttc catgaacctg

tttaatgtga tggttctctgc ccctcacatt

630

<210> 15

<211> 1227

<212> DNA

<213> Homo sapiens

<400> 15

atgcaggtca ccctgaagac cctccagcag cagaccttca agatagacat tgaccccagag	60
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gtagcaggtc aaaaattaat ttatgcaggc aaaatcctca atgatgatac tgctctcaaa	180
gaatataaaa ttgatgagaa aaactttgtg gtggttatgg tgaccaaacc caaagcagtg	240
tccacaccag caccagctac aactcagcag tcagctcctg ccagcactac agcagttact	300
tcctccacca ccacaactgt ggctcaggct ccaaccctg tccctgcctt ggccccact	360
tccacacctg catccatcac tccagcatca gcgacagcat cttctgaacc tgcacctgct	420
agtgcagcta aacaagagaa gcctgcagaa aagccagcag agacaccagt ggctactagc	480
ccaacagcaa ctgacagtac atcgggtgat tcttctcggc caaacctttt tgaagatgca	540
acgagtgcac ttgtgacggg tcagtcttac gagaatatgg taactgagat catgtcaatg	600
ggctatgaac gagagcaagt aattgcagcc ctgagagcca gtttcaacaa ccctgacaga	660
gcagtggagt atcttttaat gggaatccct ggagatagag aaagtcaggc tgtggttgac	720
ccccctcaag cagctagtac tggggttcct cagtcttcag cagtggctgc agctgcagca	780
actacgacag caacaactac aacaacaagt tctggaggac atccccttga atttttacgg	840
aatcagcctc agtttcaaca gatgagacaa attattcagc agaatccttc ctgcttcca	900
gcgttactac agcagatagg tcgagagaat cctcaattac ttcagcaaata tagccaacac	960
caggagcatt ttattcagat gttaaataaa ccagttcaag aagctgggtg tcaaggagga	1020
ggaggtggag gtggcagtgagg aggaattgca gaagctggaa gtggtcatat gaactacatt	1080
caagtaacac ctcaggaaaa agaagctata gaaagggttaa aggcatagg atttcctgaa	1140
ggacttgtga tacaagcgta ttttgcttgt gagaagaatg agaatttggc tgccaatttt	1200
cttctacagc agaactttga tgaagat	1227

<210> 16
 <211> 624
 <212> DNA
 <213> Homo sapiens

<400> 16
 atggacccgt tcctgggtgct gctgcactcg gtgtcgtcca gcctgtcgag cagcgagctg 60
 accgagctca agttcctatg cctcggggcgc gtgggcaagc gcaagctgga gcgcgtgcag 120
 agcggcctag acctcttctc catgtgtctg gagcagaacg acctggagcc cgggcacacc 180
 gagctcctgc gcgagctgct cgcctccctg cggcgccacg acctgtgctg gcgcgtcgac 240
 gacttcgagg cggggggcggc ggccggggcc gcgcctgggg aagaagacct gtgtgcagca 300
 tttaacgtca tatgtgataa tgtggggaaa gattggagaa ggctggctcg tcagctcaaa 360
 gtctcagaca ccaagatcga cagcatcgag gacagatacc cccgcaacct gacagagcgt 420
 gtgcgggagt cactgagaat ctggaagaac acagagaagg agaacgcaac agtggcccac 480
 ctggtggggg ctctcaggtc ctgccagatg aacctgggtg ctgacctggt acaagaggtt 540
 cagcaggccc gtgacctcca gaacaggagt ggggccatgt ccccgatgtc atggaactca 600
 gacgcatcta cctccgaagc gtcc 624

<210> 17
 <211> 678
 <212> DNA
 <213> Homo sapiens

<400> 17
 atgtcctccc cccgtgactt ccgtgctgag cccgtgaacg actacgaggg caacgactcc 60
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 cgttccaagg tgttcgagaa caaggtcaac tccgagaagg tcaagctgtc cctgcgcaac 180
 ttccccaca acgattacga ggacgtgttc gaggaaccct ccgagtccgg ttccgacccc 240
 tccatgtgga ccgctcgtgg tcccttccgt cgtgaccgtt ggtcctccga ggacgaggaa 300
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 gagggcgagc tggaccagct ggctcagatc cgtcccctga tcttcaactt ccacgagcag 420
 accgctatca aggactgcct gaagatcctc gagggaaaaga ccgctgctta cgacatcatg 480
 caagagttca tggctctcga gctgaagaac ctgcccggcg agttcaactc cggcaaccag 540

ccctccaacc gcgagaagaa ccgttaccgt gacatcctgc ctttccagca ccacggttac	600
tccggtccca acgagcgtac caccttctgg cacggttcca acgaggggtgc tgtgtccctg	660
ctgctgcgct actgcgct	678

<210> 18
 <211> 852
 <212> DNA
 <213> Homo sapiens

<400> 18	
atggacgcca tcaagaagaa gatgcagatg ctgaagctcg acaaggagaa cgccttggat	60
cgagctgagc aggcggaggc cgacaagaag gcggcggaag acaggagcaa gcagctggaa	120
gatgagctgg tgtcactgca aaagaaactc aagggcaccg aagatgaact ggacaaatat	180
tctgaggctc tcaaagatgc ccaggagaag ctggagctgg cagagaaaaa ggccaccgat	240
gctgaagccg acgtagcttc tctgaacaga cgcatccagc tggttgagga agagttggat	300
cgtgcccagg agcgtctggc aacagctttg cagaagctgg aggaagctga gaaggcagca	360
gatgagagtg agagaggcat gaaagtcatt gagagtcgag cccaaaaaga tgaagaaaaa	420
atggaaattc aggagatcca actgaaagag gcaaagcaca ttgctgaaga tgccgaccgc	480
aaatatgaag aggtggcccg taagctggtc atcattgaga gcgacctgga acgtgcagag	540
gagcgggctg agctctcaga aggccaagtc cgacagctgg aagaacaatt aagaataatg	600
gatcagacct tgaaagcatt aatggctgca gaggataagt actcgcagaa ggaagacaga	660
tatgaggaag agatcaaggt cttttccgac aagctgaagg aggctgagac tcgggctgag	720
tttgccgaga ggtcagtaac taaattggag aaaagcattg atgacttaga agacgagctg	780
tacgctcaga aactgaagta caaagccatc agcgaggagc tggaccacgc tctcaacgat	840
atgacttcca tg	852

<210> 19
 <211> 540
 <212> DNA
 <213> Homo sapiens

<400> 19	
atgcaggctg agggctcgtg caccggtggt tccactggcg acgctgacgg tcccgggtggt	60

cctggatatcc ccgacgggtcc tgggtggcaac gctggtggtc caggcgaggc tggtgctacc 120
 ggtggtcgtg gtcctcgtgg tgctggtgct gtcctgctt ccggtccagg tgggtggtgct 180
 ccccggtggtc ctcacgggtgg tgctgcttcc ggcctgaacg gttgctgccg ttgcggtgct 240
 cgcgggtcccg agtcccgtct gctcgagttc tacctggcta tgcccttcgc taccctatg 300
 gaagctgagc tggctcgtcg ttccctggct caggacgctc ctctctgcc cgtgcccgg 360
 gtcctgctga aggagttcac tgtctccggc aacatcctga ccatccgtct gaccgctgct 420
 gaccaccgtc agtccagct gtccatctcc tcatgcctgc agcagctgtc cctgctgatg 480
 tggatcaccc agtgtttctt gcccgtgttc ctggctcagc ccccctccgg tcaacgtcgt 540

