

SEQUENCE LISTING

<110> Cell Design Labs, Inc.

<120> METHODS AND COMPOSITIONS FOR REDUCING THE IMMUNOGENICITY OF
CHIMERIC NOTCH RECEPTORS

<130> 43159-0066W01

<150> US 62/603,993

<151> 2017-06-19

<150> US 62/556,765

<151> 2017-09-11

<160> 35

<170> PatentIn version 3.5

<210> 1

<211> 22

<212> PRT

<213> Homo sapiens

<400> 1

Met	Ala	Leu	Pro	Val	Thr	Ala	Leu	Leu	Leu	Pro	Leu	Ala	Leu	Leu	Leu
1				5				10					15		

His	Ala	Ala	Arg	Pro	Ser
			20		

<210> 2

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Myc tag

<400> 2

Glu	Gln	Lys	Leu	Ile	Ser	Glu	Glu	Asp	Leu
1			5					10	

<210> 3

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> GS linker

<400> 3

Gly Ser Ala Ala Ala Gly Gly Ser Gly Gly Ser Gly Gly Ser
1 5 10

<210> 4

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> GS linker

<400> 4

Gly Gly Gly Ser Gly Gly Gly Ser
1 5

<210> 5

<211> 638

<212> PRT

<213> Homo sapiens

<400> 5

Met Val Ser Lys Leu Ser Gln Leu Gln Thr Glu Leu Leu Ala Ala Leu
1 5 10 15

Leu Glu Ser Gly Leu Ser Lys Glu Ala Leu Ile Gln Ala Leu Gly Glu
20 25 30

Pro Gly Pro Tyr Leu Leu Ala Gly Glu Gly Pro Leu Asp Lys Gly Glu
35 40 45

Ser Cys Gly Gly Gly Arg Gly Glu Leu Ala Glu Leu Pro Asn Gly Leu
50 55 60

Gly Glu Thr Arg Gly Ser Glu Asp Glu Thr Asp Asp Asp Gly Glu Asp
65 70 75 80

Phe Thr Pro Pro Ile Leu Lys Glu Leu Glu Asn Leu Ser Pro Glu Glu
85 90 95

Ala Ala His Gln Lys Ala Val Val Glu Thr Leu Leu Gln Glu Asp Pro

100

105

110

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

Pro Gln Arg Glu Val Val Asp Thr Thr Gly Leu Asn Gln Ser His Leu
 130 135 140

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

Ala Leu Tyr Thr Trp Tyr Val Arg Lys Gln Arg Glu Val Ala Gln Gln
 165 170 175

Phe Thr His Ala Gly Gln Gly Gly Leu Ile Glu Glu Pro Thr Gly Asp
 180 185 190

Glu Leu Pro Thr Lys Lys Gly Arg Arg Asn Arg Phe Lys Trp Gly Pro
 195 200 205

Ala Ser Gln Gln Ile Leu Phe Gln Ala Tyr Glu Arg Gln Lys Asn Pro
 210 215 220

Ser Lys Glu Glu Arg Glu Thr Leu Val Glu Glu Cys Asn Arg Ala Glu
 225 230 235 240

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

Asn Leu Val Thr Glu Val Arg Val Tyr Asn Trp Phe Ala Asn Arg Arg
 260 265 270

Lys Glu Glu Ala Phe Arg His Lys Leu Ala Met Asp Thr Tyr Ser Gly
 275 280 285

Pro Pro Pro Gly Pro Gly Pro Gly Pro Ala Leu Pro Ala His Ser Ser
 290 295 300

Pro Gly Leu Pro Pro Pro Ala Leu Ser Pro Ser Lys Val His Gly Val
 305 310 315 320

Arg Tyr Gly Gln Pro Ala Thr Ser Glu Thr Ala Glu Val Pro Ser Ser
325 330 335

Ser Gly Gly Pro Leu Val Thr Val Ser Thr Pro Leu His Gln Val Ser
340 345 350

Pro Thr Gly Leu Glu Pro Ser His Ser Leu Leu Ser Thr Glu Ala Lys
355 360 365

Leu Val Ser Ala Ala Gly Gly Pro Leu Pro Pro Val Ser Thr Leu Thr
370 375 380

Ala Leu His Ser Leu Glu Gln Thr Ser Pro Gly Leu Asn Gln Gln Pro
385 390 395 400

Gln Asn Leu Ile Met Ala Ser Leu Pro Gly Val Met Thr Ile Gly Pro
405 410 415

Gly Glu Pro Ala Ser Leu Gly Pro Thr Phe Thr Asn Thr Gly Ala Ser
420 425 430

Thr Leu Val Ile Gly Leu Ala Ser Thr Gln Ala Gln Ser Val Pro Val
435 440 445

Ile Asn Ser Met Gly Ser Ser Leu Thr Thr Leu Gln Pro Val Gln Phe
450 455 460

Ser Gln Pro Leu His Pro Ser Tyr Gln Gln Pro Leu Met Pro Pro Val
465 470 475 480

Gln Ser His Val Thr Gln Ser Pro Phe Met Ala Thr Met Ala Gln Leu
485 490 495

Gln Ser Pro His Ala Leu Tyr Ser His Lys Pro Glu Val Ala Gln Tyr
500 505 510

Thr His Thr Gly Leu Leu Pro Gln Thr Met Leu Ile Thr Asp Thr Thr
515 520 525

Asn Leu Ser Ala Leu Ala Ser Leu Thr Pro Thr Lys Gln Glu Ala Ala

530

535

540

Leu Leu Pro Gln Val Phe Thr Ser Asp Thr Glu Ala Ser Ser Glu Ser
 545 550 555 560

Gly Leu His Thr Pro Ala Ser Gln Ala Thr Thr Leu His Val Pro Ser
 565 570 575

Gln Asp Pro Ala Gly Ile Gln His Leu Gln Pro Ala His Arg Leu Ser
 580 585 590

Ala Ser Pro Thr Val Ser Ser Ser Ser Leu Val Leu Tyr Gln Ser Ser
 595 600 605

Asp Ser Ser Asn Gly Gln Ser His Leu Leu Pro Ser Asn His Ser Val
 610 615 620

Ile Glu Thr Phe Ile Ser Thr Gln Met Ala Ser Ser Ser Gln
 625 630 635

<210> 6

<211> 631

<212> PRT

<213> Homo sapiens

<400> 6

Met Val Ser Lys Leu Ser Gln Leu Gln Thr Glu Leu Leu Ala Ala Leu
 1 5 10 15

Leu Glu Ser Gly Leu Ser Lys Glu Ala Leu Ile Gln Ala Leu Gly Glu
 20 25 30

Pro Gly Pro Tyr Leu Leu Ala Gly Glu Gly Pro Leu Asp Lys Gly Glu
 35 40 45

Ser Cys Gly Gly Gly Arg Gly Glu Leu Ala Glu Leu Pro Asn Gly Leu
 50 55 60

Gly Glu Thr Arg Gly Ser Glu Asp Glu Thr Asp Asp Asp Gly Glu Asp
 65 70 75 80

Phe Thr Pro Pro Ile Leu Lys Glu Leu Glu Asn Leu Ser Pro Glu Glu
85 90 95

Ala Ala His Gln Lys Ala Val Val Glu Thr Leu Leu Gln Glu Asp Pro
100 105 110

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

Pro Gln Arg Glu Val Val Asp Thr Thr Gly Leu Asn Gln Ser His Leu
130 135 140

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

Ala Leu Tyr Thr Trp Tyr Val Arg Lys Gln Arg Glu Val Ala Gln Gln
165 170 175

Phe Thr His Ala Gly Gln Gly Gly Leu Ile Glu Glu Pro Thr Gly Asp
180 185 190

Glu Leu Pro Thr Lys Lys Gly Arg Arg Asn Arg Phe Lys Trp Gly Pro
195 200 205

Ala Ser Gln Gln Ile Leu Phe Gln Ala Tyr Glu Arg Gln Lys Asn Pro
210 215 220

Ser Lys Glu Glu Arg Glu Thr Leu Val Glu Glu Cys Asn Arg Ala Glu
225 230 235 240

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

Asn Leu Val Thr Glu Val Arg Val Tyr Asn Trp Phe Ala Asn Arg Arg
260 265 270

Lys Glu Glu Ala Phe Arg His Lys Leu Ala Met Asp Thr Tyr Ser Gly
275 280 285

Pro Pro Pro Gly Pro Gly Pro Gly Pro Ala Leu Pro Ala His Ser Ser
290 295 300

Pro Gly Leu Pro Pro Pro Ala Leu Ser Pro Ser Lys Val His Gly Val
305 310 315 320

Arg Tyr Gly Gln Pro Ala Thr Ser Glu Thr Ala Glu Val Pro Ser Ser
325 330 335

Ser Gly Gly Pro Leu Val Thr Val Ser Thr Pro Leu His Gln Val Ser
340 345 350

Pro Thr Gly Leu Glu Pro Ser His Ser Leu Leu Ser Thr Glu Ala Lys
355 360 365

Leu Val Ser Ala Ala Gly Gly Pro Leu Pro Pro Val Ser Thr Leu Thr
370 375 380

Ala Leu His Ser Leu Glu Gln Thr Ser Pro Gly Leu Asn Gln Gln Pro
385 390 395 400

Gln Asn Leu Ile Met Ala Ser Leu Pro Gly Val Met Thr Ile Gly Pro
405 410 415

Gly Glu Pro Ala Ser Leu Gly Pro Thr Phe Thr Asn Thr Gly Ala Ser
420 425 430

Thr Leu Val Ile Gly Leu Ala Ser Thr Gln Ala Gln Ser Val Pro Val
435 440 445

Ile Asn Ser Met Gly Ser Ser Leu Thr Thr Leu Gln Pro Val Gln Phe
450 455 460

Ser Gln Pro Leu His Pro Ser Tyr Gln Gln Pro Leu Met Pro Pro Val
465 470 475 480

Gln Ser His Val Thr Gln Ser Pro Phe Met Ala Thr Met Ala Gln Leu
485 490 495

Gln Ser Pro His Ala Leu Tyr Ser His Lys Pro Glu Val Ala Gln Tyr
500 505 510

Thr His Thr Gly Leu Leu Pro Gln Thr Met Leu Ile Thr Asp Thr Thr
515 520 525

Asn Leu Ser Ala Leu Ala Ser Leu Thr Pro Thr Lys Gln Val Phe Thr
530 535 540

Ser Asp Thr Glu Ala Ser Ser Glu Ser Gly Leu His Thr Pro Ala Ser
545 550 555 560

Gln Ala Thr Thr Leu His Val Pro Ser Gln Asp Pro Ala Gly Ile Gln
565 570 575

His Leu Gln Pro Ala His Arg Leu Ser Ala Ser Pro Thr Val Ser Ser
580 585 590

Ser Ser Leu Val Leu Tyr Gln Ser Ser Asp Ser Ser Asn Gly Gln Ser
595 600 605

His Leu Leu Pro Ser Asn His Ser Val Ile Glu Thr Phe Ile Ser Thr
610 615 620

Gln Met Ala Ser Ser Ser Gln
625 630

<210> 7
<211> 662
<212> PRT
<213> Homo sapiens

<400> 7

Met Val Ser Lys Leu Ser Gln Leu Gln Thr Glu Leu Leu Ala Ala Leu
1 5 10 15

Leu Glu Ser Gly Leu Ser Lys Glu Ala Leu Ile Gln Ala Leu Gly Glu
20 25 30

Pro Gly Pro Tyr Leu Leu Ala Gly Glu Gly Pro Leu Asp Lys Gly Glu
35 40 45

Ser Cys Gly Gly Gly Arg Gly Glu Leu Ala Glu Leu Pro Asn Gly Leu
50 55 60

Gly Glu Thr Arg Gly Ser Glu Asp Glu Thr Asp Asp Asp Gly Glu Asp
65 70 75 80

Phe Thr Pro Pro Ile Leu Lys Glu Leu Glu Asn Leu Ser Pro Glu Glu
85 90 95

Ala Ala His Gln Lys Ala Val Val Glu Thr Leu Leu Gln Glu Asp Pro
100 105 110

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

Pro Gln Arg Glu Val Val Asp Thr Thr Gly Leu Asn Gln Ser His Leu
130 135 140

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

Ala Leu Tyr Thr Trp Tyr Val Arg Lys Gln Arg Glu Val Ala Gln Gln
165 170 175

Phe Thr His Ala Gly Gln Gly Gly Leu Ile Glu Glu Pro Thr Gly Asp
180 185 190

Glu Leu Pro Thr Lys Lys Gly Arg Arg Asn Arg Phe Lys Trp Gly Pro
195 200 205

Ala Ser Gln Gln Ile Leu Phe Gln Ala Tyr Glu Arg Gln Lys Asn Pro
210 215 220

Ser Lys Glu Glu Arg Glu Thr Leu Val Glu Glu Cys Asn Arg Ala Glu
225 230 235 240

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

Asn Leu Val Thr Glu Val Arg Val Tyr Asn Trp Phe Ala Asn Arg Arg
260 265 270

Lys Glu Glu Ala Phe Arg His Lys Leu Ala Met Asp Thr Tyr Ser Gly

275

280

285

Pro Pro Pro Gly Pro Gly Pro Gly Pro Ala Leu Pro Ala His Ser Ser
 290 295 300

Pro Gly Leu Pro Pro Pro Ala Leu Ser Pro Ser Lys Val His Gly Val
 305 310 315 320

Arg Tyr Gly Gln Pro Ala Thr Ser Glu Thr Ala Glu Val Pro Ser Ser
 325 330 335

Ser Gly Gly Pro Leu Val Thr Val Ser Thr Pro Leu His Gln Val Ser
 340 345 350

Pro Thr Gly Leu Glu Pro Ser His Ser Leu Leu Ser Thr Glu Ala Lys
 355 360 365

Leu Val Ser Ala Ala Gly Gly Pro Leu Pro Pro Val Ser Thr Leu Thr
 370 375 380

Ala Leu His Ser Leu Glu Gln Thr Ser Pro Gly Leu Asn Gln Gln Pro
 385 390 395 400

Gln Asn Leu Ile Met Ala Ser Leu Pro Gly Val Met Thr Ile Gly Pro
 405 410 415

Gly Glu Pro Ala Ser Leu Gly Pro Thr Phe Thr Asn Thr Gly Ala Ser
 420 425 430

Thr Leu Val Ile Gly Leu Ala Ser Thr Gln Ala Gln Ser Val Pro Val
 435 440 445

Ile Asn Ser Met Gly Ser Ser Leu Thr Thr Leu Gln Pro Val Gln Phe
 450 455 460

Ser Gln Pro Leu His Pro Ser Tyr Gln Gln Pro Leu Met Pro Pro Val
 465 470 475 480

Gln Ser His Val Thr Gln Ser Pro Phe Met Ala Thr Met Ala Gln Leu
 485 490 495

Gln Ser Pro His Ala Leu Tyr Ser His Lys Pro Glu Val Ala Gln Tyr
500 505 510

Thr His Thr Gly Leu Leu Pro Gln Thr Met Leu Ile Thr Asp Thr Thr
515 520 525

Asn Leu Ser Ala Leu Ala Ser Leu Thr Pro Thr Lys Gln Val Arg Ser
530 535 540

Arg Pro Ala Gly Pro Pro Leu Ala Cys Asp Arg Ala Pro His Pro His
545 550 555 560

Ile Pro Arg Ala Gln Glu Ala Ala Leu Leu Pro Gln Val Phe Thr Ser
565 570 575

Asp Thr Glu Ala Ser Ser Glu Ser Gly Leu His Thr Pro Ala Ser Gln
580 585 590

Ala Thr Thr Leu His Val Pro Ser Gln Asp Pro Ala Ser Ile Gln His
595 600 605

Leu Gln Pro Ala His Arg Leu Ser Ala Ser Pro Thr Val Ser Ser Ser
610 615 620

Ser Leu Val Leu Tyr Gln Ser Ser Asp Ser Ser Asn Gly Gln Ser His
625 630 635 640

Leu Leu Pro Ser Asn His Ser Val Ile Glu Thr Phe Ile Ser Thr Gln
645 650 655

Met Ala Ser Ser Ser Gln
660

<210> 8
<211> 3438
<212> DNA
<213> Homo sapiens

<400> 8
ggggccctga ttcacgggcc gctggggcca gggttggggg ttgggggtgc ccacagggct 60
tggctagtgg ggttttgggg gggcagtggg tgcaaggagt ttggtttgtg tctgccggcc 120

ggcaggcaaa cgcaaccac gcggtggggg aggcggctag cgtggtggac ccgggccgcg	180
tggccctgtg gcagccgagc catggtttct aaactgagcc agctgcagac ggagctcctg	240
gcggccctgc tcgagtcagg gctgagcaaa gaggcactga tccaggcact gggtagaccg	300
gggccctacc tcctggctgg agaaggcccc ctggacaagg gggagtcctg cggcggcggg	360
cgaggggagc tggctgagct gcccattggg ctgggggaga ctcggggctc cgaggacgag	420
acggacgacg atggggaaga cttcacgcca cccatcctca aagagctgga gaacctcagc	480
cctgaggagg cgggccacca gaaagccgtg gtggagaccc ttctgcagga ggacctgtgg	540
cgtgtggcga agatgggtcaa gtcctacctg cagcagcaca acatcccaca gcgggaggtg	600
gtcgatacca ctggcctcaa ccagtcccac ctgtcccaac acctcaacaa gggcactccc	660
atgaagacgc agaagcgggc cgccctgtac acctggtacg tccgcaagca gcgagaggtg	720
gcgcagcagt tcacccatgc agggcaggga gggctgattg aagagcccac aggtgatgag	780
ctaccaacca agaaggggcg gaggaaccgt ttcaagtggg gccagcatc ccagcagatc	840
ctgttccagg cctatgagag gcagaagaac cctagcaagg aggagcgaga gacgctagtg	900
gaggagtgca atagggcgga atgcatccag agaggggtgt ccccatcaca ggcacagggg	960
ctgggctcca acctcgtcac ggaggtgcgt gtctacaact ggtttgccaa ccggcgcaaa	1020
gaagaagcct tccggcacia gctggccatg gacacgtaca gcggggcccc cccagggccca	1080
ggcccgggac ctgctgtgct cgctcacagc tcccctggcc tgcctccacc tgccctctcc	1140
cccagtaagg tccacggtgt gcgctatgga cagcctgcga ccagtgcagc tgcagaagta	1200
ccctcaagca gcggcggtcc cttagtaca gtgtctacac ccctccacca agtgtcccc	1260
acgggcctgg agcccagcca cagcctgctg agtacagaag ccaagctggt ctcagcagct	1320
ggggggcccc tccccctgt cagcaccctg acagcactgc acagcttgga gcagacatcc	1380
ccaggcctca accagcagcc ccagaacctc atcatggcct cacttcctgg ggtcatgacc	1440
atcgggcctg gtgagcctgc ctccctgggt cctacgttca ccaacacagg tgcctccacc	1500
ctggtcatcg gcctggcctc cacgcaggca cagagtgtgc cggcatcaa cagcatgggc	1560
agcagcctga ccacctgca gcccgctcag ttctcccagc cgctgcaccc ctcctaccag	1620
cagccgtca tgccacctgt gcagagccat gtgaccaga gcccttcat ggccacctg	1680
gctcagctgc agagcccca cgccctctac agccacaagc ccgaggtggc ccagtacacc	1740

cacacgggcc	tgctcccgca	gactatgctc	atcaccgaca	ccaccaacct	gagcgccttg	1800
gccagcctca	cgcccaccaa	gcaggaggct	gctctgctcc	cccaggtctt	cacctcagac	1860
actgaggcct	ccagtgagtc	cgggcttcac	acgccggcat	ctcaggccac	caccctccac	1920
gtccccagcc	aggaccctgc	cggcatccag	cacctgcagc	cggcccaccg	gctcagcgcc	1980
agccccacag	tgtcctccag	cagcctgggtg	ctgtaccaga	gctcagactc	cagcaatggc	2040
cagagccacc	tgctgccatc	caaccacagc	gtcatcgaga	ccttcatctc	caccagatg	2100
gcctcttcct	cccagtaacc	acggcacctg	ggccctgggg	cctgtactgc	ctgcttgggg	2160
ggtgatgagg	gcagcagcca	gccctgcctg	gaggacctga	gcctgccgag	caaccgtggc	2220
ccttcctgga	cagctgtgcc	tcgctcccca	ctctgctctg	atgcatcaga	aaggaggggc	2280
tctgaggcgc	cccaaccgt	ggaggctgct	cggggtgcac	aggaggggggt	cgtggagagc	2340
taggagcaaa	gcctgttcat	ggcagatgta	ggagggactg	tcgctgcttc	gtgggataca	2400
gtcttcttac	ttggaactga	agggggcggc	ctatgacttg	ggcaccacca	gcctgggcct	2460
atggagagcc	ctgggaccgc	tacaccactc	tggcagccac	acttctcagg	acacaggcct	2520
gtgtagctgt	gacctgctga	gctctgagag	gccctggatc	agcgtggcct	tgttctgtca	2580
ccaatgtacc	caccgggcca	ctccttcctg	ccccaactcc	ttccagctag	tgaccacat	2640
gccatttgta	ctgaccccat	cacctactca	cacaggcatt	tcctgggtgg	ctactctgtg	2700
ccagagcctg	gggctctaac	gcctgagccc	agggaggccg	aagctaacag	ggaaggcagg	2760
cagggtcttc	ctggcttccc	atccccagcg	attccctctc	ccaggcccca	tgacctccag	2820
ctttcctgta	tttgttccca	agagcatcat	gcctctgagg	ccagcctggc	ctcctgcctc	2880
tactgggaag	gctacttcgg	ggctgggaag	tcgtccttac	tcctgtggga	gcctcgcaac	2940
ccgtgccaa	g	g	g	g	g	3000
gcccttgttt	ggggcaggag	tagctgagct	cacaaggcag	caaggcccga	gcagctgagc	3060
agggccgggg	aactggccaa	gctgaggtgc	ccaggagaag	aaagaggtga	ccccagggca	3120
caggagctac	ctgtgtggac	aggactaaca	ctcagaagcc	tgggggcctg	gctggctgag	3180
ggcagttcgc	agccaccctg	aggagtctga	ggtcctgagc	actgccagga	gggacaaagg	3240
agcctgtgaa	cccaggacaa	gcatggtccc	acatccctgg	gcctgctgct	gagaacctgg	3300
ccttcagtgt	accgctcta	ccctgggatt	caggaaaagg	cctgggggtga	cccggcacc	3360

cctgcagctt gtagccagcc ggggcgagtg gcacgtttat ttaactttta gtaaagtcaa	3420
ggagaaatgc ggtggaaa	3438

<210> 9
 <211> 3417
 <212> DNA
 <213> Homo sapiens

<400> 9	
ggggccctga ttcacgggcc gctggggcca gggttggggg ttgggggtgc ccacagggct	60
tggctagtgg ggttttgggg gggcagtggg tgcaaggagt ttggtttgtg tctgccggcc	120
ggcaggcaaa cgcaaccac gcggtggggg aggcggctag cgtggtggac ccgggccgcg	180
tggccctgtg gcagccgagc catggtttct aaactgagcc agctgcagac ggagctcctg	240
gcggccctgc tcgagtcagg gctgagcaaa gaggcactga tccaggcact gggtagaccg	300
gggcccctacc tcctggctgg agaaggcccc ctggacaagg gggagtcctg cggcggcggt	360
cgaggggagc tggctgagct gcccaatggg ctgggggaga ctcggggctc cgaggacgag	420
acggacgacg atggggaaga cttcacgcca cccatcctca aagagctgga gaacctcagc	480
cctgaggagg cgccccacca gaaagccgtg gtggagaccc ttctgcagga ggacctgtgg	540
cgtgtggcga agatggtcaa gtcctacctg cagcagcaca acatcccaca gcgggaggtg	600
gtcgatacca ctggcctcaa ccagtcccac ctgtcccaac acctcaacaa gggcactccc	660
atgaagacgc agaagcgggc cgccctgtac acctggtacg tccgcaagca gcgagaggtg	720
gcgcagcagt tcacccatgc agggcaggga gggctgattg aagagcccac aggtgatgag	780
ctaccaacca agaaggggcg gaggaaccgt ttcaagtggg gcccagcatc ccagcagatc	840
ctgttccagg cctatgagag gcagaagaac cctagcaagg aggagcgaga gacgctagtg	900
gaggagtgca atagggcgga atgcatccag agaggggtgt ccccatcaca ggcacagggg	960
ctgggctcca acctcgtcac ggaggtgcgt gtctacaact ggtttgccaa ccggcgcaaa	1020
gaagaagcct tccggcacia gctggccatg gacacgtaca gcgggcccc cccagggccca	1080
ggcccgggac ctgctgtgcc cgctcacagc tcccctggcc tgcctccacc tgccctctcc	1140
cccagtaagg tccacggtgt gcgctatgga cagcctgcga ccagtgagac tgcagaagta	1200
ccctcaagca gcggcggtcc cttagtgaac gtgtctacac ccctccacca agtgtcccc	1260

acgggcctgg agcccagcca cagcctgctg agtacagaag ccaagctggt ctcagcagct	1320
ggggggcccc tccccctgt cagcaccctg acagcactgc acagcttgga gcagacatcc	1380
ccaggcctca accagcagcc ccagaacctc atcatggcct cacttcctgg ggtcatgacc	1440
atcgggcctg gtgagcctgc ctccctgggt cctacgttca ccaacacagg tgcctccacc	1500
ctggtcatcg gcctggcctc cacgcaggca cagagtgtgc cggtcatcaa cagcatgggc	1560
agcagcctga ccaccctgca gcccgtccag ttctcccagc cgctgcaccc ctcctaccag	1620
cagccgctca tgccacctgt gcagagccat gtgaccaga gcccttcat ggccaccatg	1680
gctcagctgc agagccccca cgccctctac agccacaagc ccgaggtggc ccagtacacc	1740
cacacgggcc tgctcccga gactatgctc atcaccgaca ccaccaacct gagcgccctg	1800
gccagcctca cgcccacaa gcaggtcttc acctcagaca ctgaggcctc cagtgagtcc	1860
gggcttcaca cgccggcatc tcaggccacc acctccacg tcccagcca ggaccctgcc	1920
ggcatccagc acctgcagcc ggcccaccgg ctcagcgcca gcccacagt gtcctccagc	1980
agcctgggtg tgtaccagag ctcagactcc agcaatggcc agagccacct gctgccatcc	2040
aaccacagcg tcatcgagac cttcatctcc acccagatgg cctcttcctc ccagtaacca	2100
cggcacctgg gccctggggc ctgtactgcc tgcttggggg gtgatgaggg cagcagccag	2160
ccctgcctgg aggacctgag cctgccgagc aaccgtggcc cttcctggac agctgtgcct	2220
cgctccccac tctgctctga tgcatacaga agggagggct ctgaggcgcc ccaaccctg	2280
gaggctgctc ggggtgcaca ggagggggtc gtggagagct aggagcaaag cctgttcatg	2340
gcagatgtag gagggactgt cgctgcttcg tgggatacag tcttcttact tggaactgaa	2400
ggggggcggcc tatgacttgg gcacccccag cctgggccta tggagagccc tgggaccgct	2460
acaccactct ggagccaca cttctcagga cacaggcctg tgtagctgtg acctgctgag	2520
ctctgagagg ccctggatca gcgtggcctt gttctgtcac caatgtaccc accgggccac	2580
tccttcctgc cccaactcct tccagctagt gaccacatg ccatttgtac tgaccccatc	2640
acctactcac acaggcattt cctgggtggc tactctgtgc cagagcctgg ggctctaacg	2700
cctgagccca gggaggccga agctaacagg gaaggcaggc agggctctcc tggcttccca	2760
tcccagcga ttccctctcc caggcccat gacctcagc tttcctgtat ttgttcccaa	2820
gagcatcatg cctctgaggc cagcctggcc tcctgcctct actgggaagg ctacttcggg	2880

gctgggaagt cgtccttact cctgtgggag cctcgcaacc cgtgccaagt ccaggtcctg	2940
gtggggcagc tcctctgtct cgagcgcctt gcagaccctg cccttgtttg gggcaggagt	3000
agctgagctc acaaggcagc aaggcccgag cagctgagca gggccgggga actggccaag	3060
ctgaggtgcc caggagaaga aagaggtgac cccagggcac aggagctacc tgtgtggaca	3120
ggactaacac tcagaagcct gggggcctgg ctggctgagg gcagttcgca gccaccctga	3180
ggagtctgag gtcctgagca ctgccaggag ggacaaagga gcctgtgaac ccaggacaag	3240
catggtccca catccctggg cctgctgctg agaacctggc cttcagtgtg ccgcgtctac	3300
cctgggattc aggaaaaggc ctggggtgac ccggcacccc ctgcagcttg tagccagccg	3360
gggcgagtgg cacgtttatt taacttttag taaagtcaag gagaaatgcg gtggaaa	3417

