

SEQUENCE LISTING

<110> Externautics S.p.A.

<120> ovary tumor markers and methos of use thereof

<130> 1300PCT

<160> 108

<170> PatentIn version 3.3

<210> 1

<211> 831

<212> PRT

<213> Homo sapiens

<400> 1

Met Lys Val His Met His Thr Lys Phe Cys Leu Ile Cys Leu Leu Thr
1 5 10 15

Phe Ile Phe His His Cys Asn His Cys His Glu Glu His Asp His Gly
20 25 30

Pro Glu Ala Leu His Arg Gln His Arg Gly Met Thr Glu Leu Glu Pro
35 40 45

Ser Lys Phe Ser Lys Gln Ala Ala Glu Asn Glu Lys Lys Tyr Tyr Ile
50 55 60

Glu Lys Leu Phe Glu Arg Tyr Gly Glu Asn Gly Arg Leu Ser Phe Phe
65 70 75 80

Gly Leu Glu Lys Leu Leu Thr Asn Leu Gly Leu Gly Glu Arg Lys Val
85 90 95

Val Glu Ile Asn His Glu Asp Leu Gly His Asp His Val Ser His Leu
100 105 110

Asp Ile Leu Ala Val Gln Glu Gly Lys His Phe His Ser His Asn His
115 120 125

Gln His Ser His Asn His Leu Asn Ser Glu Asn Gln Thr Val Thr Ser
130 135 140

Val Ser Thr Lys Arg Asn His Lys Cys Asp Pro Glu Lys Glu Thr Val
145 150 155 160

Glu Val Ser Val Lys Ser Asp Asp Lys His Met His Asp His Asn His
165 170 175

Arg Leu Arg His His His Arg Leu His His His Leu Asp His Asn Asn
 180 185 190

Thr His His Phe His Asn Asp Ser Ile Thr Pro Ser Glu Arg Gly Glu
 195 200 205

Pro Ser Asn Glu Pro Ser Thr Glu Thr Asn Lys Thr Gln Glu Gln Ser
 210 215 220

Asp Val Lys Leu Pro Lys Gly Lys Arg Lys Lys Lys Gly Arg Lys Ser
 225 230 235 240

Asn Glu Asn Ser Glu Val Ile Thr Pro Gly Phe Pro Pro Asn His Asp
 245 250 255

Gln Gly Glu Gln Tyr Glu His Asn Arg Val His Lys Pro Asp Arg Val
 260 265 270

His Asn Pro Gly His Ser His Val His Leu Pro Glu Arg Asn Gly His
 275 280 285

Asp Pro Gly Arg Gly His Gln Asp Leu Asp Pro Asp Asn Glu Gly Glu
 290 295 300

Leu Arg His Thr Arg Lys Arg Glu Ala Pro His Val Lys Asn Asn Ala
 305 310 315 320

Ile Ile Ser Leu Arg Lys Asp Leu Asn Glu Asp Asp His His His Glu
 325 330 335

Cys Leu Asn Val Thr Gln Leu Leu Lys Tyr Tyr Gly His Gly Ala Asn
 340 345 350

Ser Pro Ile Ser Thr Asp Leu Phe Thr Tyr Leu Cys Pro Ala Leu Leu
 355 360 365

Tyr Gln Ile Asp Ser Arg Leu Cys Ile Glu His Phe Asp Lys Leu Leu
 370 375 380

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

Asn Ile Gly Ala Ser Ala Trp Ile Cys Gly Ile Ile Ser Ile Thr Val
 405 410 415

Ile Ser Leu Leu Ser Leu Leu Gly Val Ile Leu Val Pro Ile Ile Asn

420	425	430
Gln Gly Cys Phe Lys Phe Leu Leu Thr Phe Leu Val Ala Leu Ala Val		
435	440	445
Gly Thr Met Ser Gly Asp Ala Leu Leu His Leu Leu Pro His Ser Gln		
450	455	460
Gly Gly His Asp His Ser His Gln His Ala His Gly His Gly His Ser		
465	470	480
His Gly His Glu Ser Asn Lys Phe Leu Glu Glu Tyr Asp Ala Val Leu		
485	490	495