<210> 20
 <211> 81
 <212> PRT
 <213> Homo sapiens

<400> 20

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

His Leu Gly Ser Arg Gln Lys Lys Ile Arg Ile Gln Leu Arg Ser Gln
 20 25 30

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

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

Lys Glu Glu His Cys Lys Met Pro Glu Ala Gly Glu Glu Gln Pro Gln
 65 70 75 80

Val

<210> 21
 <211> 400
 <212> PRT

<213> Homo sapiens

<400> 21

Met Gly Thr Pro Ala Ser Gly Arg Lys Arg Thr Pro Val Lys Asp Arg
1 5 10 15

Phe Ser Ala Glu Asp Glu Ala Leu Ser Asn Ile Ala Arg Glu Ala Glu
20 25 30

Ala Arg Leu Ala Ala Lys Arg Ala Ala Arg Ala Glu Ala Arg Asp Ile
35 40 45

Arg Met Arg Glu Leu Glu Arg Gln Gln Lys Glu Leu Asp Glu Lys Ser
50 55 60

Asp Lys Gln Tyr Ala Glu Asn Tyr Thr Arg Pro Ser Ser Arg Asn Ser
65 70 75 80

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

Gly Asp Thr Ser Ser Leu Ile Asp Pro Asp Thr Ser Leu Ser Glu Leu
100 105 110

Arg Glu Ser Leu Ser Glu Val Glu Glu Lys Tyr Lys Lys Ala Met Val
115 120 125

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

Asp Thr Leu Lys Asp Val Ile Glu Glu Gln Glu Glu Gln Met Ala Glu
145 150 155 160

Phe Tyr Arg Glu Asn Glu Glu Lys Ser Lys Glu Leu Glu Arg Gln Lys
165 170 175

His Met Cys Ser Val Leu Gln His Lys Met Glu Glu Leu Lys Glu Gly
180 185 190

Leu Arg Gln Arg Asp Glu Leu Ile Glu Lys His Gly Leu Val Ile Ile
 195 200 205

Pro Asp Gly Thr Pro Asn Gly Asp Val Ser His Glu Pro Val Ala Gly
 210 215 220

Ala Ile Thr Val Val Ser Gln Glu Ala Ala Gln Val Leu Glu Ser Ala
 225 230 235 240

Gly Glu Gly Pro Leu Asp Val Arg Leu Arg Lys Leu Ala Gly Glu Lys
 245 250 255

Glu Glu Leu Leu Ser Gln Ile Arg Lys Leu Lys Leu Gln Leu Glu Glu
 260 265 270

Glu Arg Gln Lys Cys Ser Arg Asn Asp Gly Thr Val Gly Asp Leu Ala
 275 280 285

Gly Leu Gln Asn Gly Ser Asp Leu Gln Phe Ile Glu Met Gln Arg Asp
 290 295 300

Ala Asn Arg Gln Ile Ser Glu Tyr Lys Phe Lys Leu Ser Lys Ala Glu
 305 310 315 320

Gln Asp Ile Thr Thr Leu Glu Gln Ser Ile Ser Arg Leu Glu Gly Gln
 325 330 335

Val Leu Arg Tyr Lys Thr Ala Ala Glu Asn Ala Glu Lys Val Glu Asp
 340 345 350

Glu Leu Lys Ala Glu Lys Arg Lys Leu Gln Arg Glu Leu Arg Thr Ala
 355 360 365

Leu Asp Lys Ile Glu Glu Met Glu Met Thr Asn Ser His Leu Ala Lys
 370 375 380

Arg Leu Glu Lys Met Lys Ala Asn Arg Thr Ala Leu Leu Ala Gln Gln
 385 390 395 400

<210> 22
 <211> 116
 <212> PRT
 <213> Homo sapiens

<400> 22

Met Ser Trp Arg Gly Arg Ser Thr Tyr Arg Pro Arg Pro Arg Arg Tyr
 1 5 10 15

Val Glu Pro Pro Glu Met Ile Gly Pro Met Arg Pro Glu Gln Phe Ser
 20 25 30

Asp Glu Val Glu Pro Ala Thr Pro Glu Glu Gly Glu Pro Ala Thr Gln
 35 40 45

Arg Gln Asp Pro Ala Ala Ala Gln Glu Gly Glu Asp Glu Gly Ala Ser
 50 55 60

Ala Gly Gln Gly Pro Lys Pro Glu Ala His Ser Gln Glu Gln Gly His
 65 70 75 80

Pro Gln Thr Gly Cys Glu Cys Glu Asp Gly Pro Asp Gly Gln Glu Met
 85 90 95

Asp Pro Pro Asn Pro Glu Glu Val Lys Thr Pro Glu Glu Gly Glu Lys
 100 105 110

Gln Ser Gln Cys
 115

<210> 23
 <211> 631
 <212> PRT
 <213> Homo sapiens

<400> 23

Met Ser His Trp Ala Pro Glu Trp Lys Arg Ala Glu Ala Asn Pro Arg
 1 5 10 15

Asp Leu Gly Ala Ser Trp Asp Val Arg Gly Ser Arg Gly Ser Gly Trp
 20 25 30

Ser Gly Pro Phe Gly His Gln Gly Pro Arg Ala Ala Gly Ser Arg Glu
35 40 45

Pro Pro Leu Cys Phe Lys Ile Lys Asn Asn Met Val Gly Val Val Ile
50 55 60

Gly Tyr Ser Gly Ser Lys Ile Lys Asp Leu Gln His Ser Thr Asn Thr
65 70 75 80

Lys Ile Gln Ile Ile Asn Gly Glu Ser Glu Ala Lys Val Arg Ile Phe
85 90 95

Gly Asn Arg Glu Met Lys Ala Lys Ala Lys Ala Ala Ile Glu Thr Leu
100 105 110

Ile Arg Lys Gln Glu Ser Tyr Asn Ser Glu Ser Ser Val Asp Asn Ala
115 120 125

Ala Ser Gln Thr Pro Ile Gly Arg Asn Leu Gly Arg Asn Asp Ile Val
130 135 140

Gly Glu Ala Glu Pro Leu Ser Asn Trp Asp Arg Ile Arg Ala Ala Val
145 150 155 160

Val Glu Cys Glu Lys Arg Lys Trp Ala Asp Leu Pro Pro Val Lys Lys
165 170 175

Asn Phe Tyr Ile Glu Ser Lys Ala Thr Ser Cys Met Ser Glu Met Gln
180 185 190