<210> 10
 <211> 3563
 <212> DNA
 <213> Homo sapiens

<400> 10	
ataaatatga accttggaga atttccccag ctccaatgta aacagaacag gcaggggccc	60
tgattcacgg gccgctgggg ccagggttgg gggttggggg tgccacagg gcttggctag	120
tggggttttg ggggggcagt ggggtgaagg agtttggttt gtgtctgccg gccggcaggc	180
aaacgcaacc cacgcggtgg gggaggcggc tagcgtggtg gacccgggccc gcgtggccct	240
gtggcagccg agccatggtt tctaaactga gccagctgca gacggagctc ctggcggccc	300
tgctcgagtc agggctgagc aaagaggcac tgatccaggc actgggtgag ccggggccct	360
acctcctggc tggagaaggc cccctggaca agggggagtc ctgcggcggc ggtcgagggg	420
agctggctga gctgcccaat gggctggggg agactcgggg ctccgaggac gagacggacg	480
acgatgggga agacttcacg ccacccatcc tcaaagagct ggagaacctc agccctgagg	540
aggcggccca ccagaaagcc gtggtggaga cccttctgca ggaggacccg tggcgtgtgg	600
cgaagatggg caagtcctac ctgcagcagc acaacatccc acagcgggag gtggtcgata	660
ccactggcct caaccagtcc cacctgtccc aacacctcaa caagggcact cccatgaaga	720
cgcagaagcg ggccgccctg tacacctggg acgtccgcaa gcagcgagag gtggcgcagc	780
agttcaccca tgcagggcag ggagggtga ttgaagagcc cacaggtgat gagctaccaa	840
ccaagaaggg gcggaggaac cgtttcaagt ggggcccagc atcccagcag atcctgttcc	900

aggcctatga gaggcagaag aaccctagca aggaggagcg agagacgcta gtggaggagt	960
gcaatagggc ggaatgcatc cagagagggg tgtccccatc acaggcacag gggctgggct	1020
ccaacctcgt cacggagggtg cgtgtctaca actggtttgc caaccggcgc aaagaagaag	1080
ccttccggca caagctggcc atggacacgt acagcgggcc ccccccaggg ccaggcccgg	1140
gacctgcgct gcccgtcac agtccccctg gcctgcctcc acctgccctc tccccagta	1200
aggtccacgg tgtgcgctat ggacagcctg cgaccagtga gactgcagaa gtaccctcaa	1260
gcagcggcgg tcccttagtg acagtgtcta caccctcca ccaagtgtcc cccacgggcc	1320
tggagcccag ccacagcctg ctgagtacag aagccaagct ggtctcagca gctgggggcc	1380
ccctcccccc tgtcagcacc ctgacagcac tgcacagctt ggagcagaca tccccaggcc	1440
tcaaccagca gccccagaac ctcatcatgg cctcacttcc tggggtcatg accatcgggc	1500
ctggtgagcc tgcctccctg ggtcctacgt tcaccaacac aggtgcctcc accctggtca	1560
tcggcctggc ctccacgcag gcacagagtg tgccggtcat caacagcatg ggcagcagcc	1620
tgaccaccct gcagcccgtc cagtttctcc agccgctgca cccctcctac cagcagccgc	1680
tcatgccacc tgtgcagagc catgtgacct agagcccctt catggccacc atggctcagc	1740
tgagagccc ccacgccctc tacagccaca agcccagggt ggcccagtac acccacacgg	1800
gcctgctccc gcagactatg ctcatcaccg acaccaccaa cctgagcgcc ctggccagcc	1860
tcacgcccac caagcaggta aggtccaggc ctgctggccc tcccttggcc tgtgacagag	1920
cccctcacc ccacatcccc cgggctcagg aggctgctct gctccccag gtcttcacct	1980
cagacactga ggcctccagt gagtccgggc ttcacacgcc ggcatctcag gccaccaccc	2040
tccacgtccc cagccaggac cctgccagca tccagcacct gcagccggcc caccggctca	2100
gcgccagccc cacagtgtcc tccagcagcc tgggtgctgta ccagagctca gactccagca	2160
atggccagag ccacctgctg ccatccaacc acagcgtcat cgagaccttc atctccaccc	2220
agatggcctc ttcctcccag taaccacggc acctggggcc tggggcctgt actgcctgct	2280
tgggggggtga tgagggcagc agccagccct gcctggagga cctgagcctg ccgagcaacc	2340
gtggcccttc ctggacagct gtgcctcgct cccactctg ctctgatgca tcagaaaggg	2400
agggctctga ggcgccccaa cccgtggagg ctgctcgggg tgcacaggag ggggtcgtgg	2460
agagctagga gcaaagcctg ttcatggcag atgtaggagg gactgtcgct gcttcgtggg	2520

atacagtctt cttacttgga actgaagggg gcggcctatg acttgggcac cccagcctg	2580
ggcctatgga gagccctggg accgctacac cactctggca gccacacttc tcaggacaca	2640
ggcctgtgta gctgtgacct gctgagctct gagaggccct ggatcagcgt ggccttgttc	2700
tgtcaccaat gtaccaccg ggccactcct tcctgcccc aactccttcca gctagtgacc	2760
cacatgccat ttgtactgac cccatcacct actcacacag gcatttcctg ggtggctact	2820
ctgtgccaga gcctggggct ctaacgcctg agcccagga ggccgaagct aacaggaag	2880
gcaggcaggg ctctcctggc ttcccatccc cagcgattcc ctctcccagg cccatgacc	2940
tccagctttc ctgtatttgt tcccaagagc atcatgcctc tgaggccagc ctggcctcct	3000
gcctctactg ggaaggctac ttcggggctg ggaagtcgtc cttactcctg tgggagcctc	3060
gcaaccctg ccaagtccag gtcctgggtg ggcagctcct ctgtctcgag cgccctgcag	3120
accctgccct tgtttggggc aggagtagct gagctcaca ggcagcaagg cccgagcagc	3180
tgagcagggc cggggaactg gccaagctga ggtgcccagg agaagaaaga ggtgacccca	3240
gggcacagga gctacctgtg tggacaggac taacactcag aagcctgggg gcctggctgg	3300
ctgagggcag ttgcagcca ccctgaggag tctgaggtcc tgagcactgc caggagggac	3360
aaaggagcct gtgaaccag gacaagcatg gtcccacatc cctgggcctg ctgctgagaa	3420
cctggccttc agtgtaccgc gtctaccctg ggattcagga aaaggcctgg ggtgaccgg	3480
cacccctgc agctttagc cagccggggc gagtggcacg tttatttaac ttttagtaaa	3540
gtcaaggaga aatgcggtgg aaa	3563

<210> 11
 <211> 13
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Sequence

<220>
 <221> misc_feature
 <222> (7)..(7)
 <223> HNF1-alpha binding sequence

<400> 11
 gttaatnatt aac

<210> 12
<211> 551
<212> PRT
<213> Homo sapiens

<400> 12

Met Asp Glu Leu Phe Pro Leu Ile Phe Pro Ala Glu Pro Ala Gln Ala
1 5 10 15

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

Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser Ala Gly Ser Ile Pro Gly
35 40 45

Glu Arg Ser Thr Asp Thr Thr Lys Thr His Pro Thr Ile Lys Ile Asn
50 55 60

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

Pro Pro His Arg Pro His Pro His Glu Leu Val Gly Lys Asp Cys Arg
85 90 95

Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro Asp Arg Cys Ile His Ser
100 105 110

Phe Gln Asn Leu Gly Ile Gln Cys Val Lys Lys Arg Asp Leu Glu Gln
115 120 125

Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn Asn Pro Phe Gln Val Pro
130 135 140

Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu Asn Ala Val Arg Leu Cys
145 150 155 160

Phe Gln Val Thr Val Arg Asp Pro Ser Gly Arg Pro Leu Arg Leu Pro
165 170 175

Pro Val Leu Ser His Pro Ile Phe Asp Asn Arg Ala Pro Asn Thr Ala

180

185

190

Glu Leu Lys Ile Cys Arg Val Asn Arg Asn Ser Gly Ser Cys Leu Gly
 195 200 205

Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys Val Gln Lys Glu Asp Ile
 210 215 220

Glu Val Tyr Phe Thr Gly Pro Gly Trp Glu Ala Arg Gly Ser Phe Ser
 225 230 235 240

Gln Ala Asp Val His Arg Gln Val Ala Ile Val Phe Arg Thr Pro Pro
 245 250 255

Tyr Ala Asp Pro Ser Leu Gln Ala Pro Val Arg Val Ser Met Gln Leu
 260 265 270

Arg Arg Pro Ser Asp Arg Glu Leu Ser Glu Pro Met Glu Phe Gln Tyr
 275 280 285

Leu Pro Asp Thr Asp Asp Arg His Arg Ile Glu Glu Lys Arg Lys Arg
 290 295 300

Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys Lys Ser Pro Phe Ser Gly
 305 310 315 320

Pro Thr Asp Pro Arg Pro Pro Pro Arg Arg Ile Ala Val Pro Ser Arg
 325 330 335

Ser Ser Ala Ser Val Pro Lys Pro Ala Pro Gln Pro Tyr Pro Phe Thr
 340 345 350

Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu Phe Pro Thr Met Val Phe
 355 360 365

Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala Leu Ala Pro Ala Pro Pro
 370 375 380

Gln Val Leu Pro Gln Ala Pro Ala Pro Ala Pro Ala Met Val
 385 390 395 400

Ser Ala Leu Ala Gln Ala Pro Ala Pro Val Pro Val Leu Ala Pro Gly
405 410 415

Pro Pro Gln Ala Val Ala Pro Pro Ala Pro Lys Pro Thr Gln Ala Gly
420 425 430

Glu Gly Thr Leu Ser Glu Ala Leu Leu Gln Leu Gln Phe Asp Asp Glu
435 440 445

Asp Leu Gly Ala Leu Leu Gly Asn Ser Thr Asp Pro Ala Val Phe Thr
450 455 460

Asp Leu Ala Ser Val Asp Asn Ser Glu Phe Gln Gln Leu Leu Asn Gln
465 470 475 480

Gly Ile Pro Val Ala Pro His Thr Thr Glu Pro Met Leu Met Glu Tyr
485 490 495

Pro Glu Ala Ile Thr Arg Leu Val Thr Gly Ala Gln Arg Pro Pro Asp
500 505 510

Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly Leu Pro Asn Gly Leu Leu
515 520 525

Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala Asp Met Asp Phe Ser Ala
530 535 540

Leu Leu Ser Gln Ile Ser Ser
545 550

<210> 13
<211> 548
<212> PRT
<213> Homo sapiens

<400> 13

Met Asp Glu Leu Phe Pro Leu Ile Phe Pro Ala Glu Pro Ala Gln Ala
1 5 10 15

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

Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser Ala Gly Ser Ile Pro Gly
35 40 45

Glu Arg Ser Thr Asp Thr Thr Lys Thr His Pro Thr Ile Lys Ile Asn
50 55 60

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

Pro Pro His Arg Pro His Pro His Glu Leu Val Gly Lys Asp Cys Arg
85 90 95

Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro Asp Arg Cys Ile His Ser
100 105 110

Phe Gln Asn Leu Gly Ile Gln Cys Val Lys Lys Arg Asp Leu Glu Gln
115 120 125

Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn Asn Pro Phe Gln Glu Glu
130 135 140

Gln Arg Gly Asp Tyr Asp Leu Asn Ala Val Arg Leu Cys Phe Gln Val
145 150 155 160

Thr Val Arg Asp Pro Ser Gly Arg Pro Leu Arg Leu Pro Pro Val Leu
165 170 175

Ser His Pro Ile Phe Asp Asn Arg Ala Pro Asn Thr Ala Glu Leu Lys
180 185 190

Ile Cys Arg Val Asn Arg Asn Ser Gly Ser Cys Leu Gly Gly Asp Glu
195 200 205

Ile Phe Leu Leu Cys Asp Lys Val Gln Lys Glu Asp Ile Glu Val Tyr
210 215 220

Phe Thr Gly Pro Gly Trp Glu Ala Arg Gly Ser Phe Ser Gln Ala Asp
225 230 235 240

Val His Arg Gln Val Ala Ile Val Phe Arg Thr Pro Pro Tyr Ala Asp
245 250 255

Pro Ser Leu Gln Ala Pro Val Arg Val Ser Met Gln Leu Arg Arg Pro
260 265 270

Ser Asp Arg Glu Leu Ser Glu Pro Met Glu Phe Gln Tyr Leu Pro Asp
275 280 285

Thr Asp Asp Arg His Arg Ile Glu Glu Lys Arg Lys Arg Thr Tyr Glu
290 295 300

Thr Phe Lys Ser Ile Met Lys Lys Ser Pro Phe Ser Gly Pro Thr Asp
305 310 315 320

Pro Arg Pro Pro Pro Arg Arg Ile Ala Val Pro Ser Arg Ser Ser Ala
325 330 335

Ser Val Pro Lys Pro Ala Pro Gln Pro Tyr Pro Phe Thr Ser Ser Leu
340 345 350

Ser Thr Ile Asn Tyr Asp Glu Phe Pro Thr Met Val Phe Pro Ser Gly
355 360 365

Gln Ile Ser Gln Ala Ser Ala Leu Ala Pro Ala Pro Pro Gln Val Leu
370 375 380

Pro Gln Ala Pro Ala Pro Ala Pro Ala Met Val Ser Ala Leu
385 390 395 400

Ala Gln Ala Pro Ala Pro Val Pro Val Leu Ala Pro Gly Pro Pro Gln
405 410 415

Ala Val Ala Pro Pro Ala Pro Lys Pro Thr Gln Ala Gly Glu Gly Thr
420 425 430

Leu Ser Glu Ala Leu Leu Gln Leu Gln Phe Asp Asp Glu Asp Leu Gly
435 440 445

Ala Leu Leu Gly Asn Ser Thr Asp Pro Ala Val Phe Thr Asp Leu Ala
450 455 460

Ser Val Asp Asn Ser Glu Phe Gln Gln Leu Leu Asn Gln Gly Ile Pro
465 470 475 480

Val Ala Pro His Thr Thr Glu Pro Met Leu Met Glu Tyr Pro Glu Ala
485 490 495

Ile Thr Arg Leu Val Thr Gly Ala Gln Arg Pro Pro Asp Pro Ala Pro
500 505 510

Ala Pro Leu Gly Ala Pro Gly Leu Pro Asn Gly Leu Leu Ser Gly Asp
515 520 525

Glu Asp Phe Ser Ser Ile Ala Asp Met Asp Phe Ser Ala Leu Leu Ser
530 535 540

Gln Ile Ser Ser
545

<210> 14
<211> 482
<212> PRT
<213> Homo sapiens

<400> 14

Met Asp Glu Leu Phe Pro Leu Ile Phe Pro Ala Glu Pro Ala Gln Ala
1 5 10 15

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

Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser Ala Gly Ser Ile Pro Gly
35 40 45

Glu Arg Ser Thr Asp Thr Thr Lys Thr His Pro Thr Ile Lys Ile Asn
50 55 60

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

Pro Pro His Arg Pro His Pro His Glu Leu Val Gly Lys Asp Cys Arg

85

90

95

Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro Asp Arg Cys Ile His Ser
 100 105 110

Phe Gln Asn Leu Gly Ile Gln Cys Val Lys Lys Arg Asp Leu Glu Gln
 115 120 125

Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn Asn Pro Phe Gln Val Pro
 130 135 140

Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu Asn Ala Val Arg Leu Cys
 145 150 155 160

Phe Gln Val Thr Val Arg Asp Pro Ser Gly Arg Pro Leu Arg Leu Pro
 165 170 175

Pro Val Leu Ser His Pro Ile Phe Asp Asn Arg Ala Pro Asn Thr Ala
 180 185 190

Glu Leu Lys Ile Cys Arg Val Asn Arg Asn Ser Gly Ser Cys Leu Gly
 195 200 205

Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys Val Gln Lys Glu Asp Ile
 210 215 220

Glu Val Tyr Phe Thr Gly Pro Gly Trp Glu Ala Arg Gly Ser Phe Ser
 225 230 235 240

Gln Ala Asp Val His Arg Gln Val Ala Ile Val Phe Arg Thr Pro Pro
 245 250 255

Tyr Ala Asp Pro Ser Leu Gln Ala Pro Val Arg Val Ser Met Gln Leu
 260 265 270

Arg Arg Pro Ser Asp Arg Glu Leu Ser Glu Pro Met Glu Phe Gln Tyr
 275 280 285

Leu Pro Asp Thr Asp Asp Arg His Arg Ile Glu Glu Lys Arg Lys Arg
 290 295 300

Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys Lys Ser Pro Phe Ser Gly
305 310 315 320

Pro Thr Asp Pro Arg Pro Pro Pro Arg Arg Ile Ala Val Pro Ser Arg
325 330 335

Ser Ser Ala Ser Val Pro Lys Pro Ala Pro Gly Pro Pro Gln Ala Val
340 345 350

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

Glu Ala Leu Leu Gln Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu
370 375 380

Leu Gly Asn Ser Thr Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val
385 390 395 400

Asp Asn Ser Glu Phe Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala
405 410 415

Pro His Thr Thr Glu Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr
420 425 430

Arg Leu Val Thr Gly Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro
435 440 445

Leu Gly Ala Pro Gly Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp
450 455 460

Phe Ser Ser Ile Ala Asp Met Asp Phe Ser Ala Leu Leu Ser Gln Ile
465 470 475 480

Ser Ser

<210> 15
<211> 448
<212> PRT
<213> Homo sapiens

<400> 15

Met Asp Glu Leu Phe Pro Leu Ile Phe Pro Ala Glu Pro Ala Gln Ala
1 5 10 15

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

Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser Ala Gly Ser Ile Pro Gly
35 40 45

Glu Arg Ser Thr Asp Thr Thr Lys Thr His Pro Thr Ile Lys Ile Asn
50 55 60

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

Pro Pro His Arg Pro His Pro His Glu Leu Val Gly Lys Asp Cys Arg
85 90 95

Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro Asp Arg Cys Ile His Ser
100 105 110

Phe Gln Asn Leu Gly Ile Gln Cys Val Lys Lys Arg Asp Leu Glu Gln
115 120 125

Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn Asn Pro Phe Gln Val Pro
130 135 140

Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu Asn Ala Val Arg Leu Cys
145 150 155 160

Phe Gln Val Thr Val Arg Asp Pro Ser Gly Arg Pro Leu Arg Leu Pro
165 170 175

Pro Val Leu Ser His Pro Ile Phe Asp Asn Arg Ala Pro Asn Thr Ala
180 185 190

Glu Leu Lys Ile Cys Arg Val Asn Arg Asn Ser Gly Ser Cys Leu Gly
195 200 205

Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys Val Gln Lys Glu Asp Ile
210 215 220

Glu Val Tyr Phe Thr Gly Pro Gly Trp Glu Ala Arg Gly Ser Phe Ser
225 230 235 240

Gln Ala Asp Val His Arg Gln Val Ala Ile Val Phe Arg Thr Pro Pro
245 250 255

Tyr Ala Asp Pro Ser Leu Gln Ala Pro Val Arg Val Ser Met Gln Leu
260 265 270

Arg Arg Pro Ser Asp Arg Glu Leu Ser Glu Pro Met Glu Phe Gln Tyr
275 280 285

Leu Pro Asp Thr Asp Asp Arg His Arg Ile Glu Glu Lys Arg Lys Arg
290 295 300

Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys Lys Ser Pro Phe Ser Gly
305 310 315 320

Pro Thr Asp Pro Arg Pro Pro Pro Arg Arg Ile Ala Val Pro Ser Arg
325 330 335

Ser Ser Ala Ser Val Pro Lys Pro Ala Pro Gln Pro Tyr Pro Phe Thr
340 345 350

Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu Phe Pro Thr Met Val Phe
355 360 365

Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala Leu Ala Pro Ala Pro Pro
370 375 380

Gln Val Leu Pro Gln Ala Pro Ala Pro Ala Pro Ala Pro Ala Met Val
385 390 395 400

Ser Ala Leu Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly
405 410 415

Ala Pro Gly Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe Ser
420 425 430

Ser Ile Ala Asp Met Asp Phe Ser Ala Leu Leu Ser Gln Ile Ser Ser
435 440 445

<210> 16
<211> 480
<212> PRT
<213> Homo sapiens

<400> 16

Met Asp Glu Leu Phe Pro Leu Ile Phe Pro Ala Glu Pro Ala Gln Ala
1 5 10 15

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

Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser Ala Gly Ser Ile Pro Gly
35 40 45

Glu Arg Ser Thr Asp Thr Thr Lys Thr His Pro Thr Ile Lys Ile Asn
50 55 60

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

Pro Pro His Arg Pro His Pro His Glu Leu Val Gly Lys Asp Cys Arg
85 90 95

Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro Asp Arg Cys Ile His Ser
100 105 110

Phe Gln Asn Leu Gly Ile Gln Cys Val Lys Lys Arg Asp Leu Glu Gln
115 120 125

Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn Asn Pro Phe Gln Val Pro
130 135 140

Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu Asn Ala Val Arg Leu Cys
145 150 155 160

Phe Gln Val Thr Val Arg Asp Pro Ser Gly Arg Pro Leu Arg Leu Pro

165

170

175

Pro Val Leu Ser His Pro Ile Phe Asp Asn Arg Ala Pro Asn Thr Ala
 180 185 190

Glu Leu Lys Ile Cys Arg Val Asn Arg Asn Ser Gly Ser Cys Leu Gly
 195 200 205

Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys Val Gln Lys Asp Asp Arg
 210 215 220

His Arg Ile Glu Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe Lys Ser
 225 230 235 240

Ile Met Lys Lys Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg Pro Pro
 245 250 255

Pro Arg Arg Ile Ala Val Pro Ser Arg Ser Ser Ala Ser Val Pro Lys
 260 265 270

Pro Ala Pro Gln Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn
 275 280 285

Tyr Asp Glu Phe Pro Thr Met Val Phe Pro Ser Gly Gln Ile Ser Gln
 290 295 300

Ala Ser Ala Leu Ala Pro Ala Pro Pro Gln Val Leu Pro Gln Ala Pro
 305 310 315 320

Ala Pro Ala Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln Ala Pro
 325 330 335

Ala Pro Val Pro Val Leu Ala Pro Gly Pro Pro Gln Ala Val Ala Pro
 340 345 350

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

Leu Leu Gln Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu Leu Gly
 370 375 380

Asn Ser Thr Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val Asp Asn
385 390 395 400

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

Thr Thr Glu Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr Arg Leu
420 425 430

Val Thr Gly Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly
435 440 445

Ala Pro Gly Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe Ser
450 455 460

Ser Ile Ala Asp Met Asp Phe Ser Ala Leu Leu Ser Gln Ile Ser Ser
465 470 475 480

<210> 17
<211> 445
<212> PRT
<213> Homo sapiens

<400> 17

Met Asp Glu Leu Phe Pro Leu Ile Phe Pro Ala Glu Pro Ala Gln Ala
1 5 10 15

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

Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser Ala Gly Ser Ile Pro Gly
35 40 45

Glu Arg Ser Thr Asp Thr Thr Lys Thr His Pro Thr Ile Lys Ile Asn
50 55 60

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

Pro Pro His Arg Pro His Pro His Glu Leu Val Gly Lys Asp Cys Arg
85 90 95

Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro Asp Arg Cys Ile His Ser
100 105 110

Phe Gln Asn Leu Gly Ile Gln Cys Val Lys Lys Arg Asp Leu Glu Gln
115 120 125

Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn Asn Pro Phe Gln Val Pro
130 135 140

Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu Asn Ala Val Arg Leu Cys
145 150 155 160

Phe Gln Val Thr Val Arg Asp Pro Ser Gly Arg Pro Leu Arg Leu Pro
165 170 175

Pro Val Leu Ser His Pro Ile Phe Asp Asn His Asp Arg His Arg Ile
180 185 190

Glu Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys
195 200 205

Lys Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg Pro Pro Pro Arg Arg
210 215 220

Ile Ala Val Pro Ser Arg Ser Ser Ala Ser Val Pro Lys Pro Ala Pro
225 230 235 240

Gln Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu
245 250 255

Phe Pro Thr Met Val Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala
260 265 270

Leu Ala Pro Ala Pro Pro Gln Val Leu Pro Gln Ala Pro Ala Pro Ala
275 280 285

Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln Ala Pro Ala Pro Val
290 295 300

Pro Val Leu Ala Pro Gly Pro Pro Gln Ala Val Ala Pro Pro Ala Pro
305 310 315 320

Lys Pro Thr Gln Ala Gly Glu Gly Thr Leu Ser Glu Ala Leu Leu Gln
325 330 335

Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu Leu Gly Asn Ser Thr
340 345 350

Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val Asp Asn Ser Glu Phe
355 360 365

Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala Pro His Thr Thr Glu
370 375 380

Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr Arg Leu Val Thr Gly
385 390 395 400

Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly
405 410 415

Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala
420 425 430

Asp Met Asp Phe Ser Ala Leu Leu Ser Gln Ile Ser Ser
435 440 445

<210> 18
<211> 2595
<212> DNA
<213> Homo sapiens

<400> 18
agcgcgcagg cgcggccgga ttccgggcag tgacgcgacg gcgggccgcg cggcgcattt 60
ccgcctctgg cgaatggctc gtctgtagtg cacgccgcgg gccagctgc gaccccggcc 120
ccgcccccg gaccccgcc atggacgaac tgttccccct catcttcccg gcagagccag 180
cccaggcctc tggcccctat gtggagatca ttgagcagcc caagcagcgg ggcatgcgct 240
tccgtacaa gtgcgagggg cgctccgcgg gcagcatccc aggcgagagg agcacagata 300
ccaccaagac ccacccacc atcaagatca atggctacac aggaccaggg acagtgcgca 360

tctccctggt caccaaggac cctcctcacc ggcctcacc ccacgagctt gtaggaaagg	420
actgccggga tggcttctat gaggctgagc tctgcccgga ccgctgcatc cacagtttcc	480
agaacctggg aatccagtgt gtgaagaagc gggacctgga gcaggctatc agtcagcgca	540
tccagaccaa caacaacccc ttccaagttc ctatagaaga gcagcgtggg gactacgacc	600
tgaatgctgt gcggctctgc ttccaggtga cagtgcggga cccatcaggc agggccctcc	660
gcctgccgcc tgtcctttct catcccatct ttgacaatcg tgccccaac actgccgagc	720
tcaagatctg ccgagtgaac cgaaactctg gcagctgcct cgggtggggat gagatcttcc	780
tactgtgtga caaggtgcag aaagaggaca ttgaggtgta tttcacggga ccaggctggg	840
aggcccagg ctccttttct caagctgatg tgcaccgaca agtggccatt gtgttccgga	900
cccctcccta cgcagacccc agcctgcagg ctcctgtgcg tgtctccatg cagctgcggc	960
ggccttccga ccgggagctc agtgagccca tggaattcca gtacctgcca gatacagacg	1020
atcgtcaccg gattgaggag aaacgtaaaa ggacatatga gaccttcaag agcatcatga	1080
agaagagtcc tttcagcgga cccaccgacc cccggcctcc acctcgacgc attgctgtgc	1140
cttcccgcag ctcagcttct gtccccaagc cagcacccca gccctatccc tttacgtcat	1200
ccctgagcac catcaactat gatgagtttc ccaccatggt gtttccttct gggcagatca	1260
gccaggcctc ggccttggcc ccggcccctc cccaagtcct gcccaggct ccagcccctg	1320
cccctgctcc agccatggta tcagctctgg ccaggcccc agcccctgtc ccagtcctag	1380
ccccaggccc tcctcaggct gtggccccac ctgccccaa gccacccag gctggggaag	1440
gaacgctgtc agaggccctg ctgcagctgc agtttgatga tgaagacctg ggggccttgc	1500
ttggcaacag cacagacca gctgtgttca cagacctggc atccgtcgac aactccgagt	1560
ttcagcagct gctgaaccag ggcatactg tggccccca cacaactgag cccatgctga	1620
tggagtacc tgaggctata actcgcctag tgacaggggc ccagaggccc cccgaccag	1680
ctcctgctcc actgggggcc ccggggctcc ccaatggcct cttttcagga gatgaagact	1740
tctcctccat tgcggacatg gacttctcag ccctgctgag tcagatcagc tcctaagggg	1800
gtgacgcctg ccctccccag agcactgggt tgcaggggat tgaagccctc caaaagcact	1860
tacggattct ggtggggtgt gttccaactg cccccaactt tgtggatgtc ttccttgag	1920
gggggagcca tattttattc ttttattgtc agtatctgta tctctctctc tttttggagg	1980

tgcttaagca gaagcattaa cttctctgga aaggggggag ctggggaaac tcaaactttt	2040
cccctgtcct gatggtcagc tcccttctct gtaggggaact ctgggggtccc ccatcccat	2100
cctccagctt ctggtactct cctagagaca gaagcaggct ggaggtaagg cctttgagcc	2160
cacaaagcct tatcaagtgt cttccatcat ggattcatta cagcttaatc aaaataacgc	2220
cccagatacc agccccgtga tggcactggc attgtccctg tgcctaacac cagcgtttga	2280
ggggctggcc ttcctgccct acagaggtct ctgccggctc tttccttgct caaccatggc	2340
tgaaggaaac cagtgaaca gcactggctc tctccaggat ccagaagggg tttggtctgg	2400
gacttccttg ctctccctct tctcaagtgc cttaatagta gggttaagttg ttaagagtgg	2460
gggagagcag gctggcagct ctccagtcag gaggcatagt ttttactgaa caatcaaagc	2520
acttggactc ttgctctttc tactctgaac taataaatct gttgccaagc tggctagaaa	2580
aaaaaaaaaa aaaaa	2595

<210> 19
 <211> 2586
 <212> DNA
 <213> Homo sapiens

<400> 19	
agcgcgcagg cgcgggccgga ttccgggcag tgacgcgacg gcggggccgcg cggcgcattt	60
ccgcctctgg cgaatggctc gtctgtagtg cacgccgcgg gccagctgc gaccccgcc	120
ccgcccccg gaccccgcc atggacgaac tgttccccct catcttcccg gcagagccag	180
cccaggcctc tggcccctat gtggagatca ttgagcagcc caagcagcgg ggcatgcgt	240
tccgtacaa gtgcgagggg cgctccgcgg gcagcatccc aggcgagagg agcacagata	300
ccaccaagac ccacccacc atcaagatca atggctacac aggaccaggg acagtgcgca	360
tctccctggc caccaaggac cctcctcacc ggcctcacc ccacagctt gtaggaaagg	420
actgccggga tggcttctat gaggctgagc tctgcccgga ccgtgcatc cacagtttcc	480
agaacctggg aatccagtgt gtgaagaagc gggacctgga gcaggctatc agtcagcgca	540
tccagaccaa caacaaccc ttccaagaag agcagcgtgg ggactacgac ctgaatgctg	600
tgcggctctg cttccagggt acagtgcggg acccatcagg caggcccctc cgcctgccgc	660
ctgtcctttc tcatcccatc tttgacaatc gtgcccccaa cactgccgag ctcaagatct	720
gccgagtga ccgaaactct ggcagctgcc tcggtgggga tgagatcttc ctactgtgtg	780

acaaggtgca gaaagaggac attgaggtgt atttcacggg accaggctgg gaggcccagag	840
gctccttttc gcaagctgat gtgcaccgac aagtggccat tgtgttccgg acccctccct	900
acgcagaccc cagcctgcag gctcctgtgc gtgtctccat gcagctgcgg cggccttccg	960
accgggagct cagtgagccc atggaattcc agtacctgcc agatacagac gatcgtcacc	1020
ggattgagga gaaacgtaaa aggacatatg agaccttcaa gagcatcatg aagaagagtc	1080
ctttcagcgg acccaccgac ccccgccctc cacctcgacg cattgctgtg ctttcccga	1140
gctcagcttc tgtccccaag ccagcacccc agccctatcc ctttacgtca tccctgagca	1200
ccatcaacta tgatgagttt cccaccatgg tgtttccttc tgggcagatc agccaggcct	1260
cggccttggc cccggcccct cccaagtcc tgccccaggc tccagcccct gcccctgctc	1320
cagccatggg atcagctctg gcccaggccc cagcccctgt cccagtccta gcccaggcc	1380
ctcctcaggc tgtggcccca cctgccccca agcccacca ggctggggaa ggaacgtgt	1440
cagaggccct gctgcagctg cagtttgatg atgaagacct gggggccttg cttggcaaca	1500
gcacagaccc agctgtgttc acagacctgg catccgtcga caactccgag tttcagcagc	1560
tgctgaacca gggcatacct gtggccccc acacaactga gcccatgctg atggagtacc	1620
ctgaggctat aactcgccta gtgacagggg cccagaggcc cccgacca gctcctgctc	1680
cactgggggc cccggggctc cccaatggcc tcctttcagg agatgaagac ttctcctcca	1740
ttgcgacat ggacttctca gccctgctga gtcagatcag ctctaaggg ggtgacgcct	1800
gccctccca gagcactggg ttgcagggga ttgaagccct ccaaagcac ttacggattc	1860
tggtggggtg tgttccaact gcccctaact ttgtggatgt cttccttga ggggggagcc	1920
atatattatt cttttattgt cagtatctgt atctctctct ctttttgag gtgcttaagc	1980
agaagcatta acttctctgg aaagggggga gctggggaaa ctcaaacttt tcccctgtcc	2040
tgatggtcag ctcccttctc tgtagggaac tctggggtcc cccatccca tcctccagct	2100
tctgggtactc tcctagagac agaagcaggc tggaggtaag gcctttgagc ccacaaagcc	2160
ttatcaagtg tcttccatca tggattcatt acagcttaat caaaataacg cccagatac	2220
cagcccctgt atggcactgg cattgtccct gtgcctaaca ccagcgtttg aggggctggc	2280
cttcctgccc tacagaggtc tctgccggct ctttccttgc tcaaccatgg ctgaaggaaa	2340
ccagtgaac agcactggct ctctccagga tccagaaggg gtttggctctg ggacttcctt	2400

gctctccctc ttctcaagt ccttaatagt agggttaagtt gttaagagtg ggggagagca	2460
ggctggcagc tctccagtca ggaggcatag tttttactga acaatcaaag cacttggact	2520
cttgctcttt ctactctgaa ctaataaatc tgttgccaag ctggctagaa aaaaaaaaaa	2580
aaaaaa	2586