Val Ile Asn Trp Arg Lys Glu Asn Phe Asn Ile Thr Cys Asp Asp Leu
195 200 205

Lys Ser Gly Glu Lys Arg Leu Ile Pro Lys Pro Thr Cys Arg Phe Lys
210 215 220

Asp Ala Phe Gln Gln Tyr Pro Asp Leu Leu Lys Ser Ile Ile Arg Val
225 230 235 240

Gly Ile Val Lys Pro Thr Pro Ile Gln Ser Gln Ala Trp Pro Ile Ile
 245 250 255

Leu Gln Gly Ile Asp Leu Ile Val Val Ala Gln Thr Gly Thr Gly Lys
 260 265 270

Thr Leu Ser Tyr Leu Met Pro Gly Phe Ile His Leu Asp Ser Gln Pro
 275 280 285

Ile Ser Arg Glu Gln Arg Asn Gly Pro Gly Met Leu Val Leu Thr Pro
 290 295 300

Thr Arg Glu Leu Ala Leu His Val Glu Ala Glu Cys Ser Lys Tyr Ser
 305 310 315 320

Tyr Lys Gly Leu Lys Ser Ile Cys Ile Tyr Gly Gly Arg Asn Arg Asn
 325 330 335

Gly Gln Ile Glu Asp Ile Ser Lys Gly Val Asp Ile Ile Ile Ala Thr
 340 345 350

Pro Gly Arg Leu Asn Asp Leu Gln Met Asn Asn Ser Val Asn Leu Arg
 355 360 365

Ser Ile Thr Tyr Leu Val Ile Asp Glu Ala Asp Lys Met Leu Asp Met
 370 375 380

Glu Phe Glu Pro Gln Ile Arg Lys Ile Leu Leu Asp Val Arg Pro Asp
 385 390 395 400

Arg Gln Thr Val Met Thr Ser Ala Thr Trp Pro Asp Thr Val Arg Gln
 405 410 415

Leu Ala Leu Ser Tyr Leu Lys Asp Pro Met Ile Val Tyr Val Gly Asn
 420 425 430

Leu Asn Leu Val Ala Val Asn Thr Val Lys Gln Asn Ile Ile Val Thr
 435 440 445

Thr Glu Lys Glu Lys Arg Ala Leu Thr Gln Glu Phe Val Glu Asn Met
450 455 460

Ser Pro Asn Asp Lys Val Ile Met Phe Val Ser Gln Lys His Ile Ala
465 470 475 480

Asp Asp Leu Ser Ser Asp Phe Asn Ile Gln Gly Ile Ser Ala Glu Ser
485 490 495

Leu His Gly Asn Ser Glu Gln Ser Asp Gln Glu Arg Ala Val Glu Asp
500 505 510

Phe Lys Ser Gly Asn Ile Lys Ile Leu Ile Thr Thr Asp Ile Val Ser
515 520 525

Arg Gly Leu Asp Leu Asn Asp Val Thr His Val Tyr Asn Tyr Asp Phe
530 535 540

Pro Arg Asn Ile Asp Val Tyr Val His Arg Val Gly Tyr Ile Gly Arg
545 550 555 560

Thr Gly Lys Thr Gly Thr Ser Val Thr Leu Ile Thr Gln Arg Asp Ser
565 570 575

Lys Met Ala Gly Glu Leu Ile Lys Ile Leu Asp Arg Ala Asn Gln Ser
580 585 590

Val Pro Glu Asp Leu Val Val Met Ala Glu Gln Tyr Lys Leu Asn Gln
595 600 605

Gln Lys Arg His Arg Glu Thr Arg Ser Arg Lys Pro Gly Gln Arg Arg
610 615 620

Lys Glu Phe Tyr Phe Leu Ser
625 630

<210> 24
<211> 648

<212> PRT
<213> Homo sapiens

<400> 24

Met Ser His His Gly Gly Ala Pro Lys Ala Ser Thr Trp Val Val Ala
1 5 10 15

Ser Arg Arg Ser Ser Thr Val Ser Arg Ala Pro Glu Arg Arg Pro Ala
20 25 30

Glu Glu Leu Asn Arg Thr Gly Pro Glu Gly Tyr Ser Val Gly Arg Gly
35 40 45

Gly Arg Trp Arg Gly Thr Ser Arg Pro Pro Glu Ala Val Ala Ala Gly
50 55 60

His Glu Glu Leu Pro Leu Cys Phe Ala Leu Lys Ser His Phe Val Gly
65 70 75 80

Ala Val Ile Gly Arg Gly Gly Ser Lys Ile Lys Asn Ile Gln Ser Thr
85 90 95

Thr Asn Thr Thr Ile Gln Ile Ile Gln Glu Gln Pro Glu Ser Leu Val
100 105 110

Lys Ile Phe Gly Ser Lys Ala Met Gln Thr Lys Ala Lys Ala Val Ile
115 120 125

Asp Asn Phe Val Lys Lys Leu Glu Glu Asn Tyr Asn Ser Glu Cys Gly
130 135 140

Ile Asp Thr Ala Phe Gln Pro Ser Val Gly Lys Asp Gly Ser Thr Asp
145 150 155 160

Asn Asn Val Val Ala Gly Asp Arg Pro Leu Ile Asp Trp Asp Gln Ile
165 170 175

Arg Glu Glu Gly Leu Lys Trp Gln Lys Thr Lys Trp Ala Asp Leu Pro
180 185 190

Pro Ile Lys Lys Asn Phe Tyr Lys Glu Ser Thr Ala Thr Ser Ala Met
195 200 205

Ser Lys Val Glu Ala Asp Ser Trp Arg Lys Glu Asn Phe Asn Ile Thr
210 215 220

Trp Asp Asp Leu Lys Asp Gly Glu Lys Arg Pro Ile Pro Asn Pro Thr
225 230 235 240

Cys Thr Phe Asp Asp Ala Phe Gln Cys Tyr Pro Glu Val Met Glu Asn
245 250 255

Ile Lys Lys Ala Gly Phe Gln Lys Pro Thr Pro Ile Gln Ser Gln Ala
260 265 270

Trp Pro Ile Val Leu Gln Gly Ile Asp Leu Ile Gly Val Ala Gln Thr
275 280 285

Gly Thr Gly Lys Thr Leu Cys Tyr Leu Met Pro Gly Phe Ile His Leu
290 295 300

Val Leu Gln Pro Ser Leu Lys Gly Gln Arg Asn Arg Pro Gly Met Leu
305 310 315 320

Val Leu Thr Pro Thr Arg Glu Leu Ala Leu Gln Val Glu Gly Glu Cys
325 330 335

Cys Lys Tyr Ser Tyr Lys Gly Leu Arg Ser Val Cys Val Tyr Gly Gly
340 345 350

Gly Asn Arg Asp Glu Gln Ile Glu Glu Leu Lys Lys Gly Val Asp Ile
355 360 365

Ile Ile Ala Thr Pro Gly Arg Leu Asn Asp Leu Gln Met Ser Asn Phe
370 375 380

Val Asn Leu Lys Asn Ile Thr Tyr Leu Val Leu Asp Glu Ala Asp Lys
385 390 395 400

Met Leu Asp Met Gly Phe Glu Pro Gln Ile Met Lys Ile Leu Leu Asp
 405 410 415

Val Arg Pro Asp Arg Gln Thr Val Met Thr Ser Ala Thr Trp Pro His
 420 425 430

Ser Val His Arg Leu Ala Gln Ser Tyr Leu Lys Glu Pro Met Ile Val
 435 440 445

Tyr Val Gly Thr Leu Asp Leu Val Ala Val Ser Ser Val Lys Gln Asn
 450 455 460

Ile Ile Val Thr Thr Glu Glu Glu Lys Trp Ser His Met Gln Thr Phe
 465 470 475 480

Leu Gln Ser Met Ser Ser Thr Asp Lys Val Ile Val Phe Val Ser Arg
 485 490 495

Lys Ala Val Ala Asp His Leu Ser Ser Asp Leu Ile Leu Gly Asn Ile
 500 505 510

Ser Val Glu Ser Leu His Gly Asp Arg Glu Gln Arg Asp Arg Glu Lys
 515 520 525

Ala Leu Glu Asn Phe Lys Thr Gly Lys Val Arg Ile Leu Ile Ala Thr
 530 535 540

Asp Leu Ala Ser Arg Gly Leu Asp Val His Asp Val Thr His Val Tyr
 545 550 555 560

Asn Phe Asp Phe Pro Arg Asn Ile Glu Glu Tyr Val His Arg Ile Gly
 565 570 575

Arg Thr Gly Arg Ala Gly Arg Thr Gly Val Ser Ile Thr Thr Leu Thr
 580 585 590

Arg Asn Asp Trp Arg Val Ala Ser Glu Leu Ile Asn Ile Leu Glu Arg
 595 600 605

Ala Asn Gln Ser Ile Pro Glu Glu Leu Val Ser Met Ala Glu Arg Phe
610 615 620

Lys Ala His Gln Gln Lys Arg Glu Met Glu Arg Lys Met Glu Arg Pro
625 630 635 640

Gln Gly Arg Pro Lys Lys Phe His
645

<210> 25
<211> 139
<212> PRT
<213> Homo sapiens

<400> 25

Met Ser Trp Arg Gly Arg Ser Thr Tyr Tyr Trp Pro Arg Pro Arg Arg
1 5 10 15

Tyr Val Gln Pro Pro Glu Met Ile Gly Pro Met Arg Pro Glu Gln Phe
20 25 30

Ser Asp Glu Val Glu Pro Ala Thr Pro Glu Glu Gly Glu Pro Ala Thr
35 40 45

Gln Arg Gln Asp Pro Ala Ala Ala Gln Glu Gly Glu Asp Glu Gly Ala
50 55 60

Ser Ala Gly Gln Gly Pro Lys Pro Glu Ala Asp Ser Gln Glu Gln Gly
65 70 75 80

His Pro Gln Thr Gly Cys Glu Cys Glu Asp Gly Pro Asp Gly Gln Glu
85 90 95

Met Asp Pro Pro Asn Pro Glu Glu Val Lys Thr Pro Glu Glu Glu Met
100 105 110

Arg Ser His Tyr Val Ala Gln Thr Gly Ile Leu Trp Leu Leu Met Asn
115 120 125

Asn Cys Phe Leu Asn Leu Ser Pro Arg Lys Pro
130 135

<210> 26
<211> 369
<212> PRT
<213> Homo sapiens

<400> 26

Met Pro Arg Ala Pro Lys Arg Gln Arg Cys Met Pro Glu Glu Asp Leu
1 5 10 15

Gln Ser Gln Ser Glu Thr Gln Gly Leu Glu Gly Ala Gln Ala Pro Leu
20 25 30

Ala Val Glu Glu Asp Ala Ser Ser Ser Thr Ser Thr Ser Ser Ser Phe
35 40 45

Pro Ser Ser Phe Pro Ser Ser Ser Ser Ser Ser Ser Ser Cys Tyr
50 55 60

Pro Leu Ile Pro Ser Thr Pro Glu Glu Val Ser Ala Asp Asp Glu Thr
65 70 75 80

Pro Asn Pro Pro Gln Ser Ala Gln Ile Ala Cys Ser Ser Pro Ser Val
85 90 95

Val Ala Ser Leu Pro Leu Asp Gln Ser Asp Glu Gly Ser Ser Ser Gln
100 105 110

Lys Glu Glu Ser Pro Ser Thr Leu Gln Val Leu Pro Asp Ser Glu Ser
115 120 125

Leu Pro Arg Ser Glu Ile Asp Glu Lys Val Thr Asp Leu Val Gln Phe
130 135 140

Leu Leu Phe Lys Tyr Gln Met Lys Glu Pro Ile Thr Lys Ala Glu Ile
145 150 155 160

Leu Glu Ser Val Ile Arg Asn Tyr Glu Asp His Phe Pro Leu Leu Phe

165	170	175
Ser Glu Ala Ser Glu Cys Met Leu Leu Val Phe Gly Ile Asp Val Lys		
180	185	190
Glu Val Asp Pro Thr Gly His Ser Phe Val Leu Val Thr Ser Leu Gly		
195	200	205
Leu Thr Tyr Asp Gly Met Leu Ser Asp Val Gln Ser Met Pro Lys Thr		
210	215	220
Gly Ile Leu Ile Leu Ile Leu Ser Ile Val Phe Ile Glu Gly Tyr Cys		
225	230	235
Thr Pro Glu Glu Val Ile Trp Glu Ala Leu Asn Met Met Gly Leu Tyr		
245	250	255
Asp Gly Met Glu His Leu Ile Tyr Gly Glu Pro Arg Lys Leu Leu Thr		
260	265	270
Gln Asp Trp Val Gln Glu Asn Tyr Leu Glu Tyr Arg Gln Val Pro Gly		
275	280	285
Ser Asp Pro Ala Arg Tyr Glu Phe Leu Trp Gly Pro Arg Ala His Ala		
290	295	300
Glu Ile Arg Lys Met Ser Leu Leu Lys Phe Leu Ala Lys Val Asn Gly		
305	310	315
Ser Asp Pro Arg Ser Phe Pro Leu Trp Tyr Glu Glu Ala Leu Lys Asp		
325	330	335
Glu Glu Glu Arg Ala Gln Asp Arg Ile Ala Thr Thr Asp Asp Thr Thr		
340	345	350
Ala Met Ala Ser Ala Ser Ser Ser Ala Thr Gly Ser Phe Ser Tyr Pro		
355	360	365