<210> 20
 <211> 2388
 <212> DNA
 <213> Homo sapiens

<400> 20	
agcgcgcagg cgcgccgga ttccgggcag tgacgcgacg gcgggcccgcg cggcgcattt	60
ccgcctctgg cgaatggctc gtctgtagtg cagccgcgg gccagctgc gaccccgcc	120
ccgcccccg gaccccgcc atggacgaac tgttccccct catcttcccg gcagagccag	180
cccaggcctc tggcccctat gtggagatca ttgagcagcc caagcagcgg ggcatgcgt	240
tccgctacaa gtgcgagggg cgctccgcgg gcagcatccc aggcgagagg agcacagata	300
ccaccaagac ccaccccacc atcaagatca atggctacac aggaccaggg acagtgcgca	360
tctccctggg caccaaggac cctcctcacc ggcctcacc ccacgagctt gtaggaaagg	420
actgccggga tggcttctat gaggctgagc tctgccgga ccgctgcatc cacagtttcc	480
agaacctggg aatccagtgt gtgaagaagc gggacctgga gcaggctatc agtcagcgca	540
tccagaccaa caacaacccc ttccaagttc ctatagaaga gcagcgtggg gactacgacc	600
tgaatgctgt gcggctctgc ttccaggtga cagtgcggga cccatcaggc agggccctcc	660
gcctgccgcc tgtcctttct catcccatct ttgacaatcg tgcccccaac actgccgagc	720
tcaagatctg ccgagtgaac cgaaactctg gcagctgcct cgggtgggat gagatcttcc	780
tactgtgtga caaggtgcag aaagaggaca ttgaggtgta tttcacggga ccaggctggg	840
aggcccagg ctccttttcg caagctgatg tgcaccgaca agtggccatt gtgttccgga	900
cccctcccta cgagacccc agcctgcagg ctctgtgctg tgtctccatg cagctgcggc	960
ggccttccga ccgggagctc agtgagccca tggaattcca gtacctgcca gatacagacg	1020
atcgtcaccg gattgaggag aaacgtaaaa ggacatatga gaccttcaag agcatcatga	1080
agaagagtcc tttcagcgga cccaccgacc cccggcctcc acctcgacgc attgctgtgc	1140

cttccccgag ctcagcttct gtccccaagc cagccccagg ccctcctcag gctgtggccc	1200
cacctgcccc caagcccacc caggctgggg aaggaacgct gtcagaggcc ctgctgcagc	1260
tgcagtttga tgatgaagac ctgggggcct tgcttggcaa cagcacagac ccagctgtgt	1320
tcacagacct ggcacccgtc gacaactccg agtttcagca gctgctgaac cagggcatac	1380
ctgtggcccc ccacacaact gagcccatgc tgatggagta ccctgaggct ataactcgcc	1440
tagtgacagg ggcccagagg cccccgacc cagctcctgc tccactgggg gccccggggc	1500
tccccaatgg cctcctttca ggagatgaag acttctcctc cattgcggac atggacttct	1560
cagccctgct gagtcaatc agctcctaag ggggtgacgc ctgccctccc cagagcactg	1620
ggttgacagg gattgaagcc ctccaaaagc acttacggat tctgggtgggg tgtgtttcaa	1680
ctgcccccaa ctttgtggat gtcttccttg gaggggggag ccatatttta ttcttttatt	1740
gtcagtatct gtatctctct ctcttttttg aggtgcttaa gcagaagcat taacttctct	1800
ggaaaggggg gagctgggga aactcaaact tttcccctgt cctgatggtc agctcccttc	1860
tctgtaggga actctggggt ccccatccc catcctccag cttctggtac tctcctagag	1920
acagaagcag gctggaggta aggcctttga gccacaaaag cttatcaag tgtcttccat	1980
catggattca ttacagctta atcaaaataa cgccccagat accagcccct gtatggcact	2040
ggcattgtcc ctgtgcctaa caccagcgtt tgaggggctg gccttcctgc cctacagagg	2100
tctctgccgg ctctttcctt gctcaaccat ggctgaagga aaccagtgc acagcactgg	2160
ctctctccag gatccagaag gggtttggtc tgggacttcc ttgctctccc tcttctcaag	2220
tgccttaata gtagggtaag ttgttaagag tgggggagag caggctggca gctctccagt	2280
caggaggcat agtttttact gaacaatcaa agcacttgga ctcttgctct ttctactctg	2340
aactaataaa tctgttgcca agctggctag aaaaaaaaaa aaaaaaaaaa	2388

<210> 21
 <211> 2286
 <212> DNA
 <213> Homo sapiens

<400> 21	
agcgcgcagg cgcggccgga ttccgggcag tgacgcgacg gcgggcccgc cggcgcattt	60
ccgcctctgg cgaatggctc gtctgtagtg cacgccgcgg gccagctgc gaccccggcc	120
ccgcccccg gaccccgcc atggacgaac tgttccccct catcttccc gcagagccag	180

cccaggcctc tggcccctat gtggagatca ttgagcagcc caagcagcgg ggcatgcgct	240
tccgctacaa gtgcgagggg cgctccgcgg gcagcatccc aggcgagagg agcacagata	300
ccaccaagac ccaccccacc atcaagatca atggctacac aggaccaggg acagtgcgca	360
tctccctggt caccaaggac cctcctcacc ggcctcacc ccacgagctt gtaggaaagg	420
actgccggga tggcttctat gaggctgagc tctgcccgga ccgctgcatc cacagtttcc	480
agaacctggg aatccagtgt gtgaagaagc gggacctgga gcaggctatc agtcagcgca	540
tccagaccaa caacaacccc ttccaagttc ctatagaaga gcagcgtggg gactacgacc	600
tgaatgctgt gcggctctgc ttccaggtga cagtgcggga cccatcaggc aggcccctcc	660
gcctgccgcc tgtcctttct catcccatct ttgacaatcg tgcccccaac actgccgagc	720
tcaagatctg ccgagtgaac cgaaactctg gcagctgcct cgggtggggat gagatcttcc	780
tactgtgtga caaggtgcag aaagaggaca ttgaggtgta tttcacggga ccaggctggg	840
aggcccgagg ctctttttcg caagctgatg tgcaccgaca agtggccatt gtgttccgga	900
cccctcccta cgcagacccc agcctgcagg ctctgtgctg tgtctccatg cagctgcggc	960
ggccttccga ccgggagctc agtgagccca tggaattcca gtacctgcca gatacagacg	1020
atcgtcaccg gattgaggag aaacgtaaaa ggacatatga gaccttcaag agcatcatga	1080
agaagagtcc tttcagcgga cccaccgacc cccggcctcc acctcgacgc attgctgtgc	1140
cttcccgcag ctgagcttct gtccccaagc cagcacccca gccctatccc tttacgtcat	1200
ccctgagcac catcaactat gatgagtttc ccaccatggt gtttccttct gggcagatca	1260
gccaggcctc ggccttggcc ccggcccctc cccaagtcct gccccaggct ccagcccctg	1320
cccctgctcc agccatggta tcagctctgg cccagaggcc ccccgacca gctcctgctc	1380
cactgggggc cccggggctc cccaatggcc tcctttcagg agatgaagac ttctcctcca	1440
ttgcggacat ggactttctca gccctgctga gtcagatcag ctctaaggg ggtgacgcct	1500
gccctcccca gagcactggg ttgcagggga ttgaagccct ccaaaagcac ttacggattc	1560
tggtgggggtg tgttccaact gcccctaact ttgtggatgt cttccttgga ggggggagcc	1620
atatattatt cttttattgt cagtatctgt atctctctct ctttttgag gtgcttaagc	1680
agaagcatta acttctctgg aaagggggga gctggggaaa ctcaaacttt tcccctgtcc	1740
tgatggtcag ctcccctctc tgtagggaac tctggggtcc cccatcccca tcctccagct	1800

tctggtactc tcctagagac agaagcaggc tggaggtaag gcctttgagc ccacaaagcc	1860
ttatcaagtg tcttccatca tggattcatt acagcttaat caaaataacg cccagatac	1920
cagcccctgt atggcactgg cattgtccct gtgcctaaca ccagcgtttg aggggctggc	1980
cttcctgccc tacagaggtc tctgccggct ctttccttgc tcaaccatgg ctgaaggaaa	2040
ccagtgaac agcactggct ctctccagga tccagaaggg gtttggtctg ggacttcctt	2100
gctctccctc ttctcaagtg ccttaatagt agggttaagtt gttaagagtg ggggagagca	2160
ggctggcagc tctccagtca ggaggcatag tttttactga acaatcaaag cacttggact	2220
cttgctcttt ctactctgaa ctaataaatc tgttgccaag ctggctagaa aaaaaaaaaa	2280
aaaaaa	2286

<210> 22
 <211> 2341
 <212> DNA
 <213> Homo sapiens

<400> 22	
attccgggca gtgacgcgac ggcgggccgc gcggcgcatc tccgcctctg gcgaatggct	60
cgtctgtagt gcacgccgcg ggcccagctg cgaccccggc cccgcccccg ggaccccggc	120
catggacgaa ctgttcccc tcattcttccc ggcagagcca gcccaggcct ctggccccta	180
tgtggagatc attgagcagc ccaagcagcg gggcatgcgc ttccgctaca agtgcgaggg	240
gcgctccgcg ggcagcatcc caggcgagag gagcacagat accaccaaga cccacccac	300
catcaagatc aatggctaca caggaccagg gacagtgcgc atctccctgg tcaccaagga	360
ccctcctcac cggcctcacc cccacgagct tgtaggaaag gactgccggg atggcttcta	420
tgaggctgag ctctgcccgg accgctgcat ccacagtttc cagaacctgg gaatccagtg	480
tgtgaagaag cgggacctgg agcaggctat cagtcagcgc atccagacca acaacaaccc	540
cttccaagtt cctatagaag agcagcgtgg ggactacgac ctgaatgctg tgcggctctg	600
cttcagggtg acagtgcggg acccatcagg caggcccctc cgcctgccgc ctgtcctttc	660
tcatcccatc tttgacaatc gtgcccccaa cactgccgag ctcaagatct gccgagtgaa	720
ccgaaactct ggcagctgcc tcggtgggga tgagatcttc ctactgtgtg acaaggtgca	780
gaaagacgat cgtcaccgga ttgaggagaa acgtaaaagg acatatgaga ctttcaagag	840

catcatgaag aagagtcctt tcagcggacc caccgacccc cggcctccac ctcgacgcat	900
tgctgtgcct tcccgcagct cagcttctgt cccaagcca gcaccccagc cctatccctt	960
tacgtcatcc ctgagcacca tcaactatga tgagtttccc accatggtgt ttccttctgg	1020
gcagatcagc caggcctcgg ccttggcccc ggcccctccc caagtcctgc cccaggctcc	1080
agcccctgcc cctgctccag ccatggtatc agctctggcc caggccccag cccctgtccc	1140
agtcctagcc ccaggccctc ctcaggctgt ggccccacct gcccacaagc ccacccaggc	1200
tggggaagga acgctgtcag aggccctgct gcagctgcag tttgatgatg aagacctggg	1260
ggccttgctt ggcaacagca cagaccagc tgtgttcaca gacctggcat ccgtcgacaa	1320
ctccgagttt cagcagctgc tgaaccaggg catacctgtg gccccccaca caactgagcc	1380
catgctgatg gagtaccctg aggctataac tcgcctagt acagggggccc agaggcccc	1440
cgaccagct cctgctccac tgggggcccc ggggctcccc aatggcctcc tttcaggaga	1500
tgaagacttc tcctccattg cggacatgga cttctcagcc ctgctgagtc agatcagctc	1560
ctaagggggt gacgcctgcc ctccccagag cactgggttg caggggattg aagccctcca	1620
aaagcactta cggattctgg tggggtgtgt tccaactgcc cccaactttg tggatgtctt	1680
ccttggaggg gggagccata ttttattctt ttattgtcag tatctgtatc tctctctctt	1740
tttggagggt ctttaagcaga agcattaact tctctggaaa ggggggagct ggggaaactc	1800
aaacttttcc cctgtcctga tggctagctc ctttctctgt agggaaactc ggggtcccc	1860
atccccatcc tccagcttct ggtactctcc tagagacaga agcaggctgg aggtaaggcc	1920
tttgagccca caaagcctta tcaagtgtct tccatcatgg attcattaca gcttaatcaa	1980
aataacgccc cagataccag cccctgtatg gacttggcat tgtccctgtg cctaacacca	2040
gcgtttgagg ggctggcctt cctgccctac agaggtctct gccggctctt tccttgctca	2100
accatggctg aaggaaacca gtgcaacagc actggctctc tccaggatcc agaaggggtt	2160
tggctctggga cttccttgct ctccctcttc tcaagtgcct taatagtagg gtaagttgtt	2220
aagagtgggg gagagcaggc tggcagctct ccagtcagga ggcatagttt ttactgaaca	2280
atcaaagcac ttggactctt gctctttcta ctctgaacta ataaatctgt tgccaagctg	2340
g	2341

<211> 2236
<212> DNA
<213> Homo sapiens

<400> 23
attccgggca gtagcgcgac ggcggggccgc gcggcgcatt tccgcctctg gcgaatggct 60
cgtctgtagt gcacgccgcg ggcccagctg cgaccccggc cccgcccccg ggaccccggc 120
catggacgaa ctgttcccc tcattcttccc ggcagagcca gcccaggcct ctggccccta 180
tgtggagatc attgagcagc ccaagcagcg gggcatgcgc ttccgctaca agtgcgaggg 240
gcgctccgcg ggcagcatcc caggcgagag gagcacagat accaccaaga cccacccac 300
catcaagatc aatggctaca caggaccagg gacagtgcgc atctccctgg tcaccaagga 360
ccctcctcac cggcctcacc cccacgagct tgtaggaaag gactgccggg atggcttcta 420
tgagggtgag ctctgcccgg accgctgcat ccacagtttc cagaacctgg gaatccagtg 480
tgtgaagaag cgggacctgg agcaggctat cagtcagcgc atccagacca acaacaaccc 540
cttccaagtt cctatagaag agcagcgtgg ggactacgac ctgaatgctg tgcggctctg 600
cttccaggtg acagtgcggg acccatcagg caggcccctc gcctgccgc ctgtcctttc 660
tcatcccatc ttgacaatc acgatcgtca ccggattgag gagaaacgta aaaggacata 720
tgagaccttc aagagcatca tgaagaagag tcctttcagc ggaccaccg acccccggcc 780
tccacctcga cgcattgctg tgccttcccg cagctcagct tctgtcccca agccagcacc 840
ccagccctat ccctttacgt catccctgag caccatcaac tatgatgagt ttcccacat 900
gggtgtttcct tctgggcaga tcagccaggc ctcggccttg gccccggccc ctccccaagt 960
cctgccccag gctccagccc ctgcccctgc tccagccatg gtatcagctc tggcccaggc 1020
cccagcccct gtcccagtcc tagccccagg ccctcctcag gctgtggccc cacctgcccc 1080
caagcccacc caggctgggg aaggaacgct gtcagaggcc ctgctgcagc tgcagtttga 1140
tgatgaagac ctgggggcct tgcttggaac cagcacagac ccagctgtgt tcacagacct 1200
ggcatccgtc gacaactccg agtttcagca gctgctgaac cagggcatac ctgtggcccc 1260
ccacacaact gagcccatgc tgatggagta ccctgaggct ataactcgcc tagtgacagg 1320
ggcccagagg cccccgacc cagctcctgc tccactgggg gccccggggc tccccaatgg 1380
cctcctttca ggagatgaag acttctctc cattgcggac atggacttct cagccctgct 1440
gagtcagatc agctcctaag ggggtgacgc ctgccctccc cagagcactg ggttgcaggg 1500

gattgaagcc ctccaaaagc acttacggat tctggtgggg tgtgtttcaa ctgcccccaa	1560
ctttgtggat gtcttccttg gaggggggag ccatatttta ttcttttatt gtcagtatct	1620
gtatctctct ctcttttttg aggtgcttaa gcagaagcat taacttctct ggaaaggggg	1680
gagctgggga aactcaaact tttcccctgt cctgatggtc agctcccttc tctgtaggga	1740
actctggggg ccccatccc catcctccag cttctggtac tctcctagag acagaagcag	1800
gctggaggta aggcccttga gcccacaaag ccttatcaag tgtcttccat catggattca	1860
ttacagctta atcaaaataa cgccccagat accagcccct gtatggcact ggcattgtcc	1920
ctgtgcctaa caccagcgtt tgaggggctg gccttcctgc cctacagagg tctctgccgg	1980
ctctttcctt gctcaacat ggctgaagga aaccagtga acagcactgg ctctctccag	2040
gatccagaag gggtttggtc tgggacttcc ttgctctccc tcttctcaag tgccttaata	2100
gtagggtaag ttgttaagag tgggggagag caggctggca gctctccagt caggaggcat	2160
agtttttact gaacaatcaa agcacttgga ctcttgctct ttctactctg aactaataaa	2220
tctgttgcca agctgg	2236

<210> 24
 <211> 2555
 <212> PRT
 <213> Homo sapiens

<400> 24

Met	Pro	Pro	Leu	Leu	Ala	Pro	Leu	Leu	Cys	Leu	Ala	Leu	Leu	Pro	Ala
1			5						10					15	

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

Asn	Gly	Gly	Lys	Cys	Glu	Ala	Ala	Asn	Gly	Thr	Glu	Ala	Cys	Val	Cys
		35					40					45			

Gly	Gly	Ala	Phe	Val	Gly	Pro	Arg	Cys	Gln	Asp	Pro	Asn	Pro	Cys	Leu
	50					55					60				

Ser	Thr	Pro	Cys	Lys	Asn	Ala	Gly	Thr	Cys	His	Val	Val	Asp	Arg	Arg
65					70					75				80	

Gly Val Ala Asp Tyr Ala Cys Ser Cys Ala Leu Gly Phe Ser Gly Pro
85 90 95

Leu Cys Leu Thr Pro Leu Asp Asn Ala Cys Leu Thr Asn Pro Cys Arg
100 105 110

Asn Gly Gly Thr Cys Asp Leu Leu Thr Leu Thr Glu Tyr Lys Cys Arg
115 120 125

Cys Pro Pro Gly Trp Ser Gly Lys Ser Cys Gln Gln Ala Asp Pro Cys
130 135 140

Ala Ser Asn Pro Cys Ala Asn Gly Gly Gln Cys Leu Pro Phe Glu Ala
145 150 155 160

Ser Tyr Ile Cys His Cys Pro Pro Ser Phe His Gly Pro Thr Cys Arg
165 170 175

Gln Asp Val Asn Glu Cys Gly Gln Lys Pro Gly Leu Cys Arg His Gly
180 185 190

Gly Thr Cys His Asn Glu Val Gly Ser Tyr Arg Cys Val Cys Arg Ala
195 200 205

Thr His Thr Gly Pro Asn Cys Glu Arg Pro Tyr Val Pro Cys Ser Pro
210 215 220

Ser Pro Cys Gln Asn Gly Gly Thr Cys Arg Pro Thr Gly Asp Val Thr
225 230 235 240

His Glu Cys Ala Cys Leu Pro Gly Phe Thr Gly Gln Asn Cys Glu Glu
245 250 255

Asn Ile Asp Asp Cys Pro Gly Asn Asn Cys Lys Asn Gly Gly Ala Cys
260 265 270

Val Asp Gly Val Asn Thr Tyr Asn Cys Arg Cys Pro Pro Glu Trp Thr
275 280 285

Gly Gln Tyr Cys Thr Glu Asp Val Asp Glu Cys Gln Leu Met Pro Asn

290

295

300

Ala Cys Gln Asn Gly Gly Thr Cys His Asn Thr His Gly Gly Tyr Asn
 305 310 315 320

Cys Val Cys Val Asn Gly Trp Thr Gly Glu Asp Cys Ser Glu Asn Ile
 325 330 335

Asp Asp Cys Ala Ser Ala Ala Cys Phe His Gly Ala Thr Cys His Asp
 340 345 350

Arg Val Ala Ser Phe Tyr Cys Glu Cys Pro His Gly Arg Thr Gly Leu
 355 360 365

Leu Cys His Leu Asn Asp Ala Cys Ile Ser Asn Pro Cys Asn Glu Gly
 370 375 380

Ser Asn Cys Asp Thr Asn Pro Val Asn Gly Lys Ala Ile Cys Thr Cys
 385 390 395 400

Pro Ser Gly Tyr Thr Gly Pro Ala Cys Ser Gln Asp Val Asp Glu Cys
 405 410 415

Ser Leu Gly Ala Asn Pro Cys Glu His Ala Gly Lys Cys Ile Asn Thr
 420 425 430

Leu Gly Ser Phe Glu Cys Gln Cys Leu Gln Gly Tyr Thr Gly Pro Arg
 435 440 445

Cys Glu Ile Asp Val Asn Glu Cys Val Ser Asn Pro Cys Gln Asn Asp
 450 455 460

Ala Thr Cys Leu Asp Gln Ile Gly Glu Phe Gln Cys Ile Cys Met Pro
 465 470 475 480

Gly Tyr Glu Gly Val His Cys Glu Val Asn Thr Asp Glu Cys Ala Ser
 485 490 495

Ser Pro Cys Leu His Asn Gly Arg Cys Leu Asp Lys Ile Asn Glu Phe
 500 505 510

Gln Cys Glu Cys Pro Thr Gly Phe Thr Gly His Leu Cys Gln Tyr Asp
515 520 525

Val Asp Glu Cys Ala Ser Thr Pro Cys Lys Asn Gly Ala Lys Cys Leu
530 535 540

Asp Gly Pro Asn Thr Tyr Thr Cys Val Cys Thr Glu Gly Tyr Thr Gly
545 550 555 560

Thr His Cys Glu Val Asp Ile Asp Glu Cys Asp Pro Asp Pro Cys His
565 570 575

Tyr Gly Ser Cys Lys Asp Gly Val Ala Thr Phe Thr Cys Leu Cys Arg
580 585 590

Pro Gly Tyr Thr Gly His His Cys Glu Thr Asn Ile Asn Glu Cys Ser
595 600 605

Ser Gln Pro Cys Arg His Gly Gly Thr Cys Gln Asp Arg Asp Asn Ala
610 615 620

Tyr Leu Cys Phe Cys Leu Lys Gly Thr Thr Gly Pro Asn Cys Glu Ile
625 630 635 640

Asn Leu Asp Asp Cys Ala Ser Ser Pro Cys Asp Ser Gly Thr Cys Leu
645 650 655

Asp Lys Ile Asp Gly Tyr Glu Cys Ala Cys Glu Pro Gly Tyr Thr Gly
660 665 670

Ser Met Cys Asn Ile Asn Ile Asp Glu Cys Ala Gly Asn Pro Cys His
675 680 685

Asn Gly Gly Thr Cys Glu Asp Gly Ile Asn Gly Phe Thr Cys Arg Cys
690 695 700

Pro Glu Gly Tyr His Asp Pro Thr Cys Leu Ser Glu Val Asn Glu Cys
705 710 715 720

Asn Ser Asn Pro Cys Val His Gly Ala Cys Arg Asp Ser Leu Asn Gly

725

730

735

Tyr Lys Cys Asp Cys Asp Pro Gly Trp Ser Gly Thr Asn Cys Asp Ile
740 745 750

Asn Asn Asn Glu Cys Glu Ser Asn Pro Cys Val Asn Gly Gly Thr Cys
755 760 765

Lys Asp Met Thr Ser Gly Tyr Val Cys Thr Cys Arg Glu Gly Phe Ser
770 775 780

Gly Pro Asn Cys Gln Thr Asn Ile Asn Glu Cys Ala Ser Asn Pro Cys
785 790 795 800

Leu Asn Gln Gly Thr Cys Ile Asp Asp Val Ala Gly Tyr Lys Cys Asn
805 810 815

Cys Leu Leu Pro Tyr Thr Gly Ala Thr Cys Glu Val Val Leu Ala Pro
820 825 830

Cys Ala Pro Ser Pro Cys Arg Asn Gly Gly Glu Cys Arg Gln Ser Glu
835 840 845

Asp Tyr Glu Ser Phe Ser Cys Val Cys Pro Thr Gly Trp Gln Gly Gln
850 855 860

Thr Cys Glu Val Asp Ile Asn Glu Cys Val Leu Ser Pro Cys Arg His
865 870 875 880

Gly Ala Ser Cys Gln Asn Thr His Gly Gly Tyr Arg Cys His Cys Gln
885 890 895

Ala Gly Tyr Ser Gly Arg Asn Cys Glu Thr Asp Ile Asp Asp Cys Arg
900 905 910

Pro Asn Pro Cys His Asn Gly Gly Ser Cys Thr Asp Gly Ile Asn Thr
915 920 925

Ala Phe Cys Asp Cys Leu Pro Gly Phe Arg Gly Thr Phe Cys Glu Glu
930 935 940

Asp Ile Asn Glu Cys Ala Ser Asp Pro Cys Arg Asn Gly Ala Asn Cys
945 950 955 960

Thr Asp Cys Val Asp Ser Tyr Thr Cys Thr Cys Pro Ala Gly Phe Ser
965 970 975

Gly Ile His Cys Glu Asn Asn Thr Pro Asp Cys Thr Glu Ser Ser Cys
980 985 990

Phe Asn Gly Gly Thr Cys Val Asp Gly Ile Asn Ser Phe Thr Cys Leu
995 1000 1005

Cys Pro Pro Gly Phe Thr Gly Ser Tyr Cys Gln His Asp Val Asn
1010 1015 1020

Glu Cys Asp Ser Gln Pro Cys Leu His Gly Gly Thr Cys Gln Asp
1025 1030 1035

Gly Cys Gly Ser Tyr Arg Cys Thr Cys Pro Gln Gly Tyr Thr Gly
1040 1045 1050

Pro Asn Cys Gln Asn Leu Val His Trp Cys Asp Ser Ser Pro Cys
1055 1060 1065

Lys Asn Gly Gly Lys Cys Trp Gln Thr His Thr Gln Tyr Arg Cys
1070 1075 1080

Glu Cys Pro Ser Gly Trp Thr Gly Leu Tyr Cys Asp Val Pro Ser
1085 1090 1095

Val Ser Cys Glu Val Ala Ala Gln Arg Gln Gly Val Asp Val Ala
1100 1105 1110

Arg Leu Cys Gln His Gly Gly Leu Cys Val Asp Ala Gly Asn Thr
1115 1120 1125

His His Cys Arg Cys Gln Ala Gly Tyr Thr Gly Ser Tyr Cys Glu
1130 1135 1140

Asp Leu Val Asp Glu Cys Ser Pro Ser Pro Cys Gln Asn Gly Ala

1145

1150

1155

Thr Cys Thr Asp Tyr Leu Gly Gly Tyr Ser Cys Lys Cys Val Ala
 1160 1165 1170

Gly Tyr His Gly Val Asn Cys Ser Glu Glu Ile Asp Glu Cys Leu
 1175 1180 1185

Ser His Pro Cys Gln Asn Gly Gly Thr Cys Leu Asp Leu Pro Asn
 1190 1195 1200

Thr Tyr Lys Cys Ser Cys Pro Arg Gly Thr Gln Gly Val His Cys
 1205 1210 1215

Glu Ile Asn Val Asp Asp Cys Asn Pro Pro Val Asp Pro Val Ser
 1220 1225 1230

Arg Ser Pro Lys Cys Phe Asn Asn Gly Thr Cys Val Asp Gln Val
 1235 1240 1245

Gly Gly Tyr Ser Cys Thr Cys Pro Pro Gly Phe Val Gly Glu Arg
 1250 1255 1260

Cys Glu Gly Asp Val Asn Glu Cys Leu Ser Asn Pro Cys Asp Ala
 1265 1270 1275

Arg Gly Thr Gln Asn Cys Val Gln Arg Val Asn Asp Phe His Cys
 1280 1285 1290

Glu Cys Arg Ala Gly His Thr Gly Arg Arg Cys Glu Ser Val Ile
 1295 1300 1305

Asn Gly Cys Lys Gly Lys Pro Cys Lys Asn Gly Gly Thr Cys Ala
 1310 1315 1320

Val Ala Ser Asn Thr Ala Arg Gly Phe Ile Cys Lys Cys Pro Ala
 1325 1330 1335

Gly Phe Glu Gly Ala Thr Cys Glu Asn Asp Ala Arg Thr Cys Gly
 1340 1345 1350

Ser Leu Arg Cys Leu Asn Gly Gly Thr Cys Ile Ser Gly Pro Arg
1355 1360 1365

Ser Pro Thr Cys Leu Cys Leu Gly Pro Phe Thr Gly Pro Glu Cys
1370 1375 1380

Gln Phe Pro Ala Ser Ser Pro Cys Leu Gly Gly Asn Pro Cys Tyr
1385 1390 1395

Asn Gln Gly Thr Cys Glu Pro Thr Ser Glu Ser Pro Phe Tyr Arg
1400 1405 1410

Cys Leu Cys Pro Ala Lys Phe Asn Gly Leu Leu Cys His Ile Leu
1415 1420 1425

Asp Tyr Ser Phe Gly Gly Gly Ala Gly Arg Asp Ile Pro Pro Pro
1430 1435 1440

Leu Ile Glu Glu Ala Cys Glu Leu Pro Glu Cys Gln Glu Asp Ala
1445 1450 1455

Gly Asn Lys Val Cys Ser Leu Gln Cys Asn Asn His Ala Cys Gly
1460 1465 1470

Trp Asp Gly Gly Asp Cys Ser Leu Asn Phe Asn Asp Pro Trp Lys
1475 1480 1485

Asn Cys Thr Gln Ser Leu Gln Cys Trp Lys Tyr Phe Ser Asp Gly
1490 1495 1500

His Cys Asp Ser Gln Cys Asn Ser Ala Gly Cys Leu Phe Asp Gly
1505 1510 1515

Phe Asp Cys Gln Arg Ala Glu Gly Gln Cys Asn Pro Leu Tyr Asp
1520 1525 1530

Gln Tyr Cys Lys Asp His Phe Ser Asp Gly His Cys Asp Gln Gly
1535 1540 1545

Cys Asn Ser Ala Glu Cys Glu Trp Asp Gly Leu Asp Cys Ala Glu

1550						1555						1560				
His	Val	Pro	Glu	Arg	Leu	Ala	Ala	Gly	Thr	Leu	Val	Val	Val	Val		
1565						1570					1575					
Leu	Met	Pro	Pro	Glu	Gln	Leu	Arg	Asn	Ser	Ser	Phe	His	Phe	Leu		
1580						1585					1590					
Arg	Glu	Leu	Ser	Arg	Val	Leu	His	Thr	Asn	Val	Val	Phe	Lys	Arg		
1595						1600					1605					
Asp	Ala	His	Gly	Gln	Gln	Met	Ile	Phe	Pro	Tyr	Tyr	Gly	Arg	Glu		
1610						1615					1620					
Glu	Glu	Leu	Arg	Lys	His	Pro	Ile	Lys	Arg	Ala	Ala	Glu	Gly	Trp		
1625						1630					1635					
Ala	Ala	Pro	Asp	Ala	Leu	Leu	Gly	Gln	Val	Lys	Ala	Ser	Leu	Leu		
1640						1645					1650					
Pro	Gly	Gly	Ser	Glu	Gly	Gly	Arg	Arg	Arg	Arg	Glu	Leu	Asp	Pro		
1655						1660					1665					
Met	Asp	Val	Arg	Gly	Ser	Ile	Val	Tyr	Leu	Glu	Ile	Asp	Asn	Arg		
1670						1675					1680					
Gln	Cys	Val	Gln	Ala	Ser	Ser	Gln	Cys	Phe	Gln	Ser	Ala	Thr	Asp		
1685						1690					1695					
Val	Ala	Ala	Phe	Leu	Gly	Ala	Leu	Ala	Ser	Leu	Gly	Ser	Leu	Asn		
1700						1705					1710					
Ile	Pro	Tyr	Lys	Ile	Glu	Ala	Val	Gln	Ser	Glu	Thr	Val	Glu	Pro		
1715						1720					1725					
Pro	Pro	Pro	Ala	Gln	Leu	His	Phe	Met	Tyr	Val	Ala	Ala	Ala	Ala		
1730						1735					1740					
Phe	Val	Leu	Leu	Phe	Phe	Val	Gly	Cys	Gly	Val	Leu	Leu	Ser	Arg		
1745						1750					1755					