Glu

<210> 27
 <211> 126
 <212> PRT
 <213> Homo sapiens

<400> 27

Met Ser Val Met Asp Leu Ala Asn Thr Cys Ser Ser Phe Gln Ser Asp
 1 5 10 15

Leu Asp Phe Cys Ser Asp Cys Gly Ser Val Leu Pro Leu Pro Gly Ala
 20 25 30

Gln Asp Thr Val Thr Cys Ile Arg Cys Gly Phe Asn Ile Asn Val Arg
 35 40 45

Asp Phe Glu Gly Lys Val Val Lys Thr Ser Val Val Phe His Gln Leu
 50 55 60

Gly Thr Ala Met Pro Met Ser Val Glu Glu Gly Pro Glu Cys Gln Gly
 65 70 75 80

Pro Val Val Asp Arg Arg Cys Pro Arg Cys Gly His Glu Gly Met Ala
 85 90 95

Tyr His Thr Arg Gln Met Arg Ser Ala Asp Glu Gly Gln Thr Val Phe
 100 105 110

Tyr Thr Cys Thr Asn Cys Lys Phe Gln Glu Lys Glu Asp Ser
 115 120 125

<210> 28
 <211> 448
 <212> PRT
 <213> Homo sapiens

<400> 28

Met Leu Trp Leu Ala Leu Gly Pro Phe Pro Ala Met Glu Asn Gln Val
 1 5 10 15

Leu Val Ile Arg Ile Lys Ile Pro Asn Ser Gly Ala Val Asp Trp Thr
20 25 30

Val His Ser Gly Pro Gln Leu Leu Phe Arg Asp Val Leu Asp Val Ile
35 40 45

Gly Gln Val Leu Pro Glu Ala Thr Thr Thr Ala Phe Glu Tyr Glu Asp
50 55 60

Glu Asp Gly Asp Arg Ile Thr Val Arg Ser Asp Glu Glu Met Lys Ala
65 70 75 80

Met Leu Ser Tyr Tyr Tyr Ser Thr Val Met Glu Gln Gln Val Asn Gly
85 90 95

Gln Leu Ile Glu Pro Leu Gln Ile Phe Pro Arg Ala Cys Lys Pro Pro
100 105 110

Gly Glu Arg Asn Ile His Gly Leu Lys Val Asn Thr Arg Ala Gly Pro
115 120 125

Ser Gln His Ser Ser Pro Ala Val Ser Asp Ser Leu Pro Ser Asn Ser
130 135 140

Leu Lys Lys Ser Ser Ala Glu Leu Lys Lys Ile Leu Ala Asn Gly Gln
145 150 155 160

Met Asn Glu Gln Asp Ile Arg Tyr Arg Asp Thr Leu Gly His Gly Asn
165 170 175

Gly Gly Thr Val Tyr Lys Ala Tyr His Val Pro Ser Gly Lys Ile Leu
180 185 190

Ala Val Lys Val Ile Leu Leu Asp Ile Thr Leu Glu Leu Gln Lys Gln
195 200 205

Ile Met Ser Glu Leu Glu Ile Leu Tyr Lys Cys Asp Ser Ser Tyr Ile
210 215 220

Ile Gly Phe Tyr Gly Ala Phe Phe Val Glu Asn Arg Ile Ser Ile Cys
 225 230 235 240

Thr Glu Phe Met Asp Gly Gly Ser Leu Asp Val Tyr Arg Lys Met Pro
 245 250 255

Glu His Val Leu Gly Arg Ile Ala Val Ala Val Val Lys Gly Leu Thr
 260 265 270

Tyr Leu Trp Ser Leu Lys Ile Leu His Arg Asp Val Lys Pro Ser Asn
 275 280 285

Met Leu Val Asn Thr Arg Gly Gln Val Lys Leu Cys Asp Phe Gly Val
 290 295 300

Ser Thr Gln Leu Val Asn Ser Ile Ala Lys Thr Tyr Val Gly Thr Asn
 305 310 315 320

Ala Tyr Met Ala Pro Glu Arg Ile Ser Gly Glu Gln Tyr Gly Ile His
 325 330 335

Ser Asp Val Trp Ser Leu Gly Ile Ser Phe Met Glu Leu Ala Leu Gly
 340 345 350

Arg Phe Pro Tyr Pro Gln Ile Gln Lys Asn Gln Gly Ser Leu Met Pro
 355 360 365

Leu Gln Leu Leu Gln Cys Ile Val Asp Glu Asp Ser Pro Val Leu Pro
 370 375 380

Val Gly Glu Phe Ser Glu Pro Phe Val His Phe Ile Thr Gln Cys Met
 385 390 395 400

Arg Lys Gln Pro Lys Glu Arg Pro Ala Pro Glu Glu Leu Met Gly His
 405 410 415

Pro Phe Ile Val Gln Phe Asn Asp Gly Asn Ala Ala Val Val Ser Met
 420 425 430

Trp Val Cys Arg Ala Leu Glu Glu Arg Arg Ser Gln Gln Gly Pro Pro
 435 440 445

<210> 29
 <211> 317
 <212> PRT
 <213> Homo sapiens

<400> 29

Met Ser Ser Glu Gln Lys Ser Gln His Cys Lys Pro Glu Glu Gly Val
 1 5 10 15

Glu Ala Gln Glu Glu Ala Leu Gly Leu Val Gly Ala Gln Ala Pro Thr
 20 25 30

Thr Glu Glu Gln Glu Ala Ala Val Ser Ser Ser Ser Pro Leu Val Pro
 35 40 45

Gly Thr Leu Glu Glu Val Pro Ala Ala Glu Ser Ala Gly Pro Pro Gln
 50 55 60

Ser Pro Gln Gly Ala Ser Ala Leu Pro Thr Thr Ile Ser Phe Thr Cys
 65 70 75 80

Trp Arg Gln Pro Asn Glu Gly Ser Ser Ser Gln Glu Glu Glu Gly Pro
 85 90 95

Ser Thr Ser Pro Asp Ala Glu Ser Leu Phe Arg Glu Ala Leu Ser Asn
 100 105 110

Lys Val Asp Glu Leu Ala His Phe Leu Leu Arg Lys Tyr Arg Ala Lys
 115 120 125

Glu Leu Val Thr Lys Ala Glu Met Leu Glu Arg Val Ile Lys Asn Tyr
 130 135 140

Lys Arg Cys Phe Pro Val Ile Phe Gly Lys Ala Ser Glu Ser Leu Lys
 145 150 155 160

Met Ile Phe Gly Ile Asp Val Lys Glu Val Asp Pro Ala Ser Asn Thr
165 170 175

Tyr Thr Leu Val Thr Cys Leu Gly Leu Ser Tyr Asp Gly Leu Leu Gly
180 185 190

Asn Asn Gln Ile Phe Pro Lys Thr Gly Leu Leu Ile Ile Val Leu Gly
195 200 205

Thr Ile Ala Met Glu Gly Asp Ser Ala Ser Glu Glu Glu Ile Trp Glu
210 215 220

Glu Leu Gly Val Met Gly Val Tyr Asp Gly Arg Glu His Thr Val Tyr
225 230 235 240

Gly Glu Pro Arg Lys Leu Leu Thr Gln Asp Trp Val Gln Glu Asn Tyr
245 250 255

Leu Glu Tyr Arg Gln Val Pro Gly Ser Asn Pro Ala Arg Tyr Glu Phe
260 265 270

Leu Trp Gly Pro Arg Ala Leu Ala Glu Thr Ser Tyr Val Lys Val Leu
275 280 285

Glu His Val Val Arg Val Asn Ala Arg Val Arg Ile Ala Tyr Pro Ser
290 295 300

Leu Arg Glu Ala Ala Leu Leu Glu Glu Glu Gly Val
305 310 315

<210> 30

<211> 712

<212> PRT

<213> Homo sapiens

<400> 30

Met Ser Gln Trp Tyr Glu Leu Gln Gln Leu Asp Ser Lys Phe Leu Glu
1 5 10 15

Gln Val His Gln Leu Tyr Asp Asp Ser Phe Pro Met Glu Ile Arg Gln

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

225 230 235 240

Arg Arg Gln Gln Ser Ala Cys Ile Gly Gly Pro Pro Asn Ala Cys Leu
245 250 255

Asp Gln Leu Gln Asn Trp Phe Thr Ile Val Ala Glu Ser Leu Gln Gln
260 265 270

Val Arg Gln Gln Leu Lys Lys Leu Glu Glu Leu Glu Gln Lys Tyr Thr
275 280 285

Tyr Glu His Asp Pro Ile Thr Lys Asn Lys Gln Val Leu Trp Asp Arg
290 295 300

Thr Phe Ser Leu Phe Gln Gln Leu Ile Gln Ser Ser Phe Val Val Glu
305 310 315 320

Arg Gln Pro Cys Met Pro Thr His Pro Gln Arg Pro Leu Val Leu Lys
325 330 335

Thr Gly Val Gln Phe Thr Val Lys Leu Arg Leu Leu Val Lys Leu Gln
340 345 350

Glu Leu Asn Tyr Asn Leu Lys Val Lys Val Leu Phe Asp Lys Asp Val
355 360 365

Asn Glu Arg Asn Thr Val Lys Gly Phe Arg Lys Phe Asn Ile Leu Gly
370 375 380

Thr His Thr Lys Val Met Asn Met Glu Glu Ser Thr Asn Gly Ser Leu
385 390 395 400

Ala Ala Glu Phe Arg His Leu Gln Leu Lys Glu Gln Lys Asn Ala Gly
405 410 415

Thr Arg Thr Asn Glu Gly Pro Leu Ile Val Thr Glu Glu Leu His Ser
420 425 430

Leu Ser Phe Glu Thr Gln Leu Cys Gln Pro Gly Leu Val Ile Asp Leu

435		440		445
Glu Thr Thr Ser Leu Pro Val Val Val Ile Ser Asn Val Ser Gln Leu				
450		455		460
Pro Ser Gly Trp Ala Ser Ile Leu Trp Tyr Asn Met Leu Val Ala Glu				
465		470		475 480
Pro Arg Asn Leu Ser Phe Phe Leu Thr Pro Pro Cys Ala Arg Trp Ala				
	485		490	495
Gln Leu Ser Glu Val Leu Ser Trp Gln Phe Ser Ser Val Thr Lys Arg				
	500		505	510
Gly Leu Asn Val Asp Gln Leu Asn Met Leu Gly Glu Lys Leu Leu Gly				
	515		520	525
Pro Asn Ala Ser Pro Asp Gly Leu Ile Pro Trp Thr Arg Phe Cys Lys				
	530		535	540
Glu Asn Ile Asn Asp Lys Asn Phe Pro Phe Trp Leu Trp Ile Glu Ser				
545		550		555 560
Ile Leu Glu Leu Ile Lys Lys His Leu Leu Pro Leu Trp Asn Asp Gly				
	565		570	575
Cys Ile Met Gly Phe Ile Ser Lys Glu Arg Glu Arg Ala Leu Leu Lys				
	580		585	590
Asp Gln Gln Pro Gly Thr Phe Leu Leu Arg Phe Ser Glu Ser Ser Arg				
	595		600	605
Glu Gly Ala Ile Thr Phe Thr Trp Val Glu Arg Ser Gln Asn Gly Gly				
	610		615	620
Glu Pro Asp Phe His Ala Val Glu Pro Tyr Thr Lys Lys Glu Leu Ser				
625		630		635 640
Ala Val Thr Phe Pro Asp Ile Ile Arg Asn Tyr Lys Val Met Ala Ala				