Lys Arg Arg Arg Gln His Gly Gln Leu Trp Phe Pro Glu Gly Phe
1760 1765 1770

Lys Val Ser Glu Ala Ser Lys Lys Lys Arg Arg Glu Pro Leu Gly
1775 1780 1785

Glu Asp Ser Val Gly Leu Lys Pro Leu Lys Asn Ala Ser Asp Gly
1790 1795 1800

Ala Leu Met Asp Asp Asn Gln Asn Glu Trp Gly Asp Glu Asp Leu
1805 1810 1815

Glu Thr Lys Lys Phe Arg Phe Glu Glu Pro Val Val Leu Pro Asp
1820 1825 1830

Leu Asp Asp Gln Thr Asp His Arg Gln Trp Thr Gln Gln His Leu
1835 1840 1845

Asp Ala Ala Asp Leu Arg Met Ser Ala Met Ala Pro Thr Pro Pro
1850 1855 1860

Gln Gly Glu Val Asp Ala Asp Cys Met Asp Val Asn Val Arg Gly
1865 1870 1875

Pro Asp Gly Phe Thr Pro Leu Met Ile Ala Ser Cys Ser Gly Gly
1880 1885 1890

Gly Leu Glu Thr Gly Asn Ser Glu Glu Glu Glu Asp Ala Pro Ala
1895 1900 1905

Val Ile Ser Asp Phe Ile Tyr Gln Gly Ala Ser Leu His Asn Gln
1910 1915 1920

Thr Asp Arg Thr Gly Glu Thr Ala Leu His Leu Ala Ala Arg Tyr
1925 1930 1935

Ser Arg Ser Asp Ala Ala Lys Arg Leu Leu Glu Ala Ser Ala Asp
1940 1945 1950

Ala Asn Ile Gln Asp Asn Met Gly Arg Thr Pro Leu His Ala Ala

1955						1960						1965					
Val	Ser	Ala	Asp	Ala	Gln	Gly	Val	Phe	Gln	Ile	Leu	Ile	Arg	Asn			
1970						1975					1980						
Arg	Ala	Thr	Asp	Leu	Asp	Ala	Arg	Met	His	Asp	Gly	Thr	Thr	Pro			
1985						1990					1995						
Leu	Ile	Leu	Ala	Ala	Arg	Leu	Ala	Val	Glu	Gly	Met	Leu	Glu	Asp			
2000						2005					2010						
Leu	Ile	Asn	Ser	His	Ala	Asp	Val	Asn	Ala	Val	Asp	Asp	Leu	Gly			
2015						2020					2025						
Lys	Ser	Ala	Leu	His	Trp	Ala	Ala	Ala	Val	Asn	Asn	Val	Asp	Ala			
2030						2035					2040						
Ala	Val	Val	Leu	Leu	Lys	Asn	Gly	Ala	Asn	Lys	Asp	Met	Gln	Asn			
2045						2050					2055						
Asn	Arg	Glu	Glu	Thr	Pro	Leu	Phe	Leu	Ala	Ala	Arg	Glu	Gly	Ser			
2060						2065					2070						
Tyr	Glu	Thr	Ala	Lys	Val	Leu	Leu	Asp	His	Phe	Ala	Asn	Arg	Asp			
2075						2080					2085						
Ile	Thr	Asp	His	Met	Asp	Arg	Leu	Pro	Arg	Asp	Ile	Ala	Gln	Glu			
2090						2095					2100						
Arg	Met	His	His	Asp	Ile	Val	Arg	Leu	Leu	Asp	Glu	Tyr	Asn	Leu			
2105						2110					2115						
Val	Arg	Ser	Pro	Gln	Leu	His	Gly	Ala	Pro	Leu	Gly	Gly	Thr	Pro			
2120						2125					2130						
Thr	Leu	Ser	Pro	Pro	Leu	Cys	Ser	Pro	Asn	Gly	Tyr	Leu	Gly	Ser			
2135						2140					2145						
Leu	Lys	Pro	Gly	Val	Gln	Gly	Lys	Lys	Val	Arg	Lys	Pro	Ser	Ser			
2150						2155					2160						

Lys Gly Leu Ala Cys Gly Ser Lys Glu Ala Lys Asp Leu Lys Ala
2165 2170 2175

Arg Arg Lys Lys Ser Gln Asp Gly Lys Gly Cys Leu Leu Asp Ser
2180 2185 2190

Ser Gly Met Leu Ser Pro Val Asp Ser Leu Glu Ser Pro His Gly
2195 2200 2205

Tyr Leu Ser Asp Val Ala Ser Pro Pro Leu Leu Pro Ser Pro Phe
2210 2215 2220

Gln Gln Ser Pro Ser Val Pro Leu Asn His Leu Pro Gly Met Pro
2225 2230 2235

Asp Thr His Leu Gly Ile Gly His Leu Asn Val Ala Ala Lys Pro
2240 2245 2250

Glu Met Ala Ala Leu Gly Gly Gly Gly Arg Leu Ala Phe Glu Thr
2255 2260 2265

Gly Pro Pro Arg Leu Ser His Leu Pro Val Ala Ser Gly Thr Ser
2270 2275 2280

Thr Val Leu Gly Ser Ser Ser Gly Gly Ala Leu Asn Phe Thr Val
2285 2290 2295

Gly Gly Ser Thr Ser Leu Asn Gly Gln Cys Glu Trp Leu Ser Arg
2300 2305 2310

Leu Gln Ser Gly Met Val Pro Asn Gln Tyr Asn Pro Leu Arg Gly
2315 2320 2325

Ser Val Ala Pro Gly Pro Leu Ser Thr Gln Ala Pro Ser Leu Gln
2330 2335 2340

His Gly Met Val Gly Pro Leu His Ser Ser Leu Ala Ala Ser Ala
2345 2350 2355

Leu Ser Gln Met Met Ser Tyr Gln Gly Leu Pro Ser Thr Arg Leu

2360

2365

2370

Ala Thr Gln Pro His Leu Val Gln Thr Gln Gln Val Gln Pro Gln
 2375 2380 2385

Asn Leu Gln Met Gln Gln Gln Asn Leu Gln Pro Ala Asn Ile Gln
 2390 2395 2400

Gln Gln Gln Ser Leu Gln Pro Pro Pro Pro Pro Pro Gln Pro His
 2405 2410 2415

Leu Gly Val Ser Ser Ala Ala Ser Gly His Leu Gly Arg Ser Phe
 2420 2425 2430

Leu Ser Gly Glu Pro Ser Gln Ala Asp Val Gln Pro Leu Gly Pro
 2435 2440 2445

Ser Ser Leu Ala Val His Thr Ile Leu Pro Gln Glu Ser Pro Ala
 2450 2455 2460

Leu Pro Thr Ser Leu Pro Ser Ser Leu Val Pro Pro Val Thr Ala
 2465 2470 2475

Ala Gln Phe Leu Thr Pro Pro Ser Gln His Ser Tyr Ser Ser Pro
 2480 2485 2490

Val Asp Asn Thr Pro Ser His Gln Leu Gln Val Pro Glu His Pro
 2495 2500 2505

Phe Leu Thr Pro Ser Pro Glu Ser Pro Asp Gln Trp Ser Ser Ser
 2510 2515 2520

Ser Pro His Ser Asn Val Ser Asp Trp Ser Glu Gly Val Ser Ser
 2525 2530 2535

Pro Pro Thr Ser Met Gln Ser Gln Ile Ala Arg Ile Pro Glu Ala
 2540 2545 2550

Phe Lys
 2555

<210> 25
<211> 2471
<212> PRT
<213> Homo sapiens

<400> 25

Met Pro Ala Leu Arg Pro Ala Leu Leu Trp Ala Leu Leu Ala Leu Trp
1 5 10 15

Leu Cys Cys Ala Ala Pro Ala His Ala Leu Gln Cys Arg Asp Gly Tyr
20 25 30

Glu Pro Cys Val Asn Glu Gly Met Cys Val Thr Tyr His Asn Gly Thr
35 40 45

Gly Tyr Cys Lys Cys Pro Glu Gly Phe Leu Gly Glu Tyr Cys Gln His
50 55 60

Arg Asp Pro Cys Glu Lys Asn Arg Cys Gln Asn Gly Gly Thr Cys Val
65 70 75 80

Ala Gln Ala Met Leu Gly Lys Ala Thr Cys Arg Cys Ala Ser Gly Phe
85 90 95

Thr Gly Glu Asp Cys Gln Tyr Ser Thr Ser His Pro Cys Phe Val Ser
100 105 110

Arg Pro Cys Leu Asn Gly Gly Thr Cys His Met Leu Ser Arg Asp Thr
115 120 125

Tyr Glu Cys Thr Cys Gln Val Gly Phe Thr Gly Lys Glu Cys Gln Trp
130 135 140

Thr Asp Ala Cys Leu Ser His Pro Cys Ala Asn Gly Ser Thr Cys Thr
145 150 155 160

Thr Val Ala Asn Gln Phe Ser Cys Lys Cys Leu Thr Gly Phe Thr Gly
165 170 175

Gln Lys Cys Glu Thr Asp Val Asn Glu Cys Asp Ile Pro Gly His Cys
180 185 190

Gln His Gly Gly Thr Cys Leu Asn Leu Pro Gly Ser Tyr Gln Cys Gln
195 200 205

Cys Pro Gln Gly Phe Thr Gly Gln Tyr Cys Asp Ser Leu Tyr Val Pro
210 215 220

Cys Ala Pro Ser Pro Cys Val Asn Gly Gly Thr Cys Arg Gln Thr Gly
225 230 235 240

Asp Phe Thr Phe Glu Cys Asn Cys Leu Pro Gly Phe Glu Gly Ser Thr
245 250 255

Cys Glu Arg Asn Ile Asp Asp Cys Pro Asn His Arg Cys Gln Asn Gly
260 265 270

Gly Val Cys Val Asp Gly Val Asn Thr Tyr Asn Cys Arg Cys Pro Pro
275 280 285

Gln Trp Thr Gly Gln Phe Cys Thr Glu Asp Val Asp Glu Cys Leu Leu
290 295 300

Gln Pro Asn Ala Cys Gln Asn Gly Gly Thr Cys Ala Asn Arg Asn Gly
305 310 315 320

Gly Tyr Gly Cys Val Cys Val Asn Gly Trp Ser Gly Asp Asp Cys Ser
325 330 335

Glu Asn Ile Asp Asp Cys Ala Phe Ala Ser Cys Thr Pro Gly Ser Thr
340 345 350

Cys Ile Asp Arg Val Ala Ser Phe Ser Cys Met Cys Pro Glu Gly Lys
355 360 365

Ala Gly Leu Leu Cys His Leu Asp Asp Ala Cys Ile Ser Asn Pro Cys
370 375 380

His Lys Gly Ala Leu Cys Asp Thr Asn Pro Leu Asn Gly Gln Tyr Ile
385 390 395 400

Cys Thr Cys Pro Gln Gly Tyr Lys Gly Ala Asp Cys Thr Glu Asp Val
405 410 415

Asp Glu Cys Ala Met Ala Asn Ser Asn Pro Cys Glu His Ala Gly Lys
420 425 430

Cys Val Asn Thr Asp Gly Ala Phe His Cys Glu Cys Leu Lys Gly Tyr
435 440 445

Ala Gly Pro Arg Cys Glu Met Asp Ile Asn Glu Cys His Ser Asp Pro
450 455 460

Cys Gln Asn Asp Ala Thr Cys Leu Asp Lys Ile Gly Gly Phe Thr Cys
465 470 475 480

Leu Cys Met Pro Gly Phe Lys Gly Val His Cys Glu Leu Glu Ile Asn
485 490 495

Glu Cys Gln Ser Asn Pro Cys Val Asn Asn Gly Gln Cys Val Asp Lys
500 505 510

Val Asn Arg Phe Gln Cys Leu Cys Pro Pro Gly Phe Thr Gly Pro Val
515 520 525

Cys Gln Ile Asp Ile Asp Asp Cys Ser Ser Thr Pro Cys Leu Asn Gly
530 535 540

Ala Lys Cys Ile Asp His Pro Asn Gly Tyr Glu Cys Gln Cys Ala Thr
545 550 555 560

Gly Phe Thr Gly Val Leu Cys Glu Glu Asn Ile Asp Asn Cys Asp Pro
565 570 575

Asp Pro Cys His His Gly Gln Cys Gln Asp Gly Ile Asp Ser Tyr Thr
580 585 590

Cys Ile Cys Asn Pro Gly Tyr Met Gly Ala Ile Cys Ser Asp Gln Ile
595 600 605

Asp Glu Cys Tyr Ser Ser Pro Cys Leu Asn Asp Gly Arg Cys Ile Asp
610 615 620

Leu Val Asn Gly Tyr Gln Cys Asn Cys Gln Pro Gly Thr Ser Gly Val
625 630 635 640

Asn Cys Glu Ile Asn Phe Asp Asp Cys Ala Ser Asn Pro Cys Ile His
645 650 655

Gly Ile Cys Met Asp Gly Ile Asn Arg Tyr Ser Cys Val Cys Ser Pro
660 665 670

Gly Phe Thr Gly Gln Arg Cys Asn Ile Asp Ile Asp Glu Cys Ala Ser
675 680 685

Asn Pro Cys Arg Lys Gly Ala Thr Cys Ile Asn Gly Val Asn Gly Phe
690 695 700

Arg Cys Ile Cys Pro Glu Gly Pro His His Pro Ser Cys Tyr Ser Gln
705 710 715 720

Val Asn Glu Cys Leu Ser Asn Pro Cys Ile His Gly Asn Cys Thr Gly
725 730 735

Gly Leu Ser Gly Tyr Lys Cys Leu Cys Asp Ala Gly Trp Val Gly Ile
740 745 750

Asn Cys Glu Val Asp Lys Asn Glu Cys Leu Ser Asn Pro Cys Gln Asn
755 760 765

Gly Gly Thr Cys Asp Asn Leu Val Asn Gly Tyr Arg Cys Thr Cys Lys
770 775 780

Lys Gly Phe Lys Gly Tyr Asn Cys Gln Val Asn Ile Asp Glu Cys Ala
785 790 795 800

Ser Asn Pro Cys Leu Asn Gln Gly Thr Cys Phe Asp Asp Ile Ser Gly
805 810 815

Tyr Thr Cys His Cys Val Leu Pro Tyr Thr Gly Lys Asn Cys Gln Thr
820 825 830

Val Leu Ala Pro Cys Ser Pro Asn Pro Cys Glu Asn Ala Ala Val Cys
835 840 845

Lys Glu Ser Pro Asn Phe Glu Ser Tyr Thr Cys Leu Cys Ala Pro Gly
850 855 860

Trp Gln Gly Gln Arg Cys Thr Ile Asp Ile Asp Glu Cys Ile Ser Lys
865 870 875 880

Pro Cys Met Asn His Gly Leu Cys His Asn Thr Gln Gly Ser Tyr Met
885 890 895

Cys Glu Cys Pro Pro Gly Phe Ser Gly Met Asp Cys Glu Glu Asp Ile
900 905 910

Asp Asp Cys Leu Ala Asn Pro Cys Gln Asn Gly Gly Ser Cys Met Asp
915 920 925

Gly Val Asn Thr Phe Ser Cys Leu Cys Leu Pro Gly Phe Thr Gly Asp
930 935 940

Lys Cys Gln Thr Asp Met Asn Glu Cys Leu Ser Glu Pro Cys Lys Asn
945 950 955 960

Gly Gly Thr Cys Ser Asp Tyr Val Asn Ser Tyr Thr Cys Lys Cys Gln
965 970 975

Ala Gly Phe Asp Gly Val His Cys Glu Asn Asn Ile Asn Glu Cys Thr
980 985 990

Glu Ser Ser Cys Phe Asn Gly Gly Thr Cys Val Asp Gly Ile Asn Ser
995 1000 1005

Phe Ser Cys Leu Cys Pro Val Gly Phe Thr Gly Ser Phe Cys Leu
1010 1015 1020

His Glu Ile Asn Glu Cys Ser Ser His Pro Cys Leu Asn Glu Gly
1025 1030 1035

Thr Cys Val Asp Gly Leu Gly Thr Tyr Arg Cys Ser Cys Pro Leu
1040 1045 1050

Gly Tyr Thr Gly Lys Asn Cys Gln Thr Leu Val Asn Leu Cys Ser
1055 1060 1065

Arg Ser Pro Cys Lys Asn Lys Gly Thr Cys Val Gln Lys Lys Ala
1070 1075 1080

Glu Ser Gln Cys Leu Cys Pro Ser Gly Trp Ala Gly Ala Tyr Cys
1085 1090 1095

Asp Val Pro Asn Val Ser Cys Asp Ile Ala Ala Ser Arg Arg Gly
1100 1105 1110

Val Leu Val Glu His Leu Cys Gln His Ser Gly Val Cys Ile Asn
1115 1120 1125

Ala Gly Asn Thr His Tyr Cys Gln Cys Pro Leu Gly Tyr Thr Gly
1130 1135 1140

Ser Tyr Cys Glu Glu Gln Leu Asp Glu Cys Ala Ser Asn Pro Cys
1145 1150 1155

Gln His Gly Ala Thr Cys Ser Asp Phe Ile Gly Gly Tyr Arg Cys
1160 1165 1170

Glu Cys Val Pro Gly Tyr Gln Gly Val Asn Cys Glu Tyr Glu Val
1175 1180 1185

Asp Glu Cys Gln Asn Gln Pro Cys Gln Asn Gly Gly Thr Cys Ile
1190 1195 1200

Asp Leu Val Asn His Phe Lys Cys Ser Cys Pro Pro Gly Thr Arg
1205 1210 1215

Gly Leu Leu Cys Glu Glu Asn Ile Asp Asp Cys Ala Arg Gly Pro
1220 1225 1230

His Cys Leu Asn Gly Gly Gln Cys Met Asp Arg Ile Gly Gly Tyr
1235 1240 1245

Ser	Cys	Arg	Cys	Leu	Pro	Gly	Phe	Ala	Gly	Glu	Arg	Cys	Glu	Gly
1250						1255					1260			
Asp	Ile	Asn	Glu	Cys	Leu	Ser	Asn	Pro	Cys	Ser	Ser	Glu	Gly	Ser
1265						1270					1275			
Leu	Asp	Cys	Ile	Gln	Leu	Thr	Asn	Asp	Tyr	Leu	Cys	Val	Cys	Arg
1280						1285					1290			
Ser	Ala	Phe	Thr	Gly	Arg	His	Cys	Glu	Thr	Phe	Val	Asp	Val	Cys
1295						1300					1305			
Pro	Gln	Met	Pro	Cys	Leu	Asn	Gly	Gly	Thr	Cys	Ala	Val	Ala	Ser
1310						1315					1320			
Asn	Met	Pro	Asp	Gly	Phe	Ile	Cys	Arg	Cys	Pro	Pro	Gly	Phe	Ser
1325						1330					1335			
Gly	Ala	Arg	Cys	Gln	Ser	Ser	Cys	Gly	Gln	Val	Lys	Cys	Arg	Lys
1340						1345					1350			
Gly	Glu	Gln	Cys	Val	His	Thr	Ala	Ser	Gly	Pro	Arg	Cys	Phe	Cys
1355						1360					1365			
Pro	Ser	Pro	Arg	Asp	Cys	Glu	Ser	Gly	Cys	Ala	Ser	Ser	Pro	Cys
1370						1375					1380			
Gln	His	Gly	Gly	Ser	Cys	His	Pro	Gln	Arg	Gln	Pro	Pro	Tyr	Tyr
1385						1390					1395			
Ser	Cys	Gln	Cys	Ala	Pro	Pro	Phe	Ser	Gly	Ser	Arg	Cys	Glu	Leu
1400						1405					1410			
Tyr	Thr	Ala	Pro	Pro	Ser	Thr	Pro	Pro	Ala	Thr	Cys	Leu	Ser	Gln
1415						1420					1425			
Tyr	Cys	Ala	Asp	Lys	Ala	Arg	Asp	Gly	Val	Cys	Asp	Glu	Ala	Cys
1430						1435					1440			
Asn	Ser	His	Ala	Cys	Gln	Trp	Asp	Gly	Gly	Asp	Cys	Ser	Leu	Thr
1445						1450					1455			

Met Glu Asn Pro Trp Ala Asn Cys Ser Ser Pro Leu Pro Cys Trp
1460 1465 1470

Asp Tyr Ile Asn Asn Gln Cys Asp Glu Leu Cys Asn Thr Val Glu
1475 1480 1485

Cys Leu Phe Asp Asn Phe Glu Cys Gln Gly Asn Ser Lys Thr Cys
1490 1495 1500

Lys Tyr Asp Lys Tyr Cys Ala Asp His Phe Lys Asp Asn His Cys
1505 1510 1515

Asp Gln Gly Cys Asn Ser Glu Glu Cys Gly Trp Asp Gly Leu Asp
1520 1525 1530

Cys Ala Ala Asp Gln Pro Glu Asn Leu Ala Glu Gly Thr Leu Val
1535 1540 1545

Ile Val Val Leu Met Pro Pro Glu Gln Leu Leu Gln Asp Ala Arg
1550 1555 1560

Ser Phe Leu Arg Ala Leu Gly Thr Leu Leu His Thr Asn Leu Arg
1565 1570 1575

Ile Lys Arg Asp Ser Gln Gly Glu Leu Met Val Tyr Pro Tyr Tyr
1580 1585 1590

Gly Glu Lys Ser Ala Ala Met Lys Lys Gln Arg Met Thr Arg Arg
1595 1600 1605

Ser Leu Pro Gly Glu Gln Glu Gln Glu Val Ala Gly Ser Lys Val
1610 1615 1620

Phe Leu Glu Ile Asp Asn Arg Gln Cys Val Gln Asp Ser Asp His
1625 1630 1635

Cys Phe Lys Asn Thr Asp Ala Ala Ala Ala Leu Leu Ala Ser His
1640 1645 1650

Ala	Ile	Gln	Gly	Thr	Leu	Ser	Tyr	Pro	Leu	Val	Ser	Val	Val	Ser
1655						1660					1665			
Glu	Ser	Leu	Thr	Pro	Glu	Arg	Thr	Gln	Leu	Leu	Tyr	Leu	Leu	Ala
1670						1675					1680			
Val	Ala	Val	Val	Ile	Ile	Leu	Phe	Ile	Ile	Leu	Leu	Gly	Val	Ile
1685						1690					1695			
Met	Ala	Lys	Arg	Lys	Arg	Lys	His	Gly	Ser	Leu	Trp	Leu	Pro	Glu
1700						1705					1710			
Gly	Phe	Thr	Leu	Arg	Arg	Asp	Ala	Ser	Asn	His	Lys	Arg	Arg	Glu
1715						1720					1725			
Pro	Val	Gly	Gln	Asp	Ala	Val	Gly	Leu	Lys	Asn	Leu	Ser	Val	Gln
1730						1735					1740			
Val	Ser	Glu	Ala	Asn	Leu	Ile	Gly	Thr	Gly	Thr	Ser	Glu	His	Trp
1745						1750					1755			
Val	Asp	Asp	Glu	Gly	Pro	Gln	Pro	Lys	Lys	Val	Lys	Ala	Glu	Asp
1760						1765					1770			
Glu	Ala	Leu	Leu	Ser	Glu	Glu	Asp	Asp	Pro	Ile	Asp	Arg	Arg	Pro
1775						1780					1785			
Trp	Thr	Gln	Gln	His	Leu	Glu	Ala	Ala	Asp	Ile	Arg	Arg	Thr	Pro
1790						1795					1800			
Ser	Leu	Ala	Leu	Thr	Pro	Pro	Gln	Ala	Glu	Gln	Glu	Val	Asp	Val
1805						1810					1815			
Leu	Asp	Val	Asn	Val	Arg	Gly	Pro	Asp	Gly	Cys	Thr	Pro	Leu	Met
1820						1825					1830			
Leu	Ala	Ser	Leu	Arg	Gly	Gly	Ser	Ser	Asp	Leu	Ser	Asp	Glu	Asp
1835						1840					1845			
Glu	Asp	Ala	Glu	Asp	Ser	Ser	Ala	Asn	Ile	Ile	Thr	Asp	Leu	Val
1850						1855					1860			

Tyr	Gln	Gly	Ala	Ser	Leu	Gln	Ala	Gln	Thr	Asp	Arg	Thr	Gly	Glu
1865						1870					1875			
Met	Ala	Leu	His	Leu	Ala	Ala	Arg	Tyr	Ser	Arg	Ala	Asp	Ala	Ala
1880						1885					1890			
Lys	Arg	Leu	Leu	Asp	Ala	Gly	Ala	Asp	Ala	Asn	Ala	Gln	Asp	Asn
1895						1900					1905			
Met	Gly	Arg	Cys	Pro	Leu	His	Ala	Ala	Val	Ala	Ala	Asp	Ala	Gln
1910						1915					1920			
Gly	Val	Phe	Gln	Ile	Leu	Ile	Arg	Asn	Arg	Val	Thr	Asp	Leu	Asp
1925						1930					1935			
Ala	Arg	Met	Asn	Asp	Gly	Thr	Thr	Pro	Leu	Ile	Leu	Ala	Ala	Arg
1940						1945					1950			
Leu	Ala	Val	Glu	Gly	Met	Val	Ala	Glu	Leu	Ile	Asn	Cys	Gln	Ala
1955						1960					1965			
Asp	Val	Asn	Ala	Val	Asp	Asp	His	Gly	Lys	Ser	Ala	Leu	His	Trp
1970						1975					1980			
Ala	Ala	Ala	Val	Asn	Asn	Val	Glu	Ala	Thr	Leu	Leu	Leu	Leu	Lys
1985						1990					1995			
Asn	Gly	Ala	Asn	Arg	Asp	Met	Gln	Asp	Asn	Lys	Glu	Glu	Thr	Pro
2000						2005					2010			
Leu	Phe	Leu	Ala	Ala	Arg	Glu	Gly	Ser	Tyr	Glu	Ala	Ala	Lys	Ile
2015						2020					2025			
Leu	Leu	Asp	His	Phe	Ala	Asn	Arg	Asp	Ile	Thr	Asp	His	Met	Asp
2030						2035					2040			
Arg	Leu	Pro	Arg	Asp	Val	Ala	Arg	Asp	Arg	Met	His	His	Asp	Ile
2045						2050					2055			

Val	Arg	Leu	Leu	Asp	Glu	Tyr	Asn	Val	Thr	Pro	Ser	Pro	Pro	Gly
	2060					2065					2070			
Thr	Val	Leu	Thr	Ser	Ala	Leu	Ser	Pro	Val	Ile	Cys	Gly	Pro	Asn
	2075					2080					2085			
Arg	Ser	Phe	Leu	Ser	Leu	Lys	His	Thr	Pro	Met	Gly	Lys	Lys	Ser
	2090					2095					2100			
Arg	Arg	Pro	Ser	Ala	Lys	Ser	Thr	Met	Pro	Thr	Ser	Leu	Pro	Asn
	2105					2110					2115			
Leu	Ala	Lys	Glu	Ala	Lys	Asp	Ala	Lys	Gly	Ser	Arg	Arg	Lys	Lys
	2120					2125					2130			
Ser	Leu	Ser	Glu	Lys	Val	Gln	Leu	Ser	Glu	Ser	Ser	Val	Thr	Leu
	2135					2140					2145			
Ser	Pro	Val	Asp	Ser	Leu	Glu	Ser	Pro	His	Thr	Tyr	Val	Ser	Asp
	2150					2155					2160			
Thr	Thr	Ser	Ser	Pro	Met	Ile	Thr	Ser	Pro	Gly	Ile	Leu	Gln	Ala
	2165					2170					2175			
Ser	Pro	Asn	Pro	Met	Leu	Ala	Thr	Ala	Ala	Pro	Pro	Ala	Pro	Val
	2180					2185					2190			
His	Ala	Gln	His	Ala	Leu	Ser	Phe	Ser	Asn	Leu	His	Glu	Met	Gln
	2195					2200					2205			
Pro	Leu	Ala	His	Gly	Ala	Ser	Thr	Val	Leu	Pro	Ser	Val	Ser	Gln
	2210					2215					2220			
Leu	Leu	Ser	His	His	His	Ile	Val	Ser	Pro	Gly	Ser	Gly	Ser	Ala
	2225					2230					2235			
Gly	Ser	Leu	Ser	Arg	Leu	His	Pro	Val	Pro	Val	Pro	Ala	Asp	Trp
	2240					2245					2250			
Met	Asn	Arg	Met	Glu	Val	Asn	Glu	Thr	Gln	Tyr	Asn	Glu	Met	Phe
	2255					2260					2265			

Gly	Met	Val	Leu	Ala	Pro	Ala	Glu	Gly	Thr	His	Pro	Gly	Ile	Ala
2270						2275					2280			
Pro	Gln	Ser	Arg	Pro	Pro	Glu	Gly	Lys	His	Ile	Thr	Thr	Pro	Arg
2285						2290					2295			
Glu	Pro	Leu	Pro	Pro	Ile	Val	Thr	Phe	Gln	Leu	Ile	Pro	Lys	Gly
2300						2305					2310			
Ser	Ile	Ala	Gln	Pro	Ala	Gly	Ala	Pro	Gln	Pro	Gln	Ser	Thr	Cys
2315						2320					2325			
Pro	Pro	Ala	Val	Ala	Gly	Pro	Leu	Pro	Thr	Met	Tyr	Gln	Ile	Pro
2330						2335					2340			
Glu	Met	Ala	Arg	Leu	Pro	Ser	Val	Ala	Phe	Pro	Thr	Ala	Met	Met
2345						2350					2355			
Pro	Gln	Gln	Asp	Gly	Gln	Val	Ala	Gln	Thr	Ile	Leu	Pro	Ala	Tyr
2360						2365					2370			
His	Pro	Phe	Pro	Ala	Ser	Val	Gly	Lys	Tyr	Pro	Thr	Pro	Pro	Ser
2375						2380					2385			
Gln	His	Ser	Tyr	Ala	Ser	Ser	Asn	Ala	Ala	Glu	Arg	Thr	Pro	Ser
2390						2395					2400			
His	Ser	Gly	His	Leu	Gln	Gly	Glu	His	Pro	Tyr	Leu	Thr	Pro	Ser
2405						2410					2415			
Pro	Glu	Ser	Pro	Asp	Gln	Trp	Ser	Ser	Ser	Ser	Pro	His	Ser	Ala
2420						2425					2430			
Ser	Asp	Trp	Ser	Asp	Val	Thr	Thr	Ser	Pro	Thr	Pro	Gly	Gly	Ala
2435						2440					2445			
Gly	Gly	Gly	Gln	Arg	Gly	Pro	Gly	Thr	His	Met	Ser	Glu	Pro	Pro
2450						2455					2460			

His Asn Asn Met Gln Val Tyr Ala
2465 2470

<210> 26
<211> 1235
<212> PRT
<213> Homo sapiens

<400> 26

Met Pro Ala Leu Arg Pro Ala Leu Leu Trp Ala Leu Leu Ala Leu Trp
1 5 10 15

Leu Cys Cys Ala Ala Pro Ala His Ala Leu Gln Cys Arg Asp Gly Tyr
20 25 30

Glu Pro Cys Val Asn Glu Gly Met Cys Val Thr Tyr His Asn Gly Thr
35 40 45

Gly Tyr Cys Lys Cys Pro Glu Gly Phe Leu Gly Glu Tyr Cys Gln His
50 55 60

Arg Asp Pro Cys Glu Lys Asn Arg Cys Gln Asn Gly Gly Thr Cys Val
65 70 75 80

Ala Gln Ala Met Leu Gly Lys Ala Thr Cys Arg Cys Ala Ser Gly Phe
85 90 95

Thr Gly Glu Asp Cys Gln Tyr Ser Thr Ser His Pro Cys Phe Val Ser
100 105 110

Arg Pro Cys Leu Asn Gly Gly Thr Cys His Met Leu Ser Arg Asp Thr
115 120 125

Tyr Glu Cys Thr Cys Gln Val Gly Phe Thr Gly Lys Glu Cys Gln Trp
130 135 140

Thr Asp Ala Cys Leu Ser His Pro Cys Ala Asn Gly Ser Thr Cys Thr
145 150 155 160

Thr Val Ala Asn Gln Phe Ser Cys Lys Cys Leu Thr Gly Phe Thr Gly
165 170 175

Gln Lys Cys Glu Thr Asp Val Asn Glu Cys Asp Ile Pro Gly His Cys
180 185 190

Gln His Gly Gly Thr Cys Leu Asn Leu Pro Gly Ser Tyr Gln Cys Gln
195 200 205

Cys Pro Gln Gly Phe Thr Gly Gln Tyr Cys Asp Ser Leu Tyr Val Pro
210 215 220

Cys Ala Pro Ser Pro Cys Val Asn Gly Gly Thr Cys Arg Gln Thr Gly
225 230 235 240

Asp Phe Thr Phe Glu Cys Asn Cys Leu Pro Gly Phe Glu Gly Ser Thr
245 250 255

Cys Glu Arg Asn Ile Asp Asp Cys Pro Asn His Arg Cys Gln Asn Gly
260 265 270

Gly Val Cys Val Asp Gly Val Asn Thr Tyr Asn Cys Arg Cys Pro Pro
275 280 285

Gln Trp Thr Gly Gln Phe Cys Thr Glu Asp Val Asp Glu Cys Leu Leu
290 295 300

Gln Pro Asn Ala Cys Gln Asn Gly Gly Thr Cys Ala Asn Arg Asn Gly
305 310 315 320

Gly Tyr Gly Cys Val Cys Val Asn Gly Trp Ser Gly Asp Asp Cys Ser
325 330 335

Glu Asn Ile Asp Asp Cys Ala Phe Ala Ser Cys Thr Pro Gly Ser Thr
340 345 350

Cys Ile Asp Arg Val Ala Ser Phe Ser Cys Met Cys Pro Glu Gly Lys
355 360 365

Ala Gly Leu Leu Cys His Leu Asp Asp Ala Cys Ile Ser Asn Pro Cys
370 375 380

His Lys Gly Ala Leu Cys Asp Thr Asn Pro Leu Asn Gly Gln Tyr Ile

385		390		395		400
Cys Thr Cys Pro Gln Gly Tyr Lys Gly Ala Asp Cys Thr Glu Asp Val						
		405		410		415
Asp Glu Cys Ala Met Ala Asn Ser Asn Pro Cys Glu His Ala Gly Lys						
		420		425		430
Cys Val Asn Thr Asp Gly Ala Phe His Cys Glu Cys Leu Lys Gly Tyr						
		435		440		445
Ala Gly Pro Arg Cys Glu Met Asp Ile Asn Glu Cys His Ser Asp Pro						
		450		455		460
Cys Gln Asn Asp Ala Thr Cys Leu Asp Lys Ile Gly Gly Phe Thr Cys						
465		470		475		480
Leu Cys Met Pro Gly Phe Lys Gly Val His Cys Glu Leu Glu Ile Asn						
		485		490		495
Glu Cys Gln Ser Asn Pro Cys Val Asn Asn Gly Gln Cys Val Asp Lys						
		500		505		510
Val Asn Arg Phe Gln Cys Leu Cys Pro Pro Gly Phe Thr Gly Pro Val						
		515		520		525
Cys Gln Ile Asp Ile Asp Asp Cys Ser Ser Thr Pro Cys Leu Asn Gly						
530		535		540		
Ala Lys Cys Ile Asp His Pro Asn Gly Tyr Glu Cys Gln Cys Ala Thr						
545		550		555		560
Gly Phe Thr Gly Val Leu Cys Glu Glu Asn Ile Asp Asn Cys Asp Pro						
		565		570		575
Asp Pro Cys His His Gly Gln Cys Gln Asp Gly Ile Asp Ser Tyr Thr						
		580		585		590
Cys Ile Cys Asn Pro Gly Tyr Met Gly Ala Ile Cys Ser Asp Gln Ile						
		595		600		605

Asp Glu Cys Tyr Ser Ser Pro Cys Leu Asn Asp Gly Arg Cys Ile Asp
610 615 620

Leu Val Asn Gly Tyr Gln Cys Asn Cys Gln Pro Gly Thr Ser Gly Val
625 630 635 640

Asn Cys Glu Ile Asn Phe Asp Asp Cys Ala Ser Asn Pro Cys Ile His
645 650 655

Gly Ile Cys Met Asp Gly Ile Asn Arg Tyr Ser Cys Val Cys Ser Pro
660 665 670

Gly Phe Thr Gly Gln Arg Cys Asn Ile Asp Ile Asp Glu Cys Ala Ser
675 680 685

Asn Pro Cys Arg Lys Gly Ala Thr Cys Ile Asn Gly Val Asn Gly Phe
690 695 700

Arg Cys Ile Cys Pro Glu Gly Pro His His Pro Ser Cys Tyr Ser Gln
705 710 715 720

Val Asn Glu Cys Leu Ser Asn Pro Cys Ile His Gly Asn Cys Thr Gly
725 730 735

Gly Leu Ser Gly Tyr Lys Cys Leu Cys Asp Ala Gly Trp Val Gly Ile
740 745 750

Asn Cys Glu Val Asp Lys Asn Glu Cys Leu Ser Asn Pro Cys Gln Asn
755 760 765

Gly Gly Thr Cys Asp Asn Leu Val Asn Gly Tyr Arg Cys Thr Cys Lys
770 775 780

Lys Gly Phe Lys Gly Tyr Asn Cys Gln Val Asn Ile Asp Glu Cys Ala
785 790 795 800

Ser Asn Pro Cys Leu Asn Gln Gly Thr Cys Phe Asp Asp Ile Ser Gly
805 810 815

Tyr Thr Cys His Cys Val Leu Pro Tyr Thr Gly Lys Asn Cys Gln Thr

820

825

830

Val Leu Ala Pro Cys Ser Pro Asn Pro Cys Glu Asn Ala Ala Val Cys
835 840 845

Lys Glu Ser Pro Asn Phe Glu Ser Tyr Thr Cys Leu Cys Ala Pro Gly
850 855 860

Trp Gln Gly Gln Arg Cys Thr Ile Asp Ile Asp Glu Cys Ile Ser Lys
865 870 875 880

Pro Cys Met Asn His Gly Leu Cys His Asn Thr Gln Gly Ser Tyr Met
885 890 895

Cys Glu Cys Pro Pro Gly Phe Ser Gly Met Asp Cys Glu Glu Asp Ile
900 905 910

Asp Asp Cys Leu Ala Asn Pro Cys Gln Asn Gly Gly Ser Cys Met Asp
915 920 925

Gly Val Asn Thr Phe Ser Cys Leu Cys Leu Pro Gly Phe Thr Gly Asp
930 935 940

Lys Cys Gln Thr Asp Met Asn Glu Cys Leu Ser Glu Pro Cys Lys Asn
945 950 955 960

Gly Gly Thr Cys Ser Asp Tyr Val Asn Ser Tyr Thr Cys Lys Cys Gln
965 970 975

Ala Gly Phe Asp Gly Val His Cys Glu Asn Asn Ile Asn Glu Cys Thr
980 985 990

Glu Ser Ser Cys Phe Asn Gly Gly Thr Cys Val Asp Gly Ile Asn Ser
995 1000 1005

Phe Ser Cys Leu Cys Pro Val Gly Phe Thr Gly Ser Phe Cys Leu
1010 1015 1020

His Glu Ile Asn Glu Cys Ser Ser His Pro Cys Leu Asn Glu Gly
1025 1030 1035

Thr Cys Val Asp Gly Leu Gly Thr Tyr Arg Cys Ser Cys Pro Leu
1040 1045 1050

Gly Tyr Thr Gly Lys Asn Cys Gln Thr Leu Val Asn Leu Cys Ser
1055 1060 1065

Arg Ser Pro Cys Lys Asn Lys Gly Thr Cys Val Gln Lys Lys Ala
1070 1075 1080

Glu Ser Gln Cys Leu Cys Pro Ser Gly Trp Ala Gly Ala Tyr Cys
1085 1090 1095

Asp Val Pro Asn Val Ser Cys Asp Ile Ala Ala Ser Arg Arg Gly
1100 1105 1110

Val Leu Val Glu His Leu Cys Gln His Ser Gly Val Cys Ile Asn
1115 1120 1125

Ala Gly Asn Thr His Tyr Cys Gln Cys Pro Leu Gly Tyr Thr Gly
1130 1135 1140

Ser Tyr Cys Glu Glu Gln Leu Asp Glu Cys Ala Ser Asn Pro Cys
1145 1150 1155

Gln His Gly Ala Thr Cys Ser Asp Phe Ile Gly Gly Tyr Arg Cys
1160 1165 1170

Glu Cys Val Pro Gly Tyr Gln Gly Val Asn Cys Glu Tyr Glu Val
1175 1180 1185

Asp Glu Cys Gln Asn Gln Pro Cys Gln Asn Gly Gly Thr Cys Ile
1190 1195 1200

Asp Leu Val Asn His Phe Lys Cys Ser Cys Pro Pro Gly Thr Arg
1205 1210 1215

Gly Met Lys Ser Ser Leu Ser Ile Phe His Pro Gly His Cys Leu
1220 1225 1230

Lys Leu

1235

<210> 27
<211> 2321
<212> PRT
<213> Homo sapiens

<400> 27

Met Gly Pro Gly Ala Arg Gly Arg Arg Arg Arg Arg Arg Pro Met Ser
1 5 10 15

Pro Pro Pro Pro Pro Pro Pro Val Arg Ala Leu Pro Leu Leu Leu Leu
20 25 30

Leu Ala Gly Pro Gly Ala Ala Ala Pro Pro Cys Leu Asp Gly Ser Pro
35 40 45

Cys Ala Asn Gly Gly Arg Cys Thr Gln Leu Pro Ser Arg Glu Ala Ala
50 55 60

Cys Leu Cys Pro Pro Gly Trp Val Gly Glu Arg Cys Gln Leu Glu Asp
65 70 75 80

Pro Cys His Ser Gly Pro Cys Ala Gly Arg Gly Val Cys Gln Ser Ser
85 90 95

Val Val Ala Gly Thr Ala Arg Phe Ser Cys Arg Cys Pro Arg Gly Phe
100 105 110

Arg Gly Pro Asp Cys Ser Leu Pro Asp Pro Cys Leu Ser Ser Pro Cys
115 120 125

Ala His Gly Ala Arg Cys Ser Val Gly Pro Asp Gly Arg Phe Leu Cys
130 135 140

Ser Cys Pro Pro Gly Tyr Gln Gly Arg Ser Cys Arg Ser Asp Val Asp
145 150 155 160

Glu Cys Arg Val Gly Glu Pro Cys Arg His Gly Gly Thr Cys Leu Asn
165 170 175

Thr Pro Gly Ser Phe Arg Cys Gln Cys Pro Ala Gly Tyr Thr Gly Pro
180 185 190

Leu Cys Glu Asn Pro Ala Val Pro Cys Ala Pro Ser Pro Cys Arg Asn
195 200 205

Gly Gly Thr Cys Arg Gln Ser Gly Asp Leu Thr Tyr Asp Cys Ala Cys
210 215 220

Leu Pro Gly Phe Glu Gly Gln Asn Cys Glu Val Asn Val Asp Asp Cys
225 230 235 240

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

Thr Tyr Asn Cys Gln Cys Pro Pro Glu Trp Thr Gly Gln Phe Cys Thr
260 265 270

Glu Asp Val Asp Glu Cys Gln Leu Gln Pro Asn Ala Cys His Asn Gly
275 280 285

Gly Thr Cys Phe Asn Thr Leu Gly Gly His Ser Cys Val Cys Val Asn
290 295 300

Gly Trp Thr Gly Glu Ser Cys Ser Gln Asn Ile Asp Asp Cys Ala Thr
305 310 315 320

Ala Val Cys Phe His Gly Ala Thr Cys His Asp Arg Val Ala Ser Phe
325 330 335

Tyr Cys Ala Cys Pro Met Gly Lys Thr Gly Leu Leu Cys His Leu Asp
340 345 350

Asp Ala Cys Val Ser Asn Pro Cys His Glu Asp Ala Ile Cys Asp Thr
355 360 365

Asn Pro Val Asn Gly Arg Ala Ile Cys Thr Cys Pro Pro Gly Phe Thr
370 375 380

Gly Gly Ala Cys Asp Gln Asp Val Asp Glu Cys Ser Ile Gly Ala Asn
385 390 395 400

Pro Cys Glu His Leu Gly Arg Cys Val Asn Thr Gln Gly Ser Phe Leu
405 410 415

Cys Gln Cys Gly Arg Gly Tyr Thr Gly Pro Arg Cys Glu Thr Asp Val
420 425 430

Asn Glu Cys Leu Ser Gly Pro Cys Arg Asn Gln Ala Thr Cys Leu Asp
435 440 445

Arg Ile Gly Gln Phe Thr Cys Ile Cys Met Ala Gly Phe Thr Gly Thr
450 455 460

Tyr Cys Glu Val Asp Ile Asp Glu Cys Gln Ser Ser Pro Cys Val Asn
465 470 475 480

Gly Gly Val Cys Lys Asp Arg Val Asn Gly Phe Ser Cys Thr Cys Pro
485 490 495

Ser Gly Phe Ser Gly Ser Thr Cys Gln Leu Asp Val Asp Glu Cys Ala
500 505 510

Ser Thr Pro Cys Arg Asn Gly Ala Lys Cys Val Asp Gln Pro Asp Gly
515 520 525

Tyr Glu Cys Arg Cys Ala Glu Gly Phe Glu Gly Thr Leu Cys Asp Arg
530 535 540

Asn Val Asp Asp Cys Ser Pro Asp Pro Cys His His Gly Arg Cys Val
545 550 555 560

Asp Gly Ile Ala Ser Phe Ser Cys Ala Cys Ala Pro Gly Tyr Thr Gly
565 570 575

Thr Arg Cys Glu Ser Gln Val Asp Glu Cys Arg Ser Gln Pro Cys Arg
580 585 590

His Gly Gly Lys Cys Leu Asp Leu Val Asp Lys Tyr Leu Cys Arg Cys
595 600 605

Pro Ser Gly Thr Thr Gly Val Asn Cys Glu Val Asn Ile Asp Asp Cys
610 615 620

Ala Ser Asn Pro Cys Thr Phe Gly Val Cys Arg Asp Gly Ile Asn Arg
625 630 635 640

Tyr Asp Cys Val Cys Gln Pro Gly Phe Thr Gly Pro Leu Cys Asn Val
645 650 655

Glu Ile Asn Glu Cys Ala Ser Ser Pro Cys Gly Glu Gly Gly Ser Cys
660 665 670

Val Asp Gly Glu Asn Gly Phe Arg Cys Leu Cys Pro Pro Gly Ser Leu
675 680 685

Pro Pro Leu Cys Leu Pro Pro Ser His Pro Cys Ala His Glu Pro Cys
690 695 700

Ser His Gly Ile Cys Tyr Asp Ala Pro Gly Gly Phe Arg Cys Val Cys
705 710 715 720

Glu Pro Gly Trp Ser Gly Pro Arg Cys Ser Gln Ser Leu Ala Arg Asp
725 730 735

Ala Cys Glu Ser Gln Pro Cys Arg Ala Gly Gly Thr Cys Ser Ser Asp
740 745 750

Gly Met Gly Phe His Cys Thr Cys Pro Pro Gly Val Gln Gly Arg Gln
755 760 765

Cys Glu Leu Leu Ser Pro Cys Thr Pro Asn Pro Cys Glu His Gly Gly
770 775 780

Arg Cys Glu Ser Ala Pro Gly Gln Leu Pro Val Cys Ser Cys Pro Gln
785 790 795 800

Gly Trp Gln Gly Pro Arg Cys Gln Gln Asp Val Asp Glu Cys Ala Gly
805 810 815

Pro Ala Pro Cys Gly Pro His Gly Ile Cys Thr Asn Leu Ala Gly Ser
820 825 830

Phe Ser Cys Thr Cys His Gly Gly Tyr Thr Gly Pro Ser Cys Asp Gln
835 840 845

Asp Ile Asn Asp Cys Asp Pro Asn Pro Cys Leu Asn Gly Gly Ser Cys
850 855 860

Gln Asp Gly Val Gly Ser Phe Ser Cys Ser Cys Leu Pro Gly Phe Ala
865 870 875 880

Gly Pro Arg Cys Ala Arg Asp Val Asp Glu Cys Leu Ser Asn Pro Cys
885 890 895

Gly Pro Gly Thr Cys Thr Asp His Val Ala Ser Phe Thr Cys Thr Cys
900 905 910

Pro Pro Gly Tyr Gly Gly Phe His Cys Glu Gln Asp Leu Pro Asp Cys
915 920 925

Ser Pro Ser Ser Cys Phe Asn Gly Gly Thr Cys Val Asp Gly Val Asn
930 935 940

Ser Phe Ser Cys Leu Cys Arg Pro Gly Tyr Thr Gly Ala His Cys Gln
945 950 955 960

His Glu Ala Asp Pro Cys Leu Ser Arg Pro Cys Leu His Gly Gly Val
965 970 975

Cys Ser Ala Ala His Pro Gly Phe Arg Cys Thr Cys Leu Glu Ser Phe
980 985 990

Thr Gly Pro Gln Cys Gln Thr Leu Val Asp Trp Cys Ser Arg Gln Pro
995 1000 1005

Cys Gln Asn Gly Gly Arg Cys Val Gln Thr Gly Ala Tyr Cys Leu
1010 1015 1020

Cys Pro Pro Gly Trp Ser Gly Arg Leu Cys Asp Ile Arg Ser Leu
1025 1030 1035

Pro	Cys	Arg	Glu	Ala	Ala	Ala	Gln	Ile	Gly	Val	Arg	Leu	Glu	Gln
1040						1045					1050			
Leu	Cys	Gln	Ala	Gly	Gly	Gln	Cys	Val	Asp	Glu	Asp	Ser	Ser	His
1055						1060					1065			
Tyr	Cys	Val	Cys	Pro	Glu	Gly	Arg	Thr	Gly	Ser	His	Cys	Glu	Gln
1070						1075					1080			
Glu	Val	Asp	Pro	Cys	Leu	Ala	Gln	Pro	Cys	Gln	His	Gly	Gly	Thr
1085						1090					1095			
Cys	Arg	Gly	Tyr	Met	Gly	Gly	Tyr	Met	Cys	Glu	Cys	Leu	Pro	Gly
1100						1105					1110			
Tyr	Asn	Gly	Asp	Asn	Cys	Glu	Asp	Asp	Val	Asp	Glu	Cys	Ala	Ser
1115						1120					1125			
Gln	Pro	Cys	Gln	His	Gly	Gly	Ser	Cys	Ile	Asp	Leu	Val	Ala	Arg
1130						1135					1140			
Tyr	Leu	Cys	Ser	Cys	Pro	Pro	Gly	Thr	Leu	Gly	Val	Leu	Cys	Glu
1145						1150					1155			
Ile	Asn	Glu	Asp	Asp	Cys	Gly	Pro	Gly	Pro	Pro	Leu	Asp	Ser	Gly
1160						1165					1170			
Pro	Arg	Cys	Leu	His	Asn	Gly	Thr	Cys	Val	Asp	Leu	Val	Gly	Gly
1175						1180					1185			
Phe	Arg	Cys	Thr	Cys	Pro	Pro	Gly	Tyr	Thr	Gly	Leu	Arg	Cys	Glu
1190						1195					1200			
Ala	Asp	Ile	Asn	Glu	Cys	Arg	Ser	Gly	Ala	Cys	His	Ala	Ala	His
1205						1210					1215			
Thr	Arg	Asp	Cys	Leu	Gln	Asp	Pro	Gly	Gly	Gly	Phe	Arg	Cys	Leu
1220						1225					1230			
Cys	His	Ala	Gly	Phe	Ser	Gly	Pro	Arg	Cys	Gln	Thr	Val	Leu	Ser
1235						1240					1245			

Pro	Cys	Glu	Ser	Gln	Pro	Cys	Gln	His	Gly	Gly	Gln	Cys	Arg	Pro
	1250					1255					1260			
Ser	Pro	Gly	Pro	Gly	Gly	Gly	Leu	Thr	Phe	Thr	Cys	His	Cys	Ala
	1265					1270					1275			
Gln	Pro	Phe	Trp	Gly	Pro	Arg	Cys	Glu	Arg	Val	Ala	Arg	Ser	Cys
	1280					1285					1290			
Arg	Glu	Leu	Gln	Cys	Pro	Val	Gly	Val	Pro	Cys	Gln	Gln	Thr	Pro
	1295					1300					1305			
Arg	Gly	Pro	Arg	Cys	Ala	Cys	Pro	Pro	Gly	Leu	Ser	Gly	Pro	Ser
	1310					1315					1320			
Cys	Arg	Ser	Phe	Pro	Gly	Ser	Pro	Pro	Gly	Ala	Ser	Asn	Ala	Ser
	1325					1330					1335			
Cys	Ala	Ala	Ala	Pro	Cys	Leu	His	Gly	Gly	Ser	Cys	Arg	Pro	Ala
	1340					1345					1350			
Pro	Leu	Ala	Pro	Phe	Phe	Arg	Cys	Ala	Cys	Ala	Gln	Gly	Trp	Thr
	1355					1360					1365			
Gly	Pro	Arg	Cys	Glu	Ala	Pro	Ala	Ala	Ala	Pro	Glu	Val	Ser	Glu
	1370					1375					1380			
Glu	Pro	Arg	Cys	Pro	Arg	Ala	Ala	Cys	Gln	Ala	Lys	Arg	Gly	Asp
	1385					1390					1395			
Gln	Arg	Cys	Asp	Arg	Glu	Cys	Asn	Ser	Pro	Gly	Cys	Gly	Trp	Asp
	1400					1405					1410			
Gly	Gly	Asp	Cys	Ser	Leu	Ser	Val	Gly	Asp	Pro	Trp	Arg	Gln	Cys
	1415					1420					1425			
Glu	Ala	Leu	Gln	Cys	Trp	Arg	Leu	Phe	Asn	Asn	Ser	Arg	Cys	Asp
	1430					1435					1440			

Pro	Ala	Cys	Ser	Ser	Pro	Ala	Cys	Leu	Tyr	Asp	Asn	Phe	Asp	Cys
	1445					1450					1455			
His	Ala	Gly	Gly	Arg	Glu	Arg	Thr	Cys	Asn	Pro	Val	Tyr	Glu	Lys
	1460					1465					1470			
Tyr	Cys	Ala	Asp	His	Phe	Ala	Asp	Gly	Arg	Cys	Asp	Gln	Gly	Cys
	1475					1480					1485			
Asn	Thr	Glu	Glu	Cys	Gly	Trp	Asp	Gly	Leu	Asp	Cys	Ala	Ser	Glu
	1490					1495					1500			
Val	Pro	Ala	Leu	Leu	Ala	Arg	Gly	Val	Leu	Val	Leu	Thr	Val	Leu
	1505					1510					1515			
Leu	Pro	Pro	Glu	Glu	Leu	Leu	Arg	Ser	Ser	Ala	Asp	Phe	Leu	Gln
	1520					1525					1530			
Arg	Leu	Ser	Ala	Ile	Leu	Arg	Thr	Ser	Leu	Arg	Phe	Arg	Leu	Asp
	1535					1540					1545			
Ala	His	Gly	Gln	Ala	Met	Val	Phe	Pro	Tyr	His	Arg	Pro	Ser	Pro
	1550					1555					1560			
Gly	Ser	Glu	Pro	Arg	Ala	Arg	Arg	Glu	Leu	Ala	Pro	Glu	Val	Ile
	1565					1570					1575			
Gly	Ser	Val	Val	Met	Leu	Glu	Ile	Asp	Asn	Arg	Leu	Cys	Leu	Gln
	1580					1585					1590			
Ser	Pro	Glu	Asn	Asp	His	Cys	Phe	Pro	Asp	Ala	Gln	Ser	Ala	Ala
	1595					1600					1605			
Asp	Tyr	Leu	Gly	Ala	Leu	Ser	Ala	Val	Glu	Arg	Leu	Asp	Phe	Pro
	1610					1615					1620			
Tyr	Pro	Leu	Arg	Asp	Val	Arg	Gly	Glu	Pro	Leu	Glu	Pro	Pro	Glu
	1625					1630					1635			
Pro	Ser	Val	Pro	Leu	Leu	Pro	Leu	Leu	Val	Ala	Gly	Ala	Val	Leu
	1640					1645					1650			

Leu	Leu	Val	Ile	Leu	Val	Leu	Gly	Val	Met	Val	Ala	Arg	Arg	Lys
1655						1660					1665			
Arg	Glu	His	Ser	Thr	Leu	Trp	Phe	Pro	Glu	Gly	Phe	Ser	Leu	His
1670						1675					1680			
Lys	Asp	Val	Ala	Ser	Gly	His	Lys	Gly	Arg	Arg	Glu	Pro	Val	Gly
1685						1690					1695			
Gln	Asp	Ala	Leu	Gly	Met	Lys	Asn	Met	Ala	Lys	Gly	Glu	Ser	Leu
1700						1705					1710			
Met	Gly	Glu	Val	Ala	Thr	Asp	Trp	Met	Asp	Thr	Glu	Cys	Pro	Glu
1715						1720					1725			
Ala	Lys	Arg	Leu	Lys	Val	Glu	Glu	Pro	Gly	Met	Gly	Ala	Glu	Glu
1730						1735					1740			
Ala	Val	Asp	Cys	Arg	Gln	Trp	Thr	Gln	His	His	Leu	Val	Ala	Ala
1745						1750					1755			
Asp	Ile	Arg	Val	Ala	Pro	Ala	Met	Ala	Leu	Thr	Pro	Pro	Gln	Gly
1760						1765					1770			
Asp	Ala	Asp	Ala	Asp	Gly	Met	Asp	Val	Asn	Val	Arg	Gly	Pro	Asp
1775						1780					1785			
Gly	Phe	Thr	Pro	Leu	Met	Leu	Ala	Ser	Phe	Cys	Gly	Gly	Ala	Leu
1790						1795					1800			
Glu	Pro	Met	Pro	Thr	Glu	Glu	Asp	Glu	Ala	Asp	Asp	Thr	Ser	Ala
1805						1810					1815			
Ser	Ile	Ile	Ser	Asp	Leu	Ile	Cys	Gln	Gly	Ala	Gln	Leu	Gly	Ala
1820						1825					1830			
Arg	Thr	Asp	Arg	Thr	Gly	Glu	Thr	Ala	Leu	His	Leu	Ala	Ala	Arg
1835						1840					1845			

Tyr	Ala	Arg	Ala	Asp	Ala	Ala	Lys	Arg	Leu	Leu	Asp	Ala	Gly	Ala
1850						1855					1860			
Asp	Thr	Asn	Ala	Gln	Asp	His	Ser	Gly	Arg	Thr	Pro	Leu	His	Thr
1865						1870					1875			
Ala	Val	Thr	Ala	Asp	Ala	Gln	Gly	Val	Phe	Gln	Ile	Leu	Ile	Arg
1880						1885					1890			
Asn	Arg	Ser	Thr	Asp	Leu	Asp	Ala	Arg	Met	Ala	Asp	Gly	Ser	Thr
1895						1900					1905			
Ala	Leu	Ile	Leu	Ala	Ala	Arg	Leu	Ala	Val	Glu	Gly	Met	Val	Glu
1910						1915					1920			
Glu	Leu	Ile	Ala	Ser	His	Ala	Asp	Val	Asn	Ala	Val	Asp	Glu	Leu
1925						1930					1935			
Gly	Lys	Ser	Ala	Leu	His	Trp	Ala	Ala	Ala	Val	Asn	Asn	Val	Glu
1940						1945					1950			
Ala	Thr	Leu	Ala	Leu	Leu	Lys	Asn	Gly	Ala	Asn	Lys	Asp	Met	Gln
1955						1960					1965			
Asp	Ser	Lys	Glu	Glu	Thr	Pro	Leu	Phe	Leu	Ala	Ala	Arg	Glu	Gly
1970						1975					1980			
Ser	Tyr	Glu	Ala	Ala	Lys	Leu	Leu	Leu	Asp	His	Phe	Ala	Asn	Arg
1985						1990					1995			
Glu	Ile	Thr	Asp	His	Leu	Asp	Arg	Leu	Pro	Arg	Asp	Val	Ala	Gln
2000						2005					2010			
Glu	Arg	Leu	His	Gln	Asp	Ile	Val	Arg	Leu	Leu	Asp	Gln	Pro	Ser
2015						2020					2025			
Gly	Pro	Arg	Ser	Pro	Pro	Gly	Pro	His	Gly	Leu	Gly	Pro	Leu	Leu
2030						2035					2040			
Cys	Pro	Pro	Gly	Ala	Phe	Leu	Pro	Gly	Leu	Lys	Ala	Ala	Gln	Ser
2045						2050					2055			

Gly	Ser	Lys	Lys	Ser	Arg	Arg	Pro	Pro	Gly	Lys	Ala	Gly	Leu	Gly
2060						2065					2070			
Pro	Gln	Gly	Pro	Arg	Gly	Arg	Gly	Lys	Lys	Leu	Thr	Leu	Ala	Cys
2075						2080					2085			
Pro	Gly	Pro	Leu	Ala	Asp	Ser	Ser	Val	Thr	Leu	Ser	Pro	Val	Asp
2090						2095					2100			
Ser	Leu	Asp	Ser	Pro	Arg	Pro	Phe	Gly	Gly	Pro	Pro	Ala	Ser	Pro
2105						2110					2115			
Gly	Gly	Phe	Pro	Leu	Glu	Gly	Pro	Tyr	Ala	Ala	Ala	Thr	Ala	Thr
2120						2125					2130			
Ala	Val	Ser	Leu	Ala	Gln	Leu	Gly	Gly	Pro	Gly	Arg	Ala	Gly	Leu
2135						2140					2145			
Gly	Arg	Gln	Pro	Pro	Gly	Gly	Cys	Val	Leu	Ser	Leu	Gly	Leu	Leu
2150						2155					2160			
Asn	Pro	Val	Ala	Val	Pro	Leu	Asp	Trp	Ala	Arg	Leu	Pro	Pro	Pro
2165						2170					2175			
Ala	Pro	Pro	Gly	Pro	Ser	Phe	Leu	Leu	Pro	Leu	Ala	Pro	Gly	Pro
2180						2185					2190			
Gln	Leu	Leu	Asn	Pro	Gly	Thr	Pro	Val	Ser	Pro	Gln	Glu	Arg	Pro
2195						2200					2205			
Pro	Pro	Tyr	Leu	Ala	Val	Pro	Gly	His	Gly	Glu	Glu	Tyr	Pro	Ala
2210						2215					2220			
Ala	Gly	Ala	His	Ser	Ser	Pro	Pro	Lys	Ala	Arg	Phe	Leu	Arg	Val
2225						2230					2235			
Pro	Ser	Glu	His	Pro	Tyr	Leu	Thr	Pro	Ser	Pro	Glu	Ser	Pro	Glu
2240						2245					2250			