645

650

655

Glu Asn Ile Pro Glu Asn Pro Leu Lys Tyr Leu Tyr Pro Asn Ile Asp
 660 665 670

Lys Asp His Ala Phe Gly Lys Tyr Tyr Ser Arg Pro Lys Glu Ala Pro
 675 680 685

Glu Pro Met Glu Leu Asp Gly Pro Lys Gly Thr Gly Tyr Ile Lys Thr
 690 695 700

Glu Leu Ile Ser Val Ser Glu Val
 705 710

<210> 31
 <211> 288
 <212> PRT
 <213> Homo sapiens

<400> 31

Met Ser Ala Thr Gly Asp Arg His Pro Thr Gln Gly Asp Gln Glu Ala
 1 5 10 15

Pro Val Ser Gln Glu Gly Ala Gln Ala Glu Ala Ala Gly Ala Gly Asn
 20 25 30

Gln Glu Gly Gly Asp Ser Gly Pro Asp Ser Ser Asp Val Val Pro Ala
 35 40 45

Ala Glu Val Val Gly Val Ala Gly Pro Val Glu Gly Leu Gly Glu Glu
 50 55 60

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

Ala Glu Glu Asp Ser Asp Ile Gly Pro Ala Thr Glu Glu Glu Glu Glu
 85 90 95

Glu Glu Gly Asn Glu Ala Ala Asn Phe Asp Leu Ala Val Val Ala Arg
 100 105 110

Arg Tyr Pro Ala Ser Gly Ile His Phe Val Leu Leu Asp Met Val His
 115 120 125

Ser Leu Leu His Arg Leu Ser His Asn Asp His Ile Leu Ile Glu Asn
 130 135 140

Arg Gln Leu Ser Arg Leu Met Val Gly Pro His Ala Ala Ala Arg Asn
 145 150 155 160

Leu Trp Gly Asn Leu Pro Pro Leu Leu Leu Pro Gln Arg Leu Gly Ala
 165 170 175

Gly Ala Ala Ala Arg Ala Gly Glu Gly Leu Gly Leu Ile Gln Glu Ala
 180 185 190

Ala Ser Val Pro Glu Pro Ala Val Pro Ala Asp Leu Ala Glu Met Ala
 195 200 205

Arg Glu Pro Ala Glu Glu Ala Ala Glu Glu Lys Leu Ser Glu Glu Ala
 210 215 220

Thr Glu Glu Pro Asp Ala Glu Glu Pro Ala Thr Glu Glu Pro Thr Ala
 225 230 235 240

Gln Glu Ala Thr Ala Pro Glu Glu Val Thr Lys Ser Gln Pro Glu Lys
 245 250 255

Trp Asp Glu Glu Ala Gln Asp Ala Ala Gly Glu Glu Glu Lys Glu Gln
 260 265 270

Glu Lys Glu Lys Asp Ala Glu Asn Lys Val Lys Asn Ser Lys Gly Thr
 275 280 285

<210> 32
 <211> 579
 <212> PRT
 <213> Homo sapiens

<400> 32

Met Asn Lys Leu Tyr Ile Gly Asn Leu Ser Glu Asn Ala Ala Pro Ser
 1 5 10 15

Asp Leu Glu Ser Ile Phe Lys Asp Ala Lys Ile Pro Val Ser Gly Pro
 20 25 30

Phe Leu Val Lys Thr Gly Tyr Ala Phe Val Asp Cys Pro Asp Glu Ser
 35 40 45

Trp Ala Leu Lys Ala Ile Glu Ala Leu Ser Gly Lys Ile Glu Leu His
 50 55 60

Gly Lys Pro Ile Glu Val Glu His Ser Val Pro Lys Arg Gln Arg Ile
 65 70 75 80

Arg Lys Leu Gln Ile Arg Asn Ile Pro Pro His Leu Gln Trp Glu Val
 85 90 95

Leu Asp Ser Leu Leu Val Gln Tyr Gly Val Val Glu Ser Cys Glu Gln
 100 105 110

Val Asn Thr Asp Ser Glu Thr Ala Val Val Asn Val Thr Tyr Ser Ser
 115 120 125

Lys Asp Gln Ala Arg Gln Ala Leu Asp Lys Leu Asn Gly Phe Gln Leu
 130 135 140

Glu Asn Phe Thr Leu Lys Val Ala Tyr Ile Pro Asp Glu Met Ala Ala
 145 150 155 160

Gln Gln Asn Pro Leu Gln Gln Pro Arg Gly Arg Arg Gly Leu Gly Gln
 165 170 175

Arg Gly Ser Ser Arg Gln Gly Ser Pro Gly Ser Val Ser Lys Gln Lys
 180 185 190

Pro Cys Asp Leu Pro Leu Arg Leu Leu Val Pro Thr Gln Phe Val Gly
 195 200 205

Ala Ile Ile Gly Lys Glu Gly Ala Thr Ile Arg Asn Ile Thr Lys Gln
 210 215 220

Thr Gln Ser Lys Ile Asp Val His Arg Lys Glu Asn Ala Gly Ala Ala
 225 230 235 240

Glu Lys Ser Ile Thr Ile Leu Ser Thr Pro Glu Gly Thr Ser Ala Ala
 245 250 255

Cys Lys Ser Ile Leu Glu Ile Met His Lys Glu Ala Gln Asp Ile Lys
 260 265 270

Phe Thr Glu Glu Ile Pro Leu Lys Ile Leu Ala His Asn Asn Phe Val
 275 280 285

Gly Arg Leu Ile Gly Lys Glu Gly Arg Asn Leu Lys Lys Ile Glu Gln
 290 295 300

Asp Thr Asp Thr Lys Ile Thr Ile Ser Pro Leu Gln Glu Leu Thr Leu
 305 310 315 320

Tyr Asn Pro Glu Arg Thr Ile Thr Val Lys Gly Asn Val Glu Thr Cys
 325 330 335

Ala Lys Ala Glu Glu Glu Ile Met Lys Lys Ile Arg Glu Ser Tyr Glu
 340 345 350

Asn Asp Ile Ala Ser Met Asn Leu Gln Ala His Leu Ile Pro Gly Leu
 355 360 365

Asn Leu Asn Ala Leu Gly Leu Phe Pro Pro Thr Ser Gly Met Pro Pro
 370 375 380

Pro Thr Ser Gly Pro Pro Ser Ala Met Thr Pro Pro Tyr Pro Gln Phe
 385 390 395 400

Glu Gln Ser Glu Thr Glu Thr Val His Leu Phe Ile Pro Ala Leu Ser
 405 410 415

Val Gly Ala Ile Ile Gly Lys Gln Gly Gln His Ile Lys Gln Leu Ser
420 425 430

Arg Phe Ala Gly Ala Ser Ile Lys Ile Ala Pro Ala Glu Ala Pro Asp
435 440 445

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

Lys Ala Gln Gly Arg Ile Tyr Gly Lys Ile Lys Glu Glu Asn Phe Val
465 470 475 480

Ser Pro Lys Glu Glu Val Lys Leu Glu Ala His Ile Arg Val Pro Ser
485 490 495

Phe Ala Ala Gly Arg Val Ile Gly Lys Gly Gly Lys Thr Val Asn Glu
500 505 510

Leu Gln Asn Leu Ser Ser Ala Glu Val Val Val Pro Arg Asp Gln Thr
515 520 525

Pro Asp Glu Asn Asp Gln Val Val Val Lys Ile Thr Gly His Phe Tyr
530 535 540

Ala Cys Gln Val Ala Gln Arg Lys Ile Gln Glu Ile Leu Thr Gln Val
545 550 555 560

Lys Gln His Gln Gln Gln Lys Ala Leu Gln Ser Gly Pro Pro Gln Ser
565 570 575

Arg Arg Lys

<210> 33

<211> 210

<212> PRT

<213> Homo sapiens

<400> 33

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

His Ile
210

<210> 34
<211> 409
<212> PRT
<213> Homo sapiens

<400> 34

Met Gln Val Thr Leu Lys Thr Leu Gln Gln Gln Thr Phe Lys Ile Asp
1 5 10 15

Ile Asp Pro Glu Glu Thr Val Lys Ala Leu Lys Glu Lys Ile Glu Ser
20 25 30

Glu Lys Gly Lys Asp Ala Phe Pro Val Ala Gly Gln Lys Leu Ile Tyr
35 40 45

Ala Gly Lys Ile Leu Asn Asp Asp Thr Ala Leu Lys Glu Tyr Lys Ile
50 55 60

Asp Glu Lys Asn Phe Val Val Val Met Val Thr Lys Pro Lys Ala Val
65 70 75 80

Ser Thr Pro Ala Pro Ala Thr Thr Gln Gln Ser Ala Pro Ala Ser Thr
85 90 95

Thr Ala Val Thr Ser Ser Thr Thr Thr Val Ala Gln Ala Pro Thr
100 105 110

Pro Val Pro Ala Leu Ala Pro Thr Ser Thr Pro Ala Ser Ile Thr Pro
115 120 125

Ala Ser Ala Thr Ala Ser Ser Glu Pro Ala Pro Ala Ser Ala Ala Lys
130 135 140

Gln Glu Lys Pro Ala Glu Lys Pro Ala Glu Thr Pro Val Ala Thr Ser
145 150 155 160

Pro Thr Ala Thr Asp Ser Thr Ser Gly Asp Ser Ser Arg Ser Asn Leu

	165		170		175
Phe Glu Asp Ala Thr Ser Ala Leu Val Thr Gly Gln Ser Tyr Glu Asn	180	185	190		
Met Val Thr Glu Ile Met Ser Met Gly Tyr Glu Arg Glu Gln Val Ile	195	200	205		
Ala Ala Leu Arg Ala Ser Phe Asn Asn Pro Asp Arg Ala Val Glu Tyr	210	215	220		
Leu Leu Met Gly Ile Pro Gly Asp Arg Glu Ser Gln Ala Val Val Asp	225	230	235	240	
Pro Pro Gln Ala Ala Ser Thr Gly Ala Pro Gln Ser Ser Ala Val Ala	245	250	255		
Ala Ala Ala Ala Thr Thr Thr Ala Thr Thr Thr Thr Thr Ser Ser Gly	260	265	270		
Gly His Pro Leu Glu Phe Leu Arg Asn Gln Pro Gln Phe Gln Gln Met	275	280	285		
Arg Gln Ile Ile Gln Gln Asn Pro Ser Leu Leu Pro Ala Leu Leu Gln	290	295	300		
Gln Ile Gly Arg Glu Asn Pro Gln Leu Leu Gln Gln Ile Ser Gln His	305	310	315	320	
Gln Glu His Phe Ile Gln Met Leu Asn Glu Pro Val Gln Glu Ala Gly	325	330	335		
Gly Gln Gly Gly Gly Gly Gly Gly Gly Ser Gly Gly Ile Ala Glu Ala	340	345	350		
Gly Ser Gly His Met Asn Tyr Ile Gln Val Thr Pro Gln Glu Lys Glu	355	360	365		
Ala Ile Glu Arg Leu Lys Ala Leu Gly Phe Pro Glu Gly Leu Val Ile					