His Trp Ala Ser Pro Ser Pro Pro Ser Leu Ser Asp Trp Ser Glu
2255 2260 2265

Ser Thr Pro Ser Pro Ala Thr Ala Thr Gly Ala Met Ala Thr Thr
2270 2275 2280

Thr Gly Ala Leu Pro Ala Gln Pro Leu Pro Leu Ser Val Pro Ser
2285 2290 2295

Ser Leu Ala Gln Ala Gln Thr Gln Leu Gly Pro Gln Pro Glu Val
2300 2305 2310

Thr Pro Lys Arg Gln Val Leu Ala
2315 2320

<210> 28
<211> 2003
<212> PRT
<213> Homo sapiens

<400> 28

Met Gln Pro Pro Ser Leu Leu Leu Leu Leu Leu Leu Leu Leu Leu
1 5 10 15

Cys Val Ser Val Val Arg Pro Arg Gly Leu Leu Cys Gly Ser Phe Pro
20 25 30

Glu Pro Cys Ala Asn Gly Gly Thr Cys Leu Ser Leu Ser Leu Gly Gln
35 40 45

Gly Thr Cys Gln Cys Ala Pro Gly Phe Leu Gly Glu Thr Cys Gln Phe
50 55 60

Pro Asp Pro Cys Gln Asn Ala Gln Leu Cys Gln Asn Gly Gly Ser Cys
65 70 75 80

Gln Ala Leu Leu Pro Ala Pro Leu Gly Leu Pro Ser Ser Pro Ser Pro
85 90 95

Leu Thr Pro Ser Phe Leu Cys Thr Cys Leu Pro Gly Phe Thr Gly Glu
100 105 110

Arg Cys Gln Ala Lys Leu Glu Asp Pro Cys Pro Pro Ser Phe Cys Ser
115 120 125

Lys Arg Gly Arg Cys His Ile Gln Ala Ser Gly Arg Pro Gln Cys Ser
130 135 140

Cys Met Pro Gly Trp Thr Gly Glu Gln Cys Gln Leu Arg Asp Phe Cys
145 150 155 160

Ser Ala Asn Pro Cys Val Asn Gly Gly Val Cys Leu Ala Thr Tyr Pro
165 170 175

Gln Ile Gln Cys His Cys Pro Pro Gly Phe Glu Gly His Ala Cys Glu
180 185 190

Arg Asp Val Asn Glu Cys Phe Gln Asp Pro Gly Pro Cys Pro Lys Gly
195 200 205

Thr Ser Cys His Asn Thr Leu Gly Ser Phe Gln Cys Leu Cys Pro Val
210 215 220

Gly Gln Glu Gly Pro Arg Cys Glu Leu Arg Ala Gly Pro Cys Pro Pro
225 230 235 240

Arg Gly Cys Ser Asn Gly Gly Thr Cys Gln Leu Met Pro Glu Lys Asp
245 250 255

Ser Thr Phe His Leu Cys Leu Cys Pro Pro Gly Phe Ile Gly Pro Asp
260 265 270

Cys Glu Val Asn Pro Asp Asn Cys Val Ser His Gln Cys Gln Asn Gly
275 280 285

Gly Thr Cys Gln Asp Gly Leu Asp Thr Tyr Thr Cys Leu Cys Pro Glu
290 295 300

Thr Trp Thr Gly Trp Asp Cys Ser Glu Asp Val Asp Glu Cys Glu Thr
305 310 315 320

Gln Gly Pro Pro His Cys Arg Asn Gly Gly Thr Cys Gln Asn Ser Ala

325

330

335

Gly Ser Phe His Cys Val Cys Val Ser Gly Trp Gly Gly Thr Ser Cys
 340 345 350

Glu Glu Asn Leu Asp Asp Cys Ile Ala Ala Thr Cys Ala Pro Gly Ser
 355 360 365

Thr Cys Ile Asp Arg Val Gly Ser Phe Ser Cys Leu Cys Pro Pro Gly
 370 375 380

Arg Thr Gly Leu Leu Cys His Leu Glu Asp Met Cys Leu Ser Gln Pro
 385 390 395 400

Cys His Gly Asp Ala Gln Cys Ser Thr Asn Pro Leu Thr Gly Ser Thr
 405 410 415

Leu Cys Leu Cys Gln Pro Gly Tyr Ser Gly Pro Thr Cys His Gln Asp
 420 425 430

Leu Asp Glu Cys Leu Met Ala Gln Gln Gly Pro Ser Pro Cys Glu His
 435 440 445

Gly Gly Ser Cys Leu Asn Thr Pro Gly Ser Phe Asn Cys Leu Cys Pro
 450 455 460

Pro Gly Tyr Thr Gly Ser Arg Cys Glu Ala Asp His Asn Glu Cys Leu
 465 470 475 480

Ser Gln Pro Cys His Pro Gly Ser Thr Cys Leu Asp Leu Leu Ala Thr
 485 490 495

Phe His Cys Leu Cys Pro Pro Gly Leu Glu Gly Gln Leu Cys Glu Val
 500 505 510

Glu Thr Asn Glu Cys Ala Ser Ala Pro Cys Leu Asn His Ala Asp Cys
 515 520 525

His Asp Leu Leu Asn Gly Phe Gln Cys Ile Cys Leu Pro Gly Phe Ser
 530 535 540

Gly Thr Arg Cys Glu Glu Asp Ile Asp Glu Cys Arg Ser Ser Pro Cys
545 550 555 560

Ala Asn Gly Gly Gln Cys Gln Asp Gln Pro Gly Ala Phe His Cys Lys
565 570 575

Cys Leu Pro Gly Phe Glu Gly Pro Arg Cys Gln Thr Glu Val Asp Glu
580 585 590

Cys Leu Ser Asp Pro Cys Pro Val Gly Ala Ser Cys Leu Asp Leu Pro
595 600 605

Gly Ala Phe Phe Cys Leu Cys Pro Ser Gly Phe Thr Gly Gln Leu Cys
610 615 620

Glu Val Pro Leu Cys Ala Pro Asn Leu Cys Gln Pro Lys Gln Ile Cys
625 630 635 640

Lys Asp Gln Lys Asp Lys Ala Asn Cys Leu Cys Pro Asp Gly Ser Pro
645 650 655

Gly Cys Ala Pro Pro Glu Asp Asn Cys Thr Cys His His Gly His Cys
660 665 670

Gln Arg Ser Ser Cys Val Cys Asp Val Gly Trp Thr Gly Pro Glu Cys
675 680 685

Glu Ala Glu Leu Gly Gly Cys Ile Ser Ala Pro Cys Ala His Gly Gly
690 695 700

Thr Cys Tyr Pro Gln Pro Ser Gly Tyr Asn Cys Thr Cys Pro Thr Gly
705 710 715 720

Tyr Thr Gly Pro Thr Cys Ser Glu Glu Met Thr Ala Cys His Ser Gly
725 730 735

Pro Cys Leu Asn Gly Gly Ser Cys Asn Pro Ser Pro Gly Gly Tyr Tyr
740 745 750

Cys Thr Cys Pro Pro Ser His Thr Gly Pro Gln Cys Gln Thr Ser Thr

755

760

765

Asp Tyr Cys Val Ser Ala Pro Cys Phe Asn Gly Gly Thr Cys Val Asn
 770 775 780

Arg Pro Gly Thr Phe Ser Cys Leu Cys Ala Met Gly Phe Gln Gly Pro
 785 790 795 800

Arg Cys Glu Gly Lys Leu Arg Pro Ser Cys Ala Asp Ser Pro Cys Arg
 805 810 815

Asn Arg Ala Thr Cys Gln Asp Ser Pro Gln Gly Pro Arg Cys Leu Cys
 820 825 830

Pro Thr Gly Tyr Thr Gly Gly Ser Cys Gln Thr Leu Met Asp Leu Cys
 835 840 845

Ala Gln Lys Pro Cys Pro Arg Asn Ser His Cys Leu Gln Thr Gly Pro
 850 855 860

Ser Phe His Cys Leu Cys Leu Gln Gly Trp Thr Gly Pro Leu Cys Asn
 865 870 875 880

Leu Pro Leu Ser Ser Cys Gln Lys Ala Ala Leu Ser Gln Gly Ile Asp
 885 890 895

Val Ser Ser Leu Cys His Asn Gly Gly Leu Cys Val Asp Ser Gly Pro
 900 905 910

Ser Tyr Phe Cys His Cys Pro Pro Gly Phe Gln Gly Ser Leu Cys Gln
 915 920 925

Asp His Val Asn Pro Cys Glu Ser Arg Pro Cys Gln Asn Gly Ala Thr
 930 935 940

Cys Met Ala Gln Pro Ser Gly Tyr Leu Cys Gln Cys Ala Pro Gly Tyr
 945 950 955 960

Asp Gly Gln Asn Cys Ser Lys Glu Leu Asp Ala Cys Gln Ser Gln Pro
 965 970 975

Cys His Asn His Gly Thr Cys Thr Pro Lys Pro Gly Gly Phe His Cys
980 985 990

Ala Cys Pro Pro Gly Phe Val Gly Leu Arg Cys Glu Gly Asp Val Asp
995 1000 1005

Glu Cys Leu Asp Gln Pro Cys His Pro Thr Gly Thr Ala Ala Cys
1010 1015 1020

His Ser Leu Ala Asn Ala Phe Tyr Cys Gln Cys Leu Pro Gly His
1025 1030 1035

Thr Gly Gln Trp Cys Glu Val Glu Ile Asp Pro Cys His Ser Gln
1040 1045 1050

Pro Cys Phe His Gly Gly Thr Cys Glu Ala Thr Ala Gly Ser Pro
1055 1060 1065

Leu Gly Phe Ile Cys His Cys Pro Lys Gly Phe Glu Gly Pro Thr
1070 1075 1080

Cys Ser His Arg Ala Pro Ser Cys Gly Phe His His Cys His His
1085 1090 1095

Gly Gly Leu Cys Leu Pro Ser Pro Lys Pro Gly Phe Pro Pro Arg
1100 1105 1110

Cys Ala Cys Leu Ser Gly Tyr Gly Gly Pro Asp Cys Leu Thr Pro
1115 1120 1125

Pro Ala Pro Lys Gly Cys Gly Pro Pro Ser Pro Cys Leu Tyr Asn
1130 1135 1140

Gly Ser Cys Ser Glu Thr Thr Gly Leu Gly Gly Pro Gly Phe Arg
1145 1150 1155

Cys Ser Cys Pro His Ser Ser Pro Gly Pro Arg Cys Gln Lys Pro
1160 1165 1170

Gly Ala Lys Gly Cys Glu Gly Arg Ser Gly Asp Gly Ala Cys Asp

1175						1180						1185			
Ala	Gly	Cys	Ser	Gly	Pro	Gly	Gly	Asn	Trp	Asp	Gly	Gly	Asp	Cys	
1190						1195					1200				
Ser	Leu	Gly	Val	Pro	Asp	Pro	Trp	Lys	Gly	Cys	Pro	Ser	His	Ser	
1205						1210					1215				
Arg	Cys	Trp	Leu	Leu	Phe	Arg	Asp	Gly	Gln	Cys	His	Pro	Gln	Cys	
1220						1225					1230				
Asp	Ser	Glu	Glu	Cys	Leu	Phe	Asp	Gly	Tyr	Asp	Cys	Glu	Thr	Pro	
1235						1240					1245				
Pro	Ala	Cys	Thr	Pro	Ala	Tyr	Asp	Gln	Tyr	Cys	His	Asp	His	Phe	
1250						1255					1260				
His	Asn	Gly	His	Cys	Glu	Lys	Gly	Cys	Asn	Thr	Ala	Glu	Cys	Gly	
1265						1270					1275				
Trp	Asp	Gly	Gly	Asp	Cys	Arg	Pro	Glu	Asp	Gly	Asp	Pro	Glu	Trp	
1280						1285					1290				
Gly	Pro	Ser	Leu	Ala	Leu	Leu	Val	Val	Leu	Ser	Pro	Pro	Ala	Leu	
1295						1300					1305				
Asp	Gln	Gln	Leu	Phe	Ala	Leu	Ala	Arg	Val	Leu	Ser	Leu	Thr	Leu	
1310						1315					1320				
Arg	Val	Gly	Leu	Trp	Val	Arg	Lys	Asp	Arg	Asp	Gly	Arg	Asp	Met	
1325						1330					1335				
Val	Tyr	Pro	Tyr	Pro	Gly	Ala	Arg	Ala	Glu	Glu	Lys	Leu	Gly	Gly	
1340						1345					1350				
Thr	Arg	Asp	Pro	Thr	Tyr	Gln	Glu	Arg	Ala	Ala	Pro	Gln	Thr	Gln	
1355						1360					1365				
Pro	Leu	Gly	Lys	Glu	Thr	Asp	Ser	Leu	Ser	Ala	Gly	Phe	Val	Val	
1370						1375					1380				

Val Met Gly Val Asp Leu Ser Arg Cys Gly Pro Asp His Pro Ala
1385 1390 1395

Ser Arg Cys Pro Trp Asp Pro Gly Leu Leu Leu Arg Phe Leu Ala
1400 1405 1410

Ala Met Ala Ala Val Gly Ala Leu Glu Pro Leu Leu Pro Gly Pro
1415 1420 1425

Leu Leu Ala Val His Pro His Ala Gly Thr Ala Pro Pro Ala Asn
1430 1435 1440

Gln Leu Pro Trp Pro Val Leu Cys Ser Pro Val Ala Gly Val Ile
1445 1450 1455

Leu Leu Ala Leu Gly Ala Leu Leu Val Leu Gln Leu Ile Arg Arg
1460 1465 1470

Arg Arg Arg Glu His Gly Ala Leu Trp Leu Pro Pro Gly Phe Thr
1475 1480 1485

Arg Arg Pro Arg Thr Gln Ser Ala Pro His Arg Arg Arg Pro Pro
1490 1495 1500

Leu Gly Glu Asp Ser Ile Gly Leu Lys Ala Leu Lys Pro Lys Ala
1505 1510 1515

Glu Val Asp Glu Asp Gly Val Val Met Cys Ser Gly Pro Glu Glu
1520 1525 1530

Gly Glu Glu Val Gly Gln Ala Glu Glu Thr Gly Pro Pro Ser Thr
1535 1540 1545

Cys Gln Leu Trp Ser Leu Ser Gly Gly Cys Gly Ala Leu Pro Gln
1550 1555 1560

Ala Ala Met Leu Thr Pro Pro Gln Glu Ser Glu Met Glu Ala Pro
1565 1570 1575

Asp Leu Asp Thr Arg Gly Pro Asp Gly Val Thr Pro Leu Met Ser

1580						1585						1590			
Ala	Val	Cys	Cys	Gly	Glu	Val	Gln	Ser	Gly	Thr	Phe	Gln	Gly	Ala	
1595						1600					1605				
Trp	Leu	Gly	Cys	Pro	Glu	Pro	Trp	Glu	Pro	Leu	Leu	Asp	Gly	Gly	
1610						1615					1620				
Ala	Cys	Pro	Gln	Ala	His	Thr	Val	Gly	Thr	Gly	Glu	Thr	Pro	Leu	
1625						1630					1635				
His	Leu	Ala	Ala	Arg	Phe	Ser	Arg	Pro	Thr	Ala	Ala	Arg	Arg	Leu	
1640						1645					1650				
Leu	Glu	Ala	Gly	Ala	Asn	Pro	Asn	Gln	Pro	Asp	Arg	Ala	Gly	Arg	
1655						1660					1665				
Thr	Pro	Leu	His	Ala	Ala	Val	Ala	Ala	Asp	Ala	Arg	Glu	Val	Cys	
1670						1675					1680				
Gln	Leu	Leu	Leu	Arg	Ser	Arg	Gln	Thr	Ala	Val	Asp	Ala	Arg	Thr	
1685						1690					1695				
Glu	Asp	Gly	Thr	Thr	Pro	Leu	Met	Leu	Ala	Ala	Arg	Leu	Ala	Val	
1700						1705					1710				
Glu	Asp	Leu	Val	Glu	Glu	Leu	Ile	Ala	Ala	Gln	Ala	Asp	Val	Gly	
1715						1720					1725				
Ala	Arg	Asp	Lys	Trp	Gly	Lys	Thr	Ala	Leu	His	Trp	Ala	Ala	Ala	
1730						1735					1740				
Val	Asn	Asn	Ala	Arg	Ala	Ala	Arg	Ser	Leu	Leu	Gln	Ala	Gly	Ala	
1745						1750					1755				
Asp	Lys	Asp	Ala	Gln	Asp	Asn	Arg	Glu	Gln	Thr	Pro	Leu	Phe	Leu	
1760						1765					1770				
Ala	Ala	Arg	Glu	Gly	Ala	Val	Glu	Val	Ala	Gln	Leu	Leu	Leu	Gly	
1775						1780					1785				

Leu Gly Ala Ala Arg Glu Leu Arg Asp Gln Ala Gly Leu Ala Pro
1790 1795 1800

Ala Asp Val Ala His Gln Arg Asn His Trp Asp Leu Leu Thr Leu
1805 1810 1815

Leu Glu Gly Ala Gly Pro Pro Glu Ala Arg His Lys Ala Thr Pro
1820 1825 1830

Gly Arg Glu Ala Gly Pro Phe Pro Arg Ala Arg Thr Val Ser Val
1835 1840 1845

Ser Val Pro Pro His Gly Gly Gly Ala Leu Pro Arg Cys Arg Thr
1850 1855 1860

Leu Ser Ala Gly Ala Gly Pro Arg Gly Gly Gly Ala Cys Leu Gln
1865 1870 1875

Ala Arg Thr Trp Ser Val Asp Leu Ala Ala Arg Gly Gly Gly Ala
1880 1885 1890

Tyr Ser His Cys Arg Ser Leu Ser Gly Val Gly Ala Gly Gly Gly
1895 1900 1905

Pro Thr Pro Arg Gly Arg Arg Phe Ser Ala Gly Met Arg Gly Pro
1910 1915 1920

Arg Pro Asn Pro Ala Ile Met Arg Gly Arg Tyr Gly Val Ala Ala
1925 1930 1935

Gly Arg Gly Gly Arg Val Ser Thr Asp Asp Trp Pro Cys Asp Trp
1940 1945 1950

Val Ala Leu Gly Ala Cys Gly Ser Ala Ser Asn Ile Pro Ile Pro
1955 1960 1965

Pro Pro Cys Leu Thr Pro Ser Pro Glu Arg Gly Ser Pro Gln Leu
1970 1975 1980

Asp Cys Gly Pro Pro Ala Leu Gln Glu Met Pro Ile Asn Gln Gly

1985

1990

1995

Gly Glu Gly Lys Lys
2000

<210> 29

<211> 9322

<212> DNA

<213> Homo sapiens

<400> 29

atgccgccgc tcctggcgcc cctgctctgc ctggcgctgc tgcccgcgct cgccgcacga	60
ggcccgcgat gctcccagcc cggtgagacc tgcctgaatg gcgggaagtg tgaagcggcc	120
aatggcacgg aggctgcgt ctgtggcggg gccttcgtgg gcccgcgatg ccaggacccc	180
aaccctgcc tcagcacccc ctgcaagaac gccgggacat gccacgtggt ggaccgcaga	240
ggcgtggcag actatgcctg cagctgtgcc ctgggcttct ctgggcccct ctgcctgaca	300
cccctggaca atgcctgcct caccaacccc tgccgcaacg ggggcacctg cgacctgctc	360
acgctgacgg agtacaagt cgcctgcccc cccggctggt cagggaatc gtgccagcag	420
gctgacctgt gcgcctcaa cccctgcgcc aacggtggcc agtgcctgcc cttcgaggcc	480
tcctacatct gccactgccc acccagcttc catggcccca cctgccggca ggatgtcaac	540
gagtgtggcc agaagcccgg gctttgccgc cacggaggca cctgccacaa cgaggtcggc	600
tcctaccgct gcgtctgccg cgccaccac actggcccca actgcgagcg gccctacgtg	660
ccctgcagcc cctcgccctg ccagaacggg ggcacctgcc gcccacggg cgacgtcacc	720
cacgagtgtg cctgcctgcc aggcttcacc ggccagaact gtgaggaaaa tatcgacgat	780
tgtccaggaa acaactgcaa gaacgggggt gcctgtgtgg acggcgtgaa cacctacaac	840
tgccgctgcc cgccagagtg gacaggtcag tactgtaccg aggatgtgga cgagtccag	900
ctgatgccaa atgcctgcc gaacggcggg acctgccaca acaccacgg tggctacaac	960
tgctgtgtg tcaacggctg gactggtgag gactgcagcg agaacattga tgactgtgcc	1020
agcgccgcct gcttcacagg cgccacctgc catgaccgtg tggcctcctt ctactgcgag	1080
tgtcccatg gccgcacagg tctgctgtgc cacctcaacg acgcatgcat cagcaacccc	1140
tgtaacgagg gtcctaactg cgacaccaac cctgtcaatg gcaaggccat ctgcacctgc	1200
ccctcgggggt acacggggcc ggcctgcagc caggacgtgg atgagtgtc gctgggtgcc	1260

aaccctg	cg	agcatgcggg	caagtgc	atc	aacacgctgg	gctccttcga	gtgccagtgt	1320
ctgcagggg	ct	acacggggccc	ccgatgcgag	atcgacgtca	acgagtgcgt	ctcgaacccg		1380
tgccagaacg	acg	ccacctg	cctggaccag	attggggagt	tccagtgc	at	ctgcatgccc	1440
ggctacgagg	gtgtgc	actg	cgaggtcaac	acagacgagt	gtgccagcag	cccctgcctg		1500
cacaatggcc	gctgc	cctgga	caagatcaat	gagttccagt	gcgagtgccc	cacgggcttc		1560
actgggcatc	tgtgccagta	cgatgtggac	gagtgtgcc	gcaccccctg	caagaatgg	t		1620
gccaagtgcc	tggacggacc	caacacttac	acctgtgtgt	gcacggaagg	gtacacgggg			1680
acgcactgcg	aggtggacat	cgatgagtgc	gaccccgacc	cctgccacta	cggctcctgc			1740
aaggacggcg	tcgccacctt	cacctgcctc	tgccgcccag	gctacacggg	ccaccactgc			1800
gagaccaaca	tcaacgagt	ctccagccag	ccctgccgcc	acgggggcac	ctgccaggac			1860
cgcgacaacg	cctacctctg	cttctgcctg	aaggggacca	caggacccaa	ctgcgagatc			1920
aacctggatg	actgtgccag	cagcccctgc	gactcgggca	cctgtctgga	caagatcgat			1980
ggctacgagt	gtgcctgtga	gccgggctac	acagggagca	tgtgtaacat	caacatcgat			2040
gagtgtgcgg	gcaacccctg	ccacaacggg	ggcacctgcg	aggacggcat	caatggcttc			2100
acctgccgct	gccccgaggg	ctaccacgac	cccacctgcc	tgtctgaggt	caatgagtgc			2160
aacagcaacc	cctgcgtcca	cggggcctgc	cgggacagcc	tcaacgggta	caagtgcgac			2220
tgtgaccctg	ggtggagtgg	gaccaactgt	gacatcaaca	acaatgagt	tgaatccaac			2280
ccttgtgtca	acggcggcac	ctgcaaagac	atgaccagt	gctacgtgtg	cacctgccgg			2340
gagggttca	gcgggtccaa	ctgccagacc	aacatcaacg	agtgtgcgtc	caacccatgt			2400
ctgaaccagg	gcacgtgtat	tgacgacgtt	gccgggtaca	agtgcactg	cctgctgccc			2460
tacacaggtg	ccacgtgtga	ggtgggtgctg	gccccgtgtg	ccccagccc	ctgcagaaac			2520
ggcggggagt	gcaggcaatc	cgaggactat	gagagcttct	cctgtgtctg	ccccacgggc			2580
tggcaagggc	agacctgtga	ggtcgacatc	aacgagtgcg	ttctgagccc	gtgccggcac			2640
ggcgc	atcct	gccagaacac	ccacggcggc	taccgctgcc	actgccaggc	cggctacagt		2700
gggcgcaact	gcgagaccga	catcgacgac	tgccggccca	accgtgtca	caacgggggc			2760
tcctgcacag	acggcatcaa	cacggccttc	tgcgactgcc	tgcccggctt	ccggggcact			2820
ttctgtgagg	aggacatcaa	cgagtgtgcc	agtgacccct	gccgcaacgg	ggccaactgc			2880

acggactgcg tggacagcta cacgtgcacc tgccccgcag gcttcagcgg gatccactgt	2940
gagaacaaca cgcctgactg cacagagagc tcctgcttca acggtggcac ctgctgggac	3000
ggcatcaact cgttcacctg cctgtgtcca cccggcttca cgggcagcta ctgccagcac	3060
gatgtcaatg agtgcgactc acagccctgc ctgcatggcg gcacctgtca ggacggctgc	3120
ggctcctaca ggtgcacctg cccccagggc tacactggcc ccaactgcca gaaccttgtg	3180
cactgggtgtg actcctcgcc ctgcaagaac ggcggaat gctggcagac ccacaccag	3240
taccgctgcg agtgccccag cggctggacc ggcctttact gcgacgtgcc cagcgtgtcc	3300
tgtgaggtgg ctgcgcagcg acaaggtgtt gacgttgccc gcctgtgcca gcatggaggg	3360
ctctgtgtgg acgcgggcaa cacgcaccac tgccgctgcc aggggggcta cacaggcagc	3420
tactgtgagg acctgggtgga cgagtgtca cccagcccct gccagaacgg ggccacctgc	3480
acggactacc tgggaggcta ctctgcaag tgcgtggccg gctaccacgg ggtgaactgc	3540
tctgaggaga tcgacgagt cctctccac ccctgccaga acgggggcac ctgcctcgac	3600
ctccccaaca cctacaagt ctctgcca cggggcactc aggggtgtgca ctgtgagatc	3660
aacgtggacg actgcaatcc ccccgttgac cccgtgtccc ggagcccaa gtgctttaac	3720
aacggcacct gcgtggacca ggtgggcggc tacagctgca cctgcccgc gggcttcgtg	3780
ggtgagcgct gtgaggggga tgtcaacgag tgcctgtcca atccctgcga cgcccgtggc	3840
accagaact gcgtgcagcg cgtcaatgac ttccactgcg agtgccgtgc tggtcacacc	3900
gggagccgct gcgagtcgt catcaatggc tgcaaaggca agccctgcaa gaatgggggc	3960
acctgcgccg tggcctcaa caccgcccgc gggttcatct gcaagtgcc tgcgggcttc	4020
gagggcgcca cgtgtgagaa tgacgtcgt acctgcggca gcctgcgtg cctcaacggc	4080
ggcacatgca tctccggccc gcgcagcccc acctgcctgt gcctgggccc cttcacgggc	4140
cccgaatgcc agttcccggc cagcagcccc tgctggggcg gcaaccctg ctacaaccag	4200
gggacctgtg agcccacatc cgagagcccc ttctaccgtt gcctgtgccc cgccaaattc	4260
aacgggctct tgtgccacat cctggactac agcttcgggg gtggggccgg gcgcgacatc	4320
ccccgccgc tgatcgagga ggcgtgcgag ctgcccaggt gccaggagga cgcgggcaac	4380
aaggtctgca gcctgcagt caacaaccac gcgtgcggct gggacggcgg tgactgtcc	4440
ctcaacttca atgaccctg gaagaactgc acgcagtctc tgcaagtctg gaagtacttc	4500

agtgacggcc actgtgacag ccagtgcaac tcagccggct gcctcttcga cggctttgac	4560
tgccagcgtg cggaaggcca gtgcaacccc ctgtacgacc agtactgcaa ggaccacttc	4620
agcgacgggc actgcgacca gggctgcaac agcgcgaggat gcgagtggga cgggctggac	4680
tgtgcggagc atgtacccga gaggctggcg gccggcacgc tgggtggtggt ggtgctgatg	4740
ccgccggagc agctgcgcaa cagctccttc cacttcctgc gggagctcag ccgcgtgctg	4800
cacaccaacg tggctcttcaa gcgtgacgca cacggccagc agatgatctt cccctactac	4860
ggccgcgagg aggagctgcg caagcacccc atcaagcgtg ccgccgaggg ctgggccgca	4920
cctgacgccc tgctgggcca ggtgaaggcc tcgctgctcc ctggtggcag cgagggtggg	4980
cggcggcggg gggagctgga ccccatggac gtccgcggct ccacgtctta cctggagatt	5040
gacaaccggc agtgtgtgca ggcctcctcg cagtgccttc agagtgccac cgacgtggcc	5100
gcattcctgg gagcgctcgc ctcgctgggc agcctcaaca tcccctacaa gatcgaggcc	5160
gtgcagagtg agaccgtgga gccgccccg ccggcgcagc tgcacttcac gtacgtggcg	5220
gcggccgcct ttgtgcttct gttcttcgtg ggctgcgggg tgctgctgtc ccgcaagcgc	5280
cggcggcagc atggccagct ctggttcctt gagggcttca aagtgtctga ggccagcaag	5340
aagaagcggc gggagcccct cggcgaggac tccgtgggcc tcaagcccct gaagaacgct	5400
tcagacggtg ccctcatgga cgacaaccag aatgagtggg gggacgagga cctggagacc	5460
aagaagttcc ggttcgagga gcccgtggtt ctgcctgacc tggacgacca gacagaccac	5520
cggcagtgga ctacgagca cctggatgcc gctgacctgc gcatgtctgc catggcccc	5580
acaccgcccc agggtagagt tgacccgac tgcatggacg tcaatgtccg cgggcctgat	5640
ggcttcaccc cgctcatgat cgcctcctgc agcgggggcg gcctggagac gggcaacagc	5700
gaggaagagg aggacgcgcc ggccgtcatc tccgacttca tctaccaggg cgccagcctg	5760
cacaaccaga cagaccgcac gggcgagacc gccttgacc tggccgcccg ctactcacgc	5820
tctgatgccg ccaagcgctt gctggaggcc agcgagatg ccaacatcca ggacaacatg	5880
ggccgcaccc cgctgcatgc ggctgtgtct gccgacgcac aaggtgtctt ccagatcctg	5940
atccggaacc gagccacaga cctggatgcc cgcatgcatg atggcacgac gccactgatc	6000
ctggctgccc gcctggccgt ggagggcagc ctggaggacc tcatcaactc acacgccgac	6060
gtcaacgccg tagatgacct gggcaagtcc gccctgcact gggccgccgc cgtgaacaat	6120

gtggatgccg cagttgtgct cctgaagaac ggggctaaca aagatatgca gaacaacagg	6180
gaggagacac ccctgtttct ggccgcccgg gagggcagct acgagaccgc caaggtgctg	6240
ctggaccact ttgccaaccg ggacatcacg gatcatatgg accgcctgcc gcgcgacatc	6300
gcacaggagc gcatgcatca cgacatcgtg aggctgctgg acgagtacaa cctggtgcgc	6360
agcccgagc tgcacggagc cccgctgggg ggcacgcca ccctgtcgcc cccgctctgc	6420
tcgccaacg gctacctggg cagcctcaag cccggcgtgc agggcaagaa ggtccgcaag	6480
cccagcagca aaggcctggc ctgtggaagc aaggaggcca aggacctcaa ggcacggagg	6540
aagaagtccc aggacggcaa gggctgcctg ctggacagct ccggcatgct ctgcccgtg	6600
gactccctgg agtcaccca tggctacctg tcagacgtgg cctcgccgcc actgctgccc	6660
tccccgttcc agcagtctcc gtccgtgccc ctcaaccacc tgcctgggat gcccgacacc	6720
cacctgggca tcgggcacct gaacgtggcg gccaaagccg agatggcggc gctgggtggg	6780
ggcggccggc tggcctttga gactggcca cctcgtctct cccacctgcc tgtggcctct	6840
ggcaccagca ccgtcctggg ctccagcagc ggagggggccc tgaatttcac tgtgggcggg	6900
tccaccagtt tgaatggtca atgcgagtgg ctgtcccggc tgacagagcg catggtgccg	6960
aaccaataca accctctgcg ggggagtgtg gcaccaggcc ccctgagcac acaggcccc	7020
tccctgcagc atggcatggt aggcccgtg cacagtagcc ttgctgccag cgccctgtcc	7080
cagatgatga gctaccaggg cctgcccagc acccggctgg ccaccagcc tcacctggtg	7140
cagaccagc aggtgcagcc aaaaaactta cagatgcagc agcagaacct gcagccagca	7200
aacatccagc agcagcaaag cctgcagccg ccaccaccac caccacagcc gcaccttggc	7260
gtgagctcag cagccagcgg ccacctgggc cggagcttcc tgagtggaga gccgagccag	7320
gcagacgtgc agccactggg ccccagcagc ctggcggtgc acactattct gcccaggag	7380
agccccgcc tgcccacgtc gctgccatcc tcgctggtcc caccgtgac cgcagcccag	7440
ttcctgacgc ccccctcgca gcacagctac tcctcgcctg tggacaacac cccagccac	7500
cagctacagg tgcctgagca ccccttctc acccgtccc ctgagtcccc tgaccagtgg	7560
tccagctcgt ccccgcatc caacgtctcc gactgggtcc agggcgtctc cagccctccc	7620
accagcatgc agtcccagat cggccgcat ccggaggcct tcaagtaaag ggcgcgcccc	7680
acgagacccc ggcttccttt cccaagcctt cgggcgtctg tgtgcgctct gtggatgcca	7740

gggccgacca gaggagcctt tttaaaacac atgtttttat acaaaataag aacgaggatt	7800
ttaatTTTTT ttagtattta tttatgtact tttattttac acagaaacac tgccttttta	7860
tttatatgta ctgttttatc tggccccagg tagaaacttt tatctattct gagaaaacaa	7920
gcaagtcttg agagccaggg ttttcctacg taggatgaaa agattcttct gtgtttataa	7980
aatataaaca aagattcatg atttataaat gccatttatt tattgattcc ttttttcaaa	8040
atccaaaaag aaatgatgtt ggagaaggga agttgaacga gcatagtcca aaaagctcct	8100
ggggcgtcca ggccgcgccc tttccccgac gcccaccaa cccaagcca gcccggccgc	8160
tccaccagca tcacctgcct gttaggagaa gctgcatcca gaggcaaacg gaggcaaagc	8220
tggctcacct tccgcacgcg gattaatttg catctgaaat aggaaacaag tgaaagcata	8280
tgggttagat gttgccatgt gttttagatg gtttcttgca agcatgcttg tgaaaatgtg	8340
ttctcggagt gtgtatgcca agagtgcacc catggtacca atcatgaatc tttgtttcag	8400
gttcagtatt atgtagttgt tcgttggtta tacaagttct tgggtccctcc agaaccaccc	8460
cggccccctg cccgttcttg aaatgtaggc atcatgcatg tcaaacaatga gatgtgtgga	8520
ctgtggcact tgcctgggtc acacacggag gcatacctacc cttttctggg gaaagacact	8580
gcctgggctg accccgggtg cgccccagc acctcagcct gcacagtgtc cccaggttc	8640
cgaagaagat gctccagcaa cacagcctgg gccccagctc gcgggacccg accccccgtg	8700
ggctcccgtg ttttgtagga gacttgccag agccgggcac attgagctgt gcaacgccgt	8760
gggctgcgtc ctttggctct gtccccgcag ccctggcagg gggcatgcgg tcgggcaggg	8820
gctggaggga ggcgggggct gcccttgggc caccctcct agtttgggag gagcagattt	8880
ttgcaatacc aagtatagcc tatggcagaa aaaatgtctg taaatatgtt tttaaagggtg	8940
gattttgttt aaaaaatcct aatgaatgag tctgttgtgt gtcatgccag tgagggacgt	9000
cagacttggc tcagctcggg gagccttagc cgcccatgca ctggggacgc tccgctgccg	9060
tgccgcctgc actcctcagg gcagcctccc ccggctctac gggggccgcg tggtgccatc	9120
cccagggggc atgaccagat gcgtcccaag atgttgattt ttactgtgtt ttataaaata	9180
gagtgtagtt tacagaaaaa gactttaaaa gtgatctaca tgaggaactg tagatgatgt	9240
atTTTTTTca tctTTTTTgt taactgattt gcaataaaaa tgatactgat ggtgatctgg	9300
cttccaaaaa aaaaaaaaaa aa	9322

<210> 30
<211> 11474
<212> DNA
<213> Homo sapiens

<400> 30
gcttgcggtg ggaggaggcg gctgaggcgg aaggacacac gaggctgctt cgttgcacac 60
ccgagaaagt tttagccaaa cttcggggcg cggtgaggc ggcgccgag gagcggcgga 120
ctcggggcgc ggggagtcga ggcatttgcg cctgggcttc ggagcgtagc gccagggcct 180
gagcctttga agcaggagga ggggaggaga gagtggggct cctctatcgg gacccccctc 240
ccatgtggat ctgcccaggc ggcgggcgcg gcggcgagg aggaggcgac cgagaagatg 300
cccgccctgc gccccgctct gctgtgggcg ctgctggcgc tctggctgtg ctgcgcggcc 360
ccgcgcatg cattgcagtg tcgagatggc tatgaaccct gtgtaaatga aggaatgtgt 420
gttacctacc acaatggcac aggatactgc aaatgtccag aaggcttctt gggggaatat 480
tgtcaacatc gagaccctg tgagaagaac cgctgccaga atggtgggac ttgtgtggcc 540
caggccatgc tggggaaagc cacgtgccga tgtgcctcag ggtttacagg agaggactgc 600
cagtactcaa catctcatcc atgctttgtg tctcgaccct gcctgaatgg cggcacatgc 660
catatgctca gccgggatac ctatgagtgc acctgtcaag tcgggtttac aggttaaggag 720
tgccaatgga cggatgcctg cctgtctcat ccctgtgcaa atggaagtac ctgtaccact 780
gtggccaacc agttctcctg caaatgcctc acaggcttca cagggcagaa atgtgagact 840
gatgtcaatg agtgtgacat tccaggacac tgccagcatg gtggcacctg cctcaacctg 900
cctggttcct accagtgccg gtgccctcag ggcttcacag gccagtactg tgacagcctg 960
tatgtgccct gtgcaccctc accttgtgtc aatggaggca cctgtcggca gactggtgac 1020
ttcacttttg agtgcaactg ccttcagggt tttgaaggga gcacctgtga gaggaatatt 1080
gatgactgcc ctaaccacag gtgtcagaat ggaggggttt gtgtggatgg ggtcaacact 1140
tacaactgcc gctgtcccc acaatggaca ggacagttct gcacagagga tgtggatgaa 1200
tgctgtctgc agccaatgc ctgtcaaaat gggggcacct gtgccaaccg caatggaggc 1260
tatggctgtg tatgtgtcaa cggctggagt ggagatgact gcagtgagaa cattgatgat 1320
tgtgccttcg cctcctgtac tccaggctcc acctgcatcg accgtgtggc ctccttctct 1380

tgcatgtgcc	cagaggggaa	ggcaggtctc	ctgtgtcatc	tggatgatgc	atgcatcagc	1440
aatccttgcc	acaagggggc	actgtgtgac	accaaccccc	taaatgggca	atatatttgc	1500
acctgcccac	aaggctacaa	aggggctgac	tgcacagaag	atgtggatga	atgtgccatg	1560
gccaatagca	atccttgtga	gcatgcagga	aaatgtgtga	acacggatgg	cgccttccac	1620
tgtgagtgtc	tgaagggtta	tgcaggacct	cgttgtgaga	tggacatcaa	tgagtgccat	1680
tcagaccct	gccagaatga	tgctacctgt	ctggataaga	ttggaggctt	cacatgtctg	1740
tgcatgccag	gtttcaaagg	tgtgcattgt	gaattagaaa	taaatgaatg	tcagagcaac	1800
ccttgtgtga	acaatgggca	gtgtgtggat	aaagtcaatc	gtttccagtg	cctgtgtcct	1860
cctggtttca	ctgggccagt	ttgccagatt	gatattgatg	actgttccag	tactccgtgt	1920
ctgaatgggg	caaagtgtat	cgatcacccg	aatggctatg	aatgccagtg	tgccacaggt	1980
ttcactgggtg	tgttgtgtga	ggagaacatt	gacaactgtg	accccgatcc	ttgccaccat	2040
ggtcagtgtc	aggatggtat	tgattcctac	acctgcatct	gcaatcccgg	gtacatgggc	2100
gccatctgca	gtgaccagat	tgatgaatgt	tacagcagcc	cttgccctgaa	cgatggtcgc	2160
tgcattgacc	tgggtcaatgg	ctaccagtgc	aactgccagc	caggcacgtc	aggggttaat	2220
tgtgaaatta	atthttgatga	ctgtgcaagt	aacccttgta	tccatggaat	ctgtatggat	2280
ggcattaatc	gctacagttg	tgtctgctca	ccaggattca	cagggcagag	atgtaacatt	2340
gacattgatg	agtgtgcctc	caatccctgt	cgcaagggtg	caacatgtat	caacgggtgtg	2400
aatggtttcc	gctgtatatg	ccccgaggga	ccccatcacc	ccagctgcta	ctcacagggtg	2460
aacgaatgcc	tgagcaatcc	ctgcatccat	ggaaactgta	ctggagggtct	cagtggatat	2520
aagtgtctct	gtgatgcagg	ctgggttggc	atcaactgtg	aagtggacaa	aaatgaatgc	2580
ctttcgaatc	catgccagaa	tggaggaact	tgtgacaatc	tggatgaatg	atacagggtg	2640
acttgcaaga	agggtcttaa	aggctataac	tgccagggtga	atattgatga	atgtgcctca	2700
aatccatgcc	tgaaccaagg	aacctgcttt	gatgacataa	gtggctacac	ttgccactgt	2760
gtgctgccat	acacaggcaa	gaattgtcag	acagtattgg	ctccctgttc	cccaaaccct	2820
tgtgagaatg	ctgctgtttg	caaagagtca	ccaaattttg	agagttatac	ttgcttgtgt	2880
gctcctggct	ggcaagggtca	gcggtgtacc	attgacattg	acgagtgtat	ctccaagccc	2940
tgcatgaacc	atgggtctctg	ccataacacc	cagggcagct	acatgtgtga	atgtccacca	3000

ggcttcagtg gtatggactg tgaggaggac attgatgact gccttgccaa tccttgccag	3060
aatggagggtt cctgtatgga tggagtgaat actttctcct gcctctgcct tccgggtttc	3120
actggggata agtgccagac agacatgaat gagtgtctga gtgaaccctg taagaatgga	3180
gggacctgct ctgactacgt caacagttac acttgcaagt gccaggcagg atttgatgga	3240
gtccatttgatg agaacaacat caatgagtgc actgagagct cctgtttcaa tgggtggcaca	3300
tgtgttgatg ggattaactc cttctcttgc ttgtgccctg tgggtttcac tggatccttc	3360
tgcctccatg agatcaatga atgcagctct catccatgcc tgaatgaggg aacgtgtgtt	3420
gatggcctgg gtacctaccg ctgcagctgc cccctgggct acactgggaa aaactgtcag	3480
accctgggtga atctctgcag tcggtctcca tgtaaaaaca aaggtacttg cgttcagaaa	3540
aaagcagagt cccagtgcct atgtccatct ggatgggctg gtgcctattg tgacgtgccc	3600
aatgtctctt gtgacatagc agcctccagg agaggtgtgc ttgttgaaca cttgtgccag	3660
cactcaggtg tctgcatcaa tgctggcaac acgcattact gtcagtgccc cctgggctat	3720
actgggagct actgtgagga gcaactcgat gagtgtgcgt ccaaccctg ccagcacggg	3780
gcaacatgca gtgacttcat tgggtggatac agatgagagt gtgtcccagg ctatcagggt	3840
gtcaactgtg agtatgaagt ggatgagtgc cagaatcagc cctgccagaa tggaggcacc	3900
tgtattgacc ttgtgaacca tttcaagtgc tcttgcccac caggcactcg gggcctactc	3960
tgtgaagaga acattgatga ctgtgcccgg ggtccccatt gccttaatgg tggtcagtgc	4020
atggatagga ttggaggcta cagttgtcgc tgcttgccctg gctttgctgg ggagcgttgt	4080
gaggagagaca tcaacgagtg cctctccaac ccctgcagct ctgagggcag cctggactgt	4140
atacagctca ccaatgacta cctgtgtgtt tgccgtagtg cctttactgg ccggcactgt	4200
gaaaccttcg tcgatgtgtg tccccagatg ccctgcctga atggaggagc ttgtgctgtg	4260
gccagtaaca tgcctgatgg tttcatttgc cgttgtcccc cgggattttc cggggcaagg	4320
tgccagagca gctgtggaca agtgaaatgt aggaaggggg agcagtgtgt gcacaccgcc	4380
tctggacccc gctgcttctg cccagctccc cgggactgcg agtcaggctg tgccagtagc	4440
ccctgccagc acggggggcag ctgccaccct cagcgccagc ctccttatta ctcctgccag	4500
tgtgccccac cattctcggg tagccgctgt gaactctaca cggcaccccc cagcaccctt	4560
cctgccacct gtctgagcca gtattgtgcc gacaaagctc gggatggcgt ctgtgatgag	4620

gcctgcaaca gccatgcctg ccagtgggat gggggtgact gttctctcac catggagaac	4680
ccctggggcca actgctcctc cccacttccc tgctgggatt atatcaaaa ccagtgtgat	4740
gagctgtgca acacggtcga gtgcctgttt gacaactttg aatgccaggg gaacagcaag	4800
acatgcaagt atgacaaaata ctgtgcagac cacttcaaag acaaccactg tgaccagggg	4860
tgcaacagtg aggagtgtgg ttgggatggg ctggactgtg ctgctgacca acctgagaac	4920
ctggcagaag gtaccctggt tattgtggta ttgatgccac ctgaacaact gctccaggat	4980
gctcgcagct tcttgcgggc actgggtacc ctgctccaca ccaacctgcg cattaagcgg	5040
gactcccagg gggaactcat ggtgtacccc tattatggtg agaagtcagc tgctatgaag	5100
aaacagagga tgacacgcag atcccttcct ggtgaacaag aacaggaggt ggctggctct	5160
aaagtctttc tggaaattga caaccgccag tgtgttcaag actcagacca ctgcttcaag	5220
aacacggatg cagcagcagc tctcctggcc tctcacgcca tacaggggac cctgtcatac	5280
cctcttgtgt ctgtcgtcag tgaatccctg actccagaac gcactcagct cctctatctc	5340
cttgctgttg ctgttgtcat cattctgttt attattctgc tgggggtaat catggcaaaa	5400
cgaaagcgta agcatggctc tctctggctg cctgaagggt tcactcttcg ccgagatgca	5460
agcaatcaca agcgtcgtga gccagtggga caggatgctg tggggctgaa aaatctctca	5520
gtgcaagtct cagaagctaa cctaattggt actggaacaa gtgaacactg ggtcgatgat	5580
gaagggcccc agccaaagaa agtaaaggct gaagatgagg ccttactctc agaagaagat	5640
gacccattg atcgacggcc atggacacag cagcaccttg aagctgcaga catccgtagg	5700
acaccatcgc tggctctcac ccctcctcag gcagagcagg aggtggatgt gttagatgtg	5760
aatgtccgtg gccagatgg ctgcaccca ttgatgttgg cttctctccg aggaggcagc	5820
tcagatttga gtgatgaaga tgaagatgca gaggactctt ctgctaacad catcacagac	5880
ttggtctacc aggggtgccag cctccaggcc cagacagacc ggactggtga gatggccctg	5940
caccttgag cccgctactc acgggctgat gctgccaagc gtctcctgga tgcaggtgca	6000
gatgccaatg cccaggacaa catgggccgc tgtccactcc atgctgcagt ggcagctgat	6060
gccaaggtg tcttcagat tctgattcgc aaccgagtaa ctgatctaga tgccaggatg	6120
aatgatggta ctacaccctt gatcctggct gccgcctgg ctgtggaggg aatggtggca	6180
gaactgatca actgccaagc ggatgtgaat gcagtggatg accatggaaa atctgctctt	6240

cactgggcag ctgctgtcaa taatgtggag gcaactcttt tgttggtgaa aaatggggcc	6300
aaccgagaca tgcaggacaa caaggaagag acacctctgt ttcttgctgc ccgggagggg	6360
agctatgaag cagccaagat cctgttagac cattttgcca atcgagacat cacagacat	6420
atggatcgtc ttccccggga tgtggctcgg gatcgcatgc accatgacat tgtg'gcctt	6480
ctggatgaat acaatgtgac cccaagccct ccaggcaccg tgttgacttc tgctctctca	6540
cctgtcatct gtgggccc aa cagatctttc ctcagcctga agcacacccc aatgggcaag	6600
aagtctagac ggcccagtg c caagagtacc atgcctacta gcctccctaa ccttgccaag	6660
gaggcaaagg atgccaagg tagtaggagg aagaagtctc tgagtgagaa ggtccaactg	6720
tctgagagtt cagtaacttt atcccctgtt gattccctag aatctcctca cacgtatgtt	6780
tccgacacca catcctctcc aatgattaca tcccctggga tcttacaggc ctcacccaac	6840
cctatgttgg ccactgccgc ccctcctgcc ccagtccatg ccagcatgc actatctttt	6900
tctaaccttc atgaaatgca gcctttggca catggggcca gcactgtgct tccctcagt	6960
agccagttgc tatcccacca ccacattgtg tctccaggca gtggcagtg tggaagcttg	7020
agtaggctcc atccagtccc agtcccagca gattggatga accgcatgga ggtgaatgag	7080
accagtcaca atgagatgtt tggatgtgtc ctggctccag ctgagggcac ccatcctggc	7140
atagctcccc agagcaggcc acctgaaggg aagcacataa ccaccctcg ggagcccttg	7200
ccccccattg tgactttcca gctcatccct aaaggcagta ttgcccacc agcgggggct	7260
ccccagcctc agtccacctg ccctccagct gttgcgggcc ccctgccac catgtaccag	7320
attccagaaa tggcccgttt gccagtggtg gctttcccca ctgccatgat gcccagcag	7380
gacgggcagg tagctcagac cattctccca gcctatcatc ctttccagc ctctgtgggc	7440
aagtaccca cacccttc acagcacagt tatgcttcct caaatgctgc tgagcgaaca	7500
cccagtcaca gtggtcacct ccagggtgag catccctacc tgacaccatc ccagagtct	7560
cctgaccagt ggtcaagttc atcacccac tctgcttctg actggtcaga tgtgaccacc	7620
agccctacc ctgggggtgc tggaggaggt cagcggggac ctgggacaca catgtctgag	7680
ccaccacaca acaacatgca ggtttatgcg tgagagagtc cacctccagt gtagagacat	7740
aactgacttt tgtaaagtct gctgaggaac aaatgaaggt catccgggag agaaatgaag	7800
aaatctctgg agccagcttc tagaggtagg aaagagaaga tgttcttatt cagataatgc	7860

aagagaagca attcgtcagt ttcactgggt atctgcaagg cttattgatt attctaattct	7920
aataagacaa gtttgtggaa atgcaagatg aatacaagcc ttgggtccat gtttactctc	7980
ttctattttg agaataagat ggatgcttat tgaagcccag acattcttgc agcttggact	8040
gcattttaag ccctgcaggc ttctgccata tccatgagaa gattctacac tagcgtcctg	8100
ttgggaatta tgccctggaa ttctgcctga attgacctac gcatctcctc ctccttggac	8160
attcttttgt cttcatttgg tgcttttgggt tttgcacctc tccgtgattg tagccctacc	8220
agcatgttat agggcaagac ctttgtgctt ttgatcattc tggcccatga aagcaacttt	8280
ggtctccttt cccctcctgt cttcccggta tcccttggag tctcacaagg tttacttttg	8340
tatggttctc agcacaaacc tttcaagtat gttgtttctt tggaaaatgg acatactgta	8400
ttgtgttctc ctgcatatat cattcctgga gagagaaggg gagaagaata cttttcttca	8460
acaaattttg ggggcaggag atcccttcaa gaggtgcac ctttaattttt cttgtctgtg	8520
tgcaggctct catataaact ttaccaggaa gaagggtgtg agtttgttgt ttttctgtgt	8580
atgggcctgg tcagtgtaaa gttttatcct tgatagtcta gttactatga ccctccccac	8640
ttttttaaaa ccagaaaaag gtttggaaatg ttggaatgac caagagacaa gttaactcgt	8700
gcaagagcca gttaccacc cacagggtccc cctacttcct gccaaagcatt ccattgactg	8760
cctgtatgga acacatttgt cccagatctg agcattctag gcctgtttca ctcactcacc	8820
cagcatatga aactagtctt aactgttgag cttttccttt catatccaca gaagacactg	8880
tctcaaagt tgtacccttg ccatttagga ctgaactttc cttagcccaa gggaccctgt	8940
gacagttgtc ttccgtttgt cagatgatca gtctctactg attatcttgc tgcttaaagg	9000
cctgctcacc aatctttctt tcacaccgtg tgggtccgtgt tactggtata cccagtatgt	9060
tctcactgaa gacatggact ttatatgttc aagtgcagga attggaaagt tggacttggt	9120
ttctatgatc caaaacagcc ctataagaag gttggaaaag gaggaactat atagcagcct	9180
ttgctatttt ctgctacat ttcttttcct ctgaagcggc catgacattc cttttggcaa	9240
ctaacgtaga aactcaacag aacattttcc tttcctagag tcacctttta gatgataatg	9300
gacaactata gacttgctca ttgttcagac tgattgcccc tcacctgaat ccactctctg	9360
tattcatgct cttggcaatt tctttgactt tcttttaagg gcagaagcat tttagttaat	9420
tgtagataaa gaatagtttt cttcctcttc tccttgggcc agttaataat tgggtccatgg	9480

ctacactgca acttccgtcc agtgctgtga tgcccatgac acctgcaaaa taagttctgc	9540
ctgggcattt tgtagatatt aacaggtgaa ttcccgactc ttttggtttg aatgacagtt	9600
ctcattcctt ctatggctgc aagtatgcat cagtgccttc cacttacctg atttgtctgt	9660
cggtagggccc atatggaaac cctgcgtgtc tggtggcata atagtttaca aatggttttt	9720
tcagtcctat ccaaatttat tgaaccaaca aaaataatta cttctgccct gagataagca	9780
gattaagttt gttcattctc tgctttattc tctccatgtg gcaacattct gtcagcctct	9840
ttcatagtgt gcaaacattt tatcattcta aatggtgact ctctgccctt ggaccattt	9900
attattcaca gatggggaga acctatctgc atggacctct gtggaccaca gcgtacctgc	9960
ccctttctgc cctcctgctc cagccccact tctgaaagta tcagctactg atccagccac	10020
tggatatttt ataccctccc ttttccttaa gcacaatgtc agaccaaatt gcttgtttct	10080
ttttcttgga ctactttaat ttggatcctt tgggtttgga gaaagggaat gtgaaagctg	10140
tcattacaga caacaggttt cagtgatgag gaggacaaca ctgcctttca aactttttac	10200
tgatctctta gattttaaga actcttgaat tgtgtggtat ctaataaaaag ggaaggtaag	10260
atggataatc actttctcat ttgggttctg aattggagac tcagttttta tgagacacat	10320
cttttatgcc atgtatagat cctcccctgc tatttttggg ttatttttat tgttataaat	10380
gctttctttc ttgactcct cttctgcctg cttttgggga taggtttttt tgtttgttta	10440
tttgcttcct ctgttttggt ttaagcatca ttttcttatg tgagggtgggg aagggaagg	10500
tatgagggaag agagagtctg agaattaaaa tatttttagta taagcaattg gctgtgatgc	10560
tcaaattccat tgcattcctt tattgaattt gccaatgtgt aatttttgca taataaagaa	10620
ccaaagggtgt aatgttttgt tgagagggtg tttagggtatt ttggccctaa ccaatacatt	10680
gaatgtatga tgactatttg ggaggacaca tttatgtacc cagaggcccc cactaataag	10740
tggtactatg gttacttcct tgtgtacatt tctcttaaaa gtgatattat atctgtttgt	10800
atgagaaacc cagtaaccaa taaaatgacc gcatattcct gactaaacgt agtaaggaaa	10860
atgcacactt tgtttttact tttccgtttc attctaaagg tagttaagat gaaatttata	10920
tgaaagcatt tttatcacia aataaaaaag gtttgccaag ctcagtgggtg ttgtattttt	10980
tattttccaa tactgcatcc atggcctggc agtggttacct catgatgtca taatttgctg	11040
agagagcaaa ttttcttttc tttctgaatc ccacaaagcc tagcaccaaa cttctttttt	11100

tcttccttta attagatcat aaataaatga tcctggggaa aaagcatctg tcaaatagga	11160
aacatcacaa aactgagcac tcttctgtgc actagccata gctgggtgaca aacagatggt	11220
tgctcaggga caaggtgcct tccaatggaa atgcgaagta gttgctatag caagaattgg	11280
gaactgggat ataagtcata atattaatta tgctgttatg taaatgattg gtttgtaaca	11340
ttccttaagt gaaatttgtg tagaacttaa tatacaggat tataaaataa tattttgtgt	11400
ataaatttgt tataagttca cattcataca tttatttata aagtcagtga gatatttgaa	11460
catgaaaaaa aaaa	11474

<210> 31
 <211> 4326
 <212> DNA
 <213> Homo sapiens

<400> 31	
gcttgcggtg ggaggaggcg gctgaggcgg aaggacacac gaggctgctt cgttgcacac	60
ccgagaaagt ttcagccaaa cttcgggcgg cggctgaggc ggcgccgag gagcggcggga	120
ctcggggcgc ggggagtcga ggcatthtgc cctgggcttc ggagcgtagc gccagggcct	180
gagcctttga agcaggagga ggggaggaga gagtggggct cctctatcgg gacccctcc	240
ccatgtggat ctgcccaggc ggcggcggcg gcggcggagg aggaggcgac cgagaagatg	300
cccgccctgc gccccgctct gctgtgggcg ctgctggcgc tctggctgtg ctgcgcggcc	360
cccgcgcatg cattgcagtg tcgagatggc tatgaaccct gtgtaaatga aggaatgtgt	420
gttacctacc acaatggcac aggatactgc aaatgtccag aaggcttctt gggggaatat	480
tgtcaacatc gagaccctg tgagaagaac cgctgccaga atggtgggac ttgtgtggcc	540
caggccatgc tggggaaagc cacgtgccga tgtgcctcag ggtttacagg agaggactgc	600
cagtactcaa catctcatcc atgctttgtg tctcgaccct gcctgaatgg cggcacatgc	660
catatgctca gccgggatac ctatgagtgc acctgtcaag tcgggtttac aggtaaggag	720
tgccaatgga cggatgcctg cctgtctcat ccctgtgcaa atggaagtac ctgtaccact	780
gtggccaacc agttctcctg caaatgcctc acaggcttca cagggcagaa atgtgagact	840
gatgtcaatg agtgtgacat tccaggacac tgccagcatg gtggcacctg cctcaacctg	900
cctggttcct accagtgccg gtgccctcag ggcttcacag gccagtactg tgacagcctg	960
tatgtgccct gtgcaccctc acctgtgtc aatggaggca cctgtcggca gactggtgac	1020

ttcacttttg agtgcaactg ccttccaggt tttgaaggga gcacctgtga gaggaatatt	1080
gatgactgcc ctaaccacag gtgtcagaat ggaggggttt gtgtggatgg ggtcaacact	1140
tacaactgcc gctgtccccc acaatggaca ggacagttct gcacagagga tgtggatgaa	1200
tgctgtctgc agcccaatgc ctgtcaaaat gggggcacct gtgccaaccg caatggaggc	1260
tatggctgtg tatgtgtcaa cggctggagt ggagatgact gcagtgagaa cattgatgat	1320
tgtgccttcg cctcctgtac tccaggctcc acctgcatcg accgtgtggc ctccttctct	1380
tgcatgtgcc cagaggggaa ggcaggctct ctgtgtcatc tggatgatgc atgcatcagc	1440
aatccttgcc acaagggggc actgtgtgac accaaccccc taaatgggca atatatttgc	1500
acctgcccac aaggctacaa aggggctgac tgcacagaag atgtggatga atgtgccatg	1560
gccaatagca atccttgtga gcatgcagga aaatgtgtga acacggatgg cgccttcac	1620
tgtgagtgtc tgaagggtta tgcaggacct cgttgtgaga tggacatcaa tgagtgccat	1680
tcagaccct gccagaatga tgctacctgt ctggataaga ttggaggctt cacatgtctg	1740
tgcatgccag gtttcaaagg tgtgcattgt gaattagaaa taaatgaatg tcagagcaac	1800
ccttgtgtga acaatgggca gtgtgtggat aaagtcaatc gtttccagtg cctgtgtcct	1860
cctggtttca ctgggccagt ttgccagatt gatattgatg actgttccag tactccgtgt	1920
ctgaatgggg caaagtgtat cgatcacccg aatggctatg aatgccagtg tgccacaggt	1980
ttcactgggtg tgttgtgtga ggagaacatt gacaactgtg accccgatcc ttgccaccat	2040
ggtcagtgtc aggatggtat tgattcctac acctgcatct gcaatcccgg gtacatgggc	2100
gccatctgca gtgaccagat tgatgaatgt tacagcagcc cttgcctgaa cgatggctgc	2160
tgcattgacc tgggtcaatgg ctaccagtgc aactgccagc caggcacgtc aggggttaat	2220
tgtgaaatta attttgatga ctgtgcaagt aacccttgta tccatggaat ctgtatggat	2280
ggcattaatc gctacagttg tgtctgctca ccaggattca cagggcagag atgtaacatt	2340
gacattgatg agtgtgcctc caatccctgt cgcaagggtg caacatgtat caacgggtgtg	2400
aatggtttcc gctgtatatg ccccgaggga ccccatcacc ccagctgcta ctcacaggtg	2460
aacgaatgcc tgagcaatcc ctgcatccat ggaaactgta ctggaggctc cagtggatat	2520
aagtgtctct gtgatgcagg ctgggttggc atcaactgtg aagtggacaa aaatgaatgc	2580
ctttcgaatc catgccagaa tggaggaact tgtgacaatc tggatgaatgg atacaggtgt	2640

acttgcaaga agggctttaa aggctataac tgccaggtga atattgatga atgtgcctca	2700
aatccatgcc tgaaccaagg aacctgcttt gatgacataa gtggctacac ttgccactgt	2760
gtgctgccat acacaggcaa gaattgtcag acagtattgg ctccctgttc cccaaaccct	2820
tgtgagaatg ctgctgtttg caaagagtca ccaaattttg agagttatac ttgcttgtgt	2880
gctcctggct ggcaaggtca gcggtgtacc attgacattg acgagtgtat ctccaagccc	2940
tgcatgaacc atgggtctctg ccataacacc cagggcagct acatgtgtga atgtccacca	3000
ggcttcagtg gtatggactg tgaggaggac attgatgact gccttgccaa tccttgccag	3060
aatggagggt cctgtatgga tggagtgaat actttctcct gcctctgcct tccgggtttc	3120
actgggggata agtgccagac agacatgaat gagtgtctga gtgaaccctg taagaatgga	3180
gggacctgct ctgactacgt caacagttac acttgcaagt gccaggcagg atttgatgga	3240
gtccattgtg agaacaacat caatgagtgc actgagagct cctgtttcaa tgggtggcaca	3300
tgtgttgatg ggattaactc cttctcttgc ttgtgccctg tgggtttcac tggatccttc	3360
tgcctccatg agatcaatga atgcagctct catccatgcc tgaatgaggg aacgtgtgtt	3420
gatggcctgg gtacctaccg ctgcagctgc cccctgggct acactgggaa aaactgtcag	3480
accctgggtga atctctgcag tcggtctcca tgtaaaaaca aaggtacttg cgttcagaaa	3540
aaagcagagt cccagtgcct atgtccatct ggatgggctg gtgcctattg tgacgtgccc	3600
aatgtctctt gtgacatagc agcctccagg agaggtgtgc ttgttgaaca cttgtgccag	3660
cactcaggtg tctgcatcaa tgctggcaac acgcattact gtcagtgccc cctgggctat	3720
actgggagct actgtgagga gcaactcgat gagtgtgcgt ccaaccctg ccagcacggg	3780
gcaacatgca gtgacttcat tgggtggatac agatgagagt gtgtcccagg ctatcagggt	3840
gtcaactgtg agtatgaagt ggatgagtgc cagaatcagc cctgccagaa tggaggcacc	3900
tgtattgacc ttgtgaacca tttcaagtgc tcttgcccac caggcactcg gggatatgaa	3960
tcatccttat ccattttcca tccagggtcat tgtcttaagt tataaatcca ttcttagtgt	4020
tcaggggatt ttataaaatt aaagatagga agactagctt cattccaagc atttagttct	4080
acatcctagt aattcaagcc attttattct cccatctctt gctagctctg atgttgtggt	4140
ttatgttgtc agttttatct ggttgtttgg catcttgata ttccatgaaa cacagaatat	4200
ggaagggata caacattagc ataacattaa aaaattagcc tggtcagtaa gatttcttgt	4260

tgcttcacag aaaagcaact aatggcctct aaaataaaca atttacattt aaaaaaaaaa	4320
aaaaaa	4326