370

375

380

Gln Ala Tyr Phe Ala Cys Glu Lys Asn Glu Asn Leu Ala Ala Asn Phe
 385 390 395 400

Leu Leu Gln Gln Asn Phe Asp Glu Asp
 405

<210> 35
 <211> 208
 <212> PRT
 <213> Homo sapiens

<400> 35

Met Asp Pro Phe Leu Val Leu Leu His Ser Val Ser Ser Ser Leu Ser
 1 5 10 15

Ser Ser Glu Leu Thr Glu Leu Lys Phe Leu Cys Leu Gly Arg Val Gly
 20 25 30

Lys Arg Lys Leu Glu Arg Val Gln Ser Gly Leu Asp Leu Phe Ser Met
 35 40 45

Leu Leu Glu Gln Asn Asp Leu Glu Pro Gly His Thr Glu Leu Leu Arg
 50 55 60

Glu Leu Leu Ala Ser Leu Arg Arg His Asp Leu Leu Arg Arg Val Asp
 65 70 75 80

Asp Phe Glu Ala Gly Ala Ala Ala Gly Ala Ala Pro Gly Glu Glu Asp
 85 90 95

Leu Cys Ala Ala Phe Asn Val Ile Cys Asp Asn Val Gly Lys Asp Trp
 100 105 110

Arg Arg Leu Ala Arg Gln Leu Lys Val Ser Asp Thr Lys Ile Asp Ser
 115 120 125

Ile Glu Asp Arg Tyr Pro Arg Asn Leu Thr Glu Arg Val Arg Glu Ser
 130 135 140

Leu Arg Ile Trp Lys Asn Thr Glu Lys Glu Asn Ala Thr Val Ala His
 145 150 155 160

Leu Val Gly Ala Leu Arg Ser Cys Gln Met Asn Leu Val Ala Asp Leu
 165 170 175

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

Met Ser Pro Met Ser Trp Asn Ser Asp Ala Ser Thr Ser Glu Ala Ser
 195 200 205

<210> 36
 <211> 420
 <212> PRT
 <213> Homo sapiens

<400> 36

Met Ser Ser Pro Arg Asp Phe Arg Ala Glu Pro Val Asn Asp Tyr Glu
 1 5 10 15

Gly Asn Asp Ser Glu Ala Glu Asp Leu Asn Phe Arg Glu Thr Leu Pro
 20 25 30

Ser Ser Ser Gln Glu Asn Thr Pro Arg Ser Lys Val Phe Glu Asn Lys
 35 40 45

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

Asp Tyr Glu Asp Val Phe Glu Glu Pro Ser Glu Ser Gly Ser Asp Pro
 65 70 75 80

Ser Met Trp Thr Ala Arg Gly Pro Phe Arg Arg Asp Arg Trp Ser Ser
 85 90 95

Glu Asp Glu Glu Ala Ala Gly Pro Ser Gln Ala Leu Ser Pro Leu Leu
 100 105 110

Ser Asp Thr Arg Lys Ile Val Ser Glu Gly Glu Leu Asp Gln Leu Ala
 115 120 125

Gln Ile Arg Pro Leu Ile Phe Asn Phe His Glu Gln Thr Ala Ile Lys
 130 135 140

Asp Cys Leu Lys Ile Leu Glu Glu Lys Thr Ala Ala Tyr Asp Ile Met
 145 150 155 160

Gln Glu Phe Met Ala Leu Glu Leu Lys Asn Leu Pro Gly Glu Phe Asn
 165 170 175

Ser Gly Asn Gln Pro Ser Asn Arg Glu Lys Asn Arg Tyr Arg Asp Ile
 180 185 190

Leu Pro Tyr Asp Ser Thr Arg Val Pro Leu Gly Lys Ser Lys Asp Tyr
 195 200 205

Ile Asn Ala Ser Tyr Ile Arg Ile Val Asn Cys Gly Glu Glu Tyr Phe
 210 215 220

Tyr Ile Ala Thr Gln Gly Pro Leu Leu Ser Thr Ile Asp Asp Phe Trp
 225 230 235 240

Gln Met Val Leu Glu Asn Asn Ser Asn Val Ile Ala Met Ile Thr Arg
 245 250 255

Glu Ile Glu Gly Gly Ile Ile Lys Cys Tyr His Tyr Trp Pro Ile Ser
 260 265 270

Leu Lys Lys Pro Leu Glu Leu Lys His Phe Arg Val Phe Leu Glu Asn
 275 280 285

Tyr Gln Ile Leu Gln Tyr Phe Ile Ile Arg Met Phe Gln Val Val Glu
 290 295 300

Lys Ser Thr Gly Thr Ser His Ser Val Lys Gln Leu Gln Phe Thr Lys
 305 310 315 320

Trp Pro Asp His Gly Thr Pro Ala Ser Ala Asp Ser Phe Ile Lys Tyr
325 330 335

Ile Arg Tyr Ala Arg Lys Ser His Leu Thr Gly Pro Met Val Val His
340 345 350

Cys Ser Ala Gly Ile Gly Arg Thr Gly Val Phe Leu Cys Val Asp Val
355 360 365

Val Phe Cys Ala Ile Val Lys Asn Cys Ser Phe Asn Ile Met Asp Ile
370 375 380

Val Ala Gln Met Arg Glu Gln Arg Ser Gly Met Val Gln Thr Lys Glu
385 390 395 400

Gln Tyr His Phe Cys Tyr Asp Ile Val Leu Glu Val Leu Arg Lys Leu
405 410 415

Leu Thr Leu Asp
420

<210> 37
<211> 284
<212> PRT
<213> Homo sapiens

<400> 37

Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu
1 5 10 15

Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala
20 25 30

Glu Asp Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ser Leu Gln Lys
35 40 45

Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu
50 55 60

Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp
 65 70 75 80

Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu
 85 90 95

Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys
 100 105 110

Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys
 115 120 125

Val Ile Glu Ser Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln
 130 135 140

Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg
 145 150 155 160

Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu
 165 170 175

Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu
 180 185 190

Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu
 195 200 205

Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Arg Tyr Glu Glu Glu
 210 215 220

Ile Lys Val Leu Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu
 225 230 235 240

Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu
 245 250 255

Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu
 260 265 270

Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile
 275 280

<210> 38
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 38

Met Gln Ala Glu Gly Arg Gly Thr Gly Gly Ser Thr Gly Asp Ala Asp
 1 5 10 15

Gly Pro Gly Gly Pro Gly Ile Pro Asp Gly Pro Gly Gly Asn Ala Gly
 20 25 30

Gly Pro Gly Glu Ala Gly Ala Thr Gly Gly Arg Gly Pro Arg Gly Ala
 35 40 45

Gly Ala Ala Arg Ala Ser Gly Pro Gly Gly Gly Ala Pro Arg Gly Pro
 50 55 60

His Gly Gly Ala Ala Ser Gly Leu Asn Gly Cys Cys Arg Cys Gly Ala
 65 70 75 80

Arg Gly Pro Glu Ser Arg Leu Leu Glu Phe Tyr Leu Ala Met Pro Phe
 85 90 95

Ala Thr Pro Met Glu Ala Glu Leu Ala Arg Arg Ser Leu Ala Gln Asp
 100 105 110

Ala Pro Pro Leu Pro Val Pro Gly Val Leu Leu Lys Glu Phe Thr Val
 115 120 125

Ser Gly Asn Ile Leu Thr Ile Arg Leu Thr Ala Ala Asp His Arg Gln
 130 135 140

Leu Gln Leu Ser Ile Ser Ser Cys Leu Gln Gln Leu Ser Leu Leu Met
 145 150 155 160

Trp Ile Thr Gln Cys Phe Leu Pro Val Phe Leu Ala Gln Pro Pro Ser

165

170

175

Gly Gln Arg Arg
180