<210> 32
 <211> 8089
 <212> DNA
 <213> Homo sapiens

<400> 32	
gcggcgcgga ggctggcccc ggacgcgccc ggagcccagg gaaggaggga ggaggggagg	60
gtcgcggccg gccgccatgg ggccgggggc ccgtggccgc cgccgccgcc gtcgcccgat	120
gtcgccgcca ccgccaccgc caccgtgcg ggcgctgccc ctgctgctgc tgctagcggg	180
gccgggggct gcagcccccc cttgcctgga cggaagcccg tgtgcaaata gaggtcgttg	240
caccagctg ccctcccggg aggctgcctg cctgtgcccg cctggctggg tgggtgagcg	300
gtgtcagctg gaggaccctt gtcactcagg cccctgtgct ggccgtggtg tctgccagag	360
ttcagtgggtg gctggcaccg cccgattctc atgccggtgc ccccgctggc tccgaggccc	420
tgactgctcc ctgccagatc cctgcctcag cagcccttgt gccacggtg cccgctgctc	480
agtggggccc gatggacgct tcctctgctc ctgcccacct ggctaccagg gccgcagctg	540
ccgaagcgac gtggatgagt gccgggtggg tgagccctgc cgccatggtg gcacctgcct	600
caacacacct ggctccttcc gctgccagtg tccagctggc tacacagggc cactatgtga	660
gaaccccgcg gtgccctgtg caccctcacc atgccgtaac gggggcacct gcaggcagag	720
tggcgacctc acttacgact gtgcctgtct tcctgggttt gagggtcaga attgtgaagt	780
gaacgtggac gactgtccag gacaccgatg tctcaatggg gggacatgcg tggatggcgt	840
caacacctat aactgccagt gccctcctga gtggacaggc cagttctgca cggaggacgt	900
ggatgagtgt cagctgcagc ccaacgcctg ccacaatggg ggtacctgct tcaacacgct	960
gggtggccac agctgcgtgt gtgtcaatgg ctggacaggc gagagctgca gtcagaatat	1020
cgatgactgt gccacagccg tgtgcttcca tggggccacc tgccatgacc gcgtggcttc	1080
tttctactgt gcctgcccc a tgggcaagac tggcctcctg tgtcacctgg atgacgcctg	1140
tgtcagcaac ccctgccacg aggatgctat ctgtgacaca aatccggtga acggccgggc	1200
catttgacc tgtcctcccg gcttcacggg tggggcatgt gaccaggatg tggacgagtg	1260

ctctatcggc gccaacccct gcgagcactt gggcaggtgc gtgaacacgc agggctcctt	1320
cctgtgccag tgcggtcgtg gctacactgg acctcgtgt gagaccgatg tcaacgagtg	1380
tctgtcgggg ccctgccgaa accaggccac gtgcctcgac cgcataggcc agttcacctg	1440
tatctgtatg gcaggcttca caggaacctt ttgcgaggtg gacattgacg agtgtcagag	1500
tagccccctgt gtcaacgggtg gggctctgcaa ggaccgagtc aatggcttca gctgcacctg	1560
cccctcgggc ttcagcggct ccacgtgtca gctggacgtg gacgaatgcg ccagcacgcc	1620
ctgcaggaat ggcgccaaat gcgtggacca gcccgatggc tacgagtgcc gctgtgccga	1680
gggctttgag ggcacgctgt gtgatcgcaa cgtggacgac tgctcccctg acccatgcca	1740
ccatggctcg cgtgtggatg gcatcgccag cttctcatgt gcctgtgctc ctggctacac	1800
gggcacacgc tgcgagagcc aggtggacga atgccgcagc cagccctgcc gccatggcgg	1860
caaatgccta gacctggtgg acaagtacct ctgccgctgc ctttctggga ccacaggtgt	1920
gaactgcgaa gtgaacattg acgactgtgc cagcaacccc tgcacctttg gagtctgccg	1980
tgatggcatc aaccgctacg actgtgtctg ccaacctggc ttcacagggc ccctttgtaa	2040
cgtggagatc aatgagtgtg cttccagccc atgcggcgag ggaggttcct gtgtggatgg	2100
ggaaaatggc ttccgctgcc tctgcccgc tggtctcttg cccctactct gcctcccccc	2160
gagccatccc tgtgcccattg agccctgcag tcacggcatc tgctatgatg cacctggcgg	2220
gttccgctgt gtgtgtgagc ctggctggag tggccccgc tgcagccaga gcctggcccc	2280
agacgcctgt gagtcccagc cgtgcagggc cgggtgggaca tgcagcagcg atggaatggg	2340
tttccactgc acctgcccgc ctggtgtcca gggacgtcag tgtgaactcc tctccccctg	2400
caccccgaac ccctgtgagc atgggggccc ctgcgagtct gcccctggcc agctgcctgt	2460
ctgctcctgc ccccagggtt ggcaaggccc acgatgccag caggatgtgg acgagtgtgc	2520
tggccccgca ccctgtggcc ctcatggtat ctgcaccaac ctggcaggga gtttcagctg	2580
cacctgccat ggagggtaca ctggcccttc ctgcgatcag gacatcaatg actgtgaccc	2640
caacccatgc ctgaacgggtg gctcgtgcca agacggcgtg ggctcctttt cctgctcctg	2700
cctccctggg ttccgcccgc cacgatgcgc ccgcgatgtg gatgagtgcc tgagcaaccc	2760
ctgcggcccc ggcacctgta ccgaccacgt ggcctccttc acctgcacct gcccgccagg	2820
ctacggaggc ttccactgcg aacaggacct gcccgactgc agccccagct cctgcttcaa	2880

tggcgggacc	tgtgtggacg	gcgtgaactc	gttcagctgc	ctgtgccgtc	ccggctacac	2940
aggagcccac	tgccaacatg	aggcagaccc	ctgcctctcg	cggccctgcc	tacacggggg	3000
cgtctgcagc	gccgcccacc	ctggcttccg	ctgcacctgc	ctcgagagct	tcacggggccc	3060
gcagtgccag	acgctgggtg	attgggtgcag	ccgccagcct	tgtcaaaacg	ggggctcgtg	3120
cgtccagact	ggggcctatt	gcctttgtcc	ccctggatgg	agcggacgcc	tctgtgacat	3180
ccgaagcttg	ccctgcaggg	aggccgcagc	ccagatcggg	gtgcggctgg	agcagctgtg	3240
tcaggcgggt	gggcagtgtg	tggatgaaga	cagctcccac	tactgcgtgt	gcccagaggg	3300
ccgtactgg	agccactgtg	agcaggaggt	ggacccctgc	ttggcccagc	cctgccagca	3360
tggggggacc	tgccgtggct	atatgggggg	ctacatgtgt	gagtgtcttc	ctggctacaa	3420
tgggtgataac	tgtgaggacg	acgtggacga	gtgtgcctcc	cagccctgcc	agcacggggg	3480
ttcatgcatt	gacctcgtgg	cccgctatct	ctgctcctgt	ccccaggaa	cgctgggggt	3540
gctctgcgag	attaatgagg	atgactgcgg	cccaggccca	ccgctggact	caggggccccg	3600
gtgcctacac	aatggcacct	gcgtggacct	ggtgggtggt	ttccgctgca	cctgtcccc	3660
aggatacact	ggtttgcgct	gcgaggcaga	catcaatgag	tgtcgctcag	gtgcctgcca	3720
cgcggcacac	acccgggact	gcctgcagga	cccaggcgga	ggtttccgtt	gcctttgtca	3780
tgctggcttc	tcaggtcctc	gctgtcagac	tgtcctgtct	ccctgcgagt	cccagccatg	3840
ccagcatgga	ggccagtgcc	gtcctagccc	gggtcctggg	ggtgggctga	ccttcacctg	3900
tcactgtgcc	cagccgttct	ggggtccgcg	ttgcgagcgg	gtggcgcgct	cctgccggga	3960
gctgcagtgc	ccggtgggcg	tcccatgcca	gcagacgccc	cgcgggcccgc	gctgcgcctg	4020
ccccccagg	ttgtcgggac	cctcctgccg	cagcttccc	gggtcgccgc	cgggggcccag	4080
caacgccagc	tgcgcgggcg	ccccctgtct	ccacgggggc	tcctgccgcc	ccgcgccgct	4140
cgcgcccttc	ttccgctgcg	cttgcgcgca	gggctggacc	gggccgcgct	gcgaggcgcc	4200
cgccgcggca	cccgaggtct	cggaggagcc	gcggtgccc	cgcgccgcct	gccaggccaa	4260
gcgcggggac	cagcgctgcg	accgcgagtg	caacagccca	ggctgcggct	gggacggcgg	4320
cgactgctcg	ctgagcgtgg	gcgaccctg	gcggcaatgc	gaggcgctgc	agtgtggcg	4380
cctcttcaac	aacagccgct	gcgacccgc	ctgcagctcg	cccgcctgcc	tctacgacaa	4440
cttcgactgc	cacgccggtg	gccgcgagcg	cacttgcaac	ccggtgtacg	agaagtactg	4500

cgccgaccac tttgccgacg gccgctgcga ccagggtgc aacacggagg agtgcggctg	4560
ggatgggctg gattgtgcca gcgaggtgcc ggccctgctg gcccgcggcg tgctgggtgt	4620
cacagtgtg ctgccgccag aggagctact gcgttccagc gccgactttc tgcagcggct	4680
cagcgccatc ctgcgcacct cgctgcgctt ccgcctggac gcgcacggcc aggccatggt	4740
cttcccttac caccggccta gtcctggctc cgaaccccg gcccgtcggg agctggcccc	4800
cgaggtgatc ggctcggtag taatgctgga gattgacaac cggctctgcc tgcagtcgcc	4860
tgagaatgat cactgcttcc ccgatgcca gagcgccgct gactacctgg gagcgttgtc	4920
agcgggtggag cgcctggact tcccgtacct actgcgggac gtgcgggggg agccgctgga	4980
gcctccagaa cccagcgtcc cgctgctgcc actgctagt gcgggcgctg tcttgctgt	5040
ggtcattctc gtcctgggtg tcatgggtggc ccggcgcaag cgcgagcaca gcaccctctg	5100
gttccctgag ggcttctcac tgcacaagga cgtggcctct ggtcacaagg gccggcggga	5160
acccgtgggc caggacgcgc tgggcatgaa gaacatggcc aagggtgaga gcctgatggg	5220
ggaggtggcc acagactgga tggacacaga gtgcccagag gccaagcggc taaaggtaga	5280
ggagccaggc atgggggctg aggaggctgt ggattgccgt cagtggactc aacaccatct	5340
ggttgctgct gacatccgcg tggcaccagc catggcactg acaccaccac agggcgacgc	5400
agatgctgat ggcatggatg tcaatgtgcg tggcccagat ggcttcacct cgctaattgt	5460
ggcttccttc tgtggggggg ctctggagcc aatgccaact gaagaggatg aggcagatga	5520
cacatcagct agcatcatct ccgacctgat ctgccagggg gctcagcttg gggcacggac	5580
tgaccgtact ggcgagactg ctttgcacct ggctgcccgt tatgcccgtg ctgatgcagc	5640
caagcggctg ctggatgctg gggcagacac caatgcccag gaccactcag gccgcactcc	5700
cctgcacaca gctgtcacag ccgatgcca ggggtgtcttc cagattctca tccgaaaccg	5760
ctctacagac ttggatgccc gcatggcaga tggctcaacg gcactgatcc tggcggcccc	5820
cctggcagta gagggcatgg tggaagagct catcgccagc catgctgatg tcaatgctgt	5880
ggatgagctt gggaaatcag ctttacctg ggctgcggct gtgaacaacg tggaagccac	5940
tttggccctg ctcaaaaatg gagccaataa ggacatgcag gatagcaagg aggagacccc	6000
cctattcctg gccgcccgcg agggcagcta tgaggctgcc aagctgctgt tggaccactt	6060
tgccaaccgt gagatcaccg accacctgga caggctgccg cgggacgtag cccaggagag	6120

actgcaccag gacatcgtgc gcttgctgga tcaaccagtg gggcccccgc gcccccccg	6180
tccccacggc ctggggcctc tgctctgtcc tccagggggc ttctctcctg gcctcaaagc	6240
ggcacagtcg ggggtccaaga agagcaggag gccccccggg aaggcggggc tggggccgca	6300
ggggccccgg gggcggggca agaagctgac gctggcctgc ccgggcccc tggctgacag	6360
ctcggtcacg ctgtcgcccc tggactcgct ggactcccc cggcctttcg gtgggcccc	6420
tgcttcccct ggtggcttcc cccttgaggg gccctatgca gctgccactg cactgcagt	6480
gtctctggca cagcttggtg gcccaggccg ggcgggtcta gggcgccagc cccctggagg	6540
atgtgtactc agcctgggcc tgctgaacct tgtggctgtg cccctcgatt gggcccggct	6600
gccccacct gcccctccag gcccctcgct cctgctgcca ctggcgccgg gacccagct	6660
gctcaacca gggaccccc tctccccgca ggagcggccc ccgccttacc tggcagtccc	6720
aggacatggc gaggagtacc cggcggctgg ggcacacagc agcccccaa aggcccgctt	6780
cctgcgggtt cccagtgagc acccttacct gacccatcc cccgaatccc ctgagcactg	6840
ggccagcccc tcacctccct ccctctcaga ctggtccgaa tccacgccta gccagccac	6900
tgccactggg gccatggcca ccaccactgg ggcactgcct gccagccac ttcccttgtc	6960
tgttcccagc tcccttgctc agggccagac ccagctgggg cccagccgg aagttacccc	7020
caagaggcaa gtgttggcct gagacgctcg tcagttctta gatcttgggg gcctaaagag	7080
acccccgtcc tgctctcttt ctttctctgt ctcttccttc cttttagtct ttttcatcct	7140
cttctctttc caccaaccct cctgcatcct tgccttgag cgtgaccgag ataggtcatc	7200
agcccagggc ttcagtcttc ctttatttat aatgggtggg ggctaccacc caccctctca	7260
gtcttgtgaa gagtctggga cctccttctt cccacttct ctcttcctc attcctttct	7320
ctctccttct ggcctctcat ttccttacac tctgacatga atgaattatt attattttta	7380
ttttctttt tttttttaca ttttgtatag aaacaaattc atttaaaca acttattatt	7440
attatttttt acaaaatata tatatggaga tgctccctcc ccctgtgaac ccccagtg	7500
ccccgtgggg ctgagtctgt gggcccattc ggccaagctg gattctgtgt acctagtaca	7560
caggcatgac tgggatcccc tgtaccgagt acacgaccca ggtatgtacc aagtaggcac	7620
ccttgggcgc acccactggg gccaggggtc gggggagtgt tgggagcctc ctccccacc	7680
cacctccctc acttcactgc attccagatg ggacatgttc catagccttg ctggggaagg	7740

gcccactgcc aactccctct gccccagccc cacccttggc catctccctt tgggaactag	7800
ggggctgctg gtgggaaatg ggagccaggg cagatgtatg cattcctttg tgtccctgta	7860
aatgtgggac tacaagaaga ggagctgcct gagtgggtact ttctcttcct ggtaatcctc	7920
tggcccagcc tcatggcaga atagaggtat ttttaggcta tttttgtaat atggcttctg	7980
gtcaaaatcc ctgtgtagct gaattcccaa gccctgcatt gtacagcccc ccactcccct	8040
caccacctaa taaaggaata gttaacactc aaaaaaaaaa aaaaaaaaaa	8089

<210> 33

<211> 6762

<212> DNA

<213> Homo sapiens

<400> 33

agacgtgagg cttgcagcag gccgaggagg aagaagaggg gcagtgggag cagaggaggt	60
ggctcctgcc ccagtgaag ctctgagggt ccctgcctga agaggacag ggaccggggc	120
ttggagaagg ggctgtggaa tgcagcccc ttactgctg ctgctgctgc tgctgctgct	180
gctgctatgt gtctcagtgg tcagaccag agggctgctg tgtgggagtt tcccagaacc	240
ctgtgccaat ggaggcacct gcctgagcct gtctctggga caaggacct gccagtgtgc	300
ccctggcttc ctgggtgaga cgtgccagtt tcctgacccc tgccagaacg cccagctctg	360
ccaaaatgga ggcagctgcc aagccctgct tcccgtccc ctagggctcc ccagctctcc	420
ctctccattg acaccagct tcttgtgcac ttgcctccct ggcttactg gtgagagatg	480
ccaggccaag cttgaagacc cttgtcctcc ctcttctgt tccaaaagg gccgctgcca	540
catccaggcc tcgggccgcc cacagtgtc ctgcatgcct ggatggacag gtgagcagtg	600
ccagcttcgg gacttctgtt cagccaacc atgtgttaat ggaggggtgt gtctggccac	660
atacccccag atccagtgcc actgcccacc gggcttcgag ggccatgcct gtgaacgtga	720
tgtcaacgag tgcttcagg acccaggacc ctgccccaaa ggcacctcct gccataacac	780
cctgggctcc ttccagtgcc tctgccctgt ggggcaggag ggtccacgtt gtgagctgcg	840
ggcaggaccc tgccctccta ggggctgttc gaatgggggc acctgccagc tgatgccaga	900
gaaagactcc accttcacc tctgcctctg tccccaggt tcataggcc cagactgtga	960
ggatgaatcca gacaactgtg tcagccacca gtgtcagaat gggggcactt gccaggatgg	1020
gctggacacc tacacctgcc tctgcccaga aacctggaca ggctgggact gctccgaaga	1080

tgtggatgag tgtgagaccc aggggtccccc tcaactgcaga aacggggggca cctgccagaa	1140
ctctgctgggt agcttttact gcgtgtgtgt gagtggctgg ggcggcacaa gctgtgagga	1200
gaacctggat gactgtattg ctgccacctg tgccccggga tccacctgca ttgaccgggt	1260
gggctctttc tcctgcctct gcccacctgg acgcacagga ctctgtgcc acttggaaga	1320
catgtgtctg agccagccgt gccatgggga tgcccaatgc agcaccaacc ccctcacagg	1380
ctccacactc tgcctgtgtc agcctggcta ttcgggggccc acctgccacc aggacctgga	1440
cgagtgtctg atggcccagc aaggcccaag tccctgtgaa catggcggtt cctgcctcaa	1500
cactcctggc tccttcaact gcctctgtcc acctggctac acaggctccc gttgtgaggc	1560
tgatcacaat gagtgcctct cccagccctg ccaccagga agcacctgtc tggacctact	1620
tgccaccttc cactgcctct gcccgccagg cttagaaggg cagctctgtg aggtggagac	1680
caacgagtgt gcctcagctc cctgcctgaa ccacgcggat tgccatgacc tgctcaacgg	1740
cttccagtgc atctgcctgc ctggattctc cggcacccga tgtgaggagg atatcgatga	1800
gtgcagaagc tctccctgtg ccaatgggtg gcagtgccag gaccagcctg gaggcctcca	1860
ctgcaagtgt ctcccaggct ttgaagggcc acgctgtcaa acagagggtg atgagtgcct	1920
gagtgacca tgtcccgttg gagccagctg cttgatctt ccaggagcct tcttttgcct	1980
ctgccccctc ggtttcacag gccagctctg tgaggttccc ctgtgtgtc ccaacctgtg	2040
ccagcccaag cagatatgta aggaccagaa agacaaggcc aactgcctct gtcctgatgg	2100
aagccctggc tgtgccccac ctgaggacaa ctgcacctgc caccacgggc actgccagag	2160
atcctcatgt gtgtgtgacg tgggttggaac ggggccagag tgtgaggcag agctaggggg	2220
ctgcatctct gcacctgtg cccatggggg gacctgtac cccagccct ctggctacaa	2280
ctgcacctgc cctacaggct acacaggacc cacctgtagt gaggagatga cagcttgtca	2340
ctcagggccca tgtctcaatg gcggctcctg caaccctagc cctggaggct actactgcac	2400
ctgccctcca agccacacag ggccccagtg ccaaaccagc actgactact gtgtgtctgc	2460
cccgtgcttc aatgggggta cctgtgtgaa caggcctggc accttctcct gcctctgtgc	2520
catgggcctc caggggccgc gctgtgaggg aaagctccgc cccagctgtg cagacagccc	2580
ctgtaggaat agggcaacct gccaggacag ccctcagggt ccccgctgcc tctgccccac	2640
tggctacacc ggaggcagct gccagactct gatggactta tgtgcccaga agccctgccc	2700

acgcaattcc cactgcctcc agactgggcc ctctttccac tgcttgtgcc tccagggatg	2760
gaccgggcct ctctgcaacc ttccactgtc ctctgccag aaggctgcac tgagccaagg	2820
catagacgtc tcttcccttt gccacaatgg aggctctgt gtcgacagcg gccctccta	2880
tttctgccac tgccccctg gattccaagg cagcctgtgc caggatcacg tgaacccatg	2940
tgagtccagg ctttgccaga acggggccac ctgcatggcc cagcccagtg ggtatctctg	3000
ccagtgtgcc ccaggctacg atggacagaa ctgctcaaag gaactcgatg cttgtcagtc	3060
ccaaccctgt cacaaccatg gaacctgtac tccaaacct ggaggattcc actgtgcctg	3120
ccctccaggc tttgtggggc tacgctgtga gggagacgtg gacgagtgtc tggaccagcc	3180
ctgccacccc acaggcactg cagcctgcca ctctctggcc aatgccttct actgccagtg	3240
tctgcctgga cacacaggcc agtgggtgtga ggtggagata gaccctgcc acagccaacc	3300
ctgctttcat ggagggacct gtgaggccac agcaggatca cccctgggtt tcatctgcca	3360
ctgccccaaag ggttttgaag gccccacctg cagccacagg gcccttcct gcggcttcca	3420
tcactgccac cacggaggcc tgtgtctgcc ctcccctaag ccaggcttcc caccacgctg	3480
tgctgcctc agtggctatg ggggtcctga ctgcctgacc ccaccagctc ctaaaggctg	3540
tggccctccc tccccatgcc tatacaatgg cagctgtca gagaccacgg gcttgggggg	3600
cccaggcttt cgatgctcct gccctcacag ctctccaggg ccccggtgtc agaaacccgg	3660
agccaagggg tgtgaggga gaagtggaga tggggcctgc gatgctggct gcagtggccc	3720
gggaggaaac tgggatggag gggactgtc tctgggagtc ccagaccct ggaagggtg	3780
cccctcccac tctcgggtgt ggcttctctt ccgggacggg cagtgccacc cacagtgtga	3840
ctctgaagag tgtctgtttg atggctacga ctgtgagacc cctccagcct gcactccagc	3900
ctatgaccag tactgccatg atcacttcca caacgggcac tgtgagaaag gctgcaacac	3960
tgacagagtgt ggctgggatg gaggtgactg caggcctgaa gatggggacc cagagtgggg	4020
gccctccctg gccctgctgg tgggtactgag cccccagcc ctagaccagc agctgtttgc	4080
cctggcccgg gtgctgtccc tgactctgag ggtaggactc tgggtaagga aggatcgtga	4140
tggcagggac atggtgtacc cctatcctgg ggcccgggt gaagaaaagc taggaggaac	4200
tcgggacccc acctatcagg agagagcagc ccctcaaagc cagcccctgg gcaaggagac	4260
cgactccctc agtgctgggt ttgtggtggt catgggtgtg gatttgtccc gctgtggccc	4320

tgaccacccg gcatcccgct gtccctggga ccctgggctt ctactccgct tccttgctgc	4380
gatggctgca gtgggagccc tggagcccct gctgcctgga ccactgctgg ctgtccaccc	4440
tcatgcaggg accgcacccc ctgccaacca gcttccctgg cctgtgctgt gctccccagt	4500
ggccggggtg attctcctgg ccctaggggc tcttctcgtc ctccagctca tccggcgtcg	4560
acgccgagag catggagctc tctggctgcc ccctggtttc actcgacggc ctcggactca	4620
gtcagctccc caccgacgcc ggccccact aggcgaggac agcattggct tcaaggcact	4680
gaagccaaag gcagaagttg atgaggatgg agttgtgatg tgctcaggcc ctgaggaggg	4740
agaggaggtg ggccaggctg aagaaacagg cccaccctcc acgtgccagc tctggtctct	4800
gagtgggtggc tgtggggcgc tccctcaggc agccatgcta actcctcccc aggaatctga	4860
gatggaagcc cctgacctgg acacccgtgg acctgatggg gtgacacccc tgatgtcagc	4920
agtttgctgt ggggaagtac agtccgggac cttccaaggg gcatggttgg gatgtcctga	4980
gccctgggaa cctctgctgg atggaggggc ctgtccccag gctcacaccg tgggcactgg	5040
ggagaccccc ctgcacctgg ctgcccgatt ctcccggcca accgctgccc gccgcctcct	5100
tgaggctgga gccaacccca accagccaga ccgggcaggg cgcacacccc ttcattgctgc	5160
tgtggctgct gatgctcggg aggtctgcca gcttctgctc cgtagcagac aaactgcagt	5220
ggacgctcgc acagaggacg ggaccacacc cttgatgctg gctgccaggc tggcggtgga	5280
agacctggtt gaagaactga ttgcagccca agcagacgtg ggggccagag ataaatgggg	5340
gaaaactgcg ctgcaactgg ctgctgccgt gaacaacgcc cgagccgccc gctcgcttct	5400
ccaggccgga gccgataaag atgcccagga caacaggag cagacgccgc tattcctggc	5460
ggcgcgggaa ggagcggtgg aagtagccca gctactgctg gggctggggg cagcccgaga	5520
gctgcgggac caggctgggc tagcgccggc ggacgtcgt caccaacgta accactggga	5580
tctgctgacg ctgctggaag gggctgggcc accagaggcc cgtcaciaaag ccacgccggg	5640
ccgcgaggct gggcccttcc cgcgcgcacg gacggtgtca gtaagcgtgc cccgcgatgg	5700
gggcggggct ctgccgcgt gccggacgct gtcagccgga gcaggccctc gtgggggcgg	5760
agcttgcttg caggctcggga cttggtccgt agacttggct gcgcgggggg gcggggccta	5820
ttctcattgc cggagcctct cgggagtagg agcaggagga ggcccgaccc ctgcgcggccg	5880
taggttttct gcaggcatgc gcgggcctcg gcccaaccct gcgataatgc gaggaagata	5940

cggagtggct gccgggcgcg gaggcagggt ctcaacggat gactggccct gtgattgggt	6000
ggccctggga gcttgcggtt ctgcctccaa cattccgata ccgcctcctt gccttactcc	6060
gtccccggag cggggatcac ctcaacttga ctgtgggtccc ccagccctcc aagaaatgcc	6120
cataaaccaa ggaggagagg gtaaaaaata gaagaatata tggtaggagag gaattccaaa	6180
aatgattacc cattaaggagg caggctggaa ggccttcctg gttttaagat ggatccccc	6240
aatgaaggg ttgtgagttt agtttctctc ctaaaatgaa tgtatgccc	6300
catcttcac gtggagaagc tgcagctctg gaaagagggt ttaagatgct aggatgaggc	6360
aggcccagtc ctctccaga aaataagaca ggccacagga gggcagagtg gaggggaaat	6420
accctaagt tggaaccaag aattgcaggc atatgggatg taagatgttc tttctatat	6480
atggtttcca aagggtgccc ctatgatcca ttgtccccac tgcccacaaa tggctgacaa	6540
atatttattg ggcacctact atgtgccagg cactgtgtag gtgctgaaaa gtggccaagg	6600
gccacccccg ctgatgactc cttgcattcc ctcccctcac aacaaagaac tccactgtgg	6660
ggatgaagcg cttcttctag ccactgctat cgctatttaa gaaccctaaa tctgtcacc	6720
ataataaagc tgatttgaag tgtaaaaaa aaaaaaaaaa aa	6762

<210> 34
 <211> 200
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> CMV promoter

<400> 34	
atcgaagtta ataattaaca tatatgttaa tcattaacta tatagttaat tattaaccgc	60
tatgttaatg attaacta gttaggcgtg tacgggtggga ggcctatata agcagagctc	120
gtttagtga cgcgcagatc gcctggagac gccatccacg ctgttttgac ctccatagaa	180
gacaccggga ccgatccagc	200

<210> 35
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Kozak sequence

<400> 35
gccgccacc