Lys Gly Leu Val Ala Leu Gly Gly Ile Tyr Leu Leu Phe Ile Ile Glu		
500	505	510
His Cys Ile Arg Met Phe Lys His Tyr Lys Gln Gln Arg Gly Lys Gln		
515	520	525
Lys Trp Phe Met Lys Gln Asn Thr Glu Glu Ser Thr Ile Gly Arg Lys		
530	535	540
Leu Ser Asp His Lys Leu Asn Asn Thr Pro Asp Ser Asp Trp Leu Gln		
545	550	555
Leu Lys Pro Leu Ala Gly Thr Asp Asp Ser Val Val Ser Glu Asp Arg		
565	570	575
Leu Asn Glu Thr Glu Leu Thr Asp Leu Glu Gly Gln Gln Glu Ser Pro		
580	585	590
Pro Lys Asn Tyr Leu Cys Ile Glu Glu Glu Lys Ile Ile Asp His Ser		
595	600	605
His Ser Asp Gly Leu His Thr Ile His Glu His Asp Leu His Ala Ala		
610	615	620
Ala His Asn His His Gly Glu Asn Lys Thr Val Leu Arg Lys His Asn		
625	630	635
His Gln Trp His His Lys His Ser His His Ser His Gly Pro Cys His		
645	650	655
Ser Gly Ser Asp Leu Lys Glu Thr Gly Ile Ala Asn Ile Ala Trp Met		
660	665	670

Val Ile Met Gly Asp Gly Ile His Asn Phe Ser Asp Gly Leu Ala Ile
675 680 685

Gly Ala Ala Phe Ser Ala Gly Leu Thr Gly Gly Ile Ser Thr Ser Ile
690 695 700

Ala Val Phe Cys His Glu Leu Pro His Glu Leu Gly Asp Phe Ala Val
705 710 715 720

Leu Leu Lys Ala Gly Met Thr Val Lys Gln Ala Ile Val Tyr Asn Leu
725 730 735

Leu Ser Ala Met Met Ala Tyr Ile Gly Met Leu Ile Gly Thr Ala Val
740 745 750

Gly Gln Tyr Ala Asn Asn Ile Thr Leu Trp Ile Phe Ala Val Thr Ala
755 760 765

Gly Met Phe Leu Tyr Val Ala Leu Val Asp Met Leu Pro Glu Met Leu
770 775 780

His Gly Asp Gly Asp Asn Glu Glu His Gly Phe Cys Pro Val Gly Gln
785 790 795 800

Phe Ile Leu Gln Asn Leu Gly Leu Leu Phe Gly Phe Ala Ile Met Leu
805 810 815

Val Ile Ala Leu Tyr Glu Asp Lys Ile Val Phe Asp Ile Gln Phe
820 825 830

<210> 2
<211> 831
<212> PRT
<213> Homo sapiens

<400> 2

Met Lys Val His Met His Thr Lys Phe Cys Leu Ile Cys Leu Leu Thr
1 5 10 15

Phe Ile Phe His His Cys Asn His Cys His Glu Glu His Asp His Gly
20 25 30

Pro Glu Ala Leu His Arg Gln His Arg Gly Met Thr Glu Leu Glu Pro
35 40 45

Ser Lys Phe Ser Lys Gln Ala Ala Glu Asn Glu Lys Lys Tyr Tyr Ile
50 55 60

Glu Lys Leu Phe Glu Arg Tyr Gly Glu Asn Gly Arg Leu Ser Phe Phe
65 70 75 80

Gly Leu Glu Lys Leu Leu Thr Asn Leu Gly Leu Gly Glu Arg Lys Val
85 90 95

Val Glu Ile Asn His Glu Asp Leu Gly His Asp His Val Ser His Leu
100 105 110

Asp Ile Leu Ala Val Gln Glu Gly Lys His Phe His Ser His Asn His
115 120 125

Gln His Ser His Asn His Leu Asn Ser Glu Asn Gln Thr Val Thr Ser
130 135 140

Val Ser Thr Lys Arg Asn His Lys Cys Asp Pro Glu Lys Glu Thr Val
145 150 155 160

Glu Val Ser Val Lys Ser Asp Asp Lys His Met His Asp His Asn His
165 170 175

Arg Leu Arg His His His Arg Leu His His His Leu Asp His Asn Asn
180 185 190

Thr His His Phe His Asn Asp Ser Ile Thr Pro Ser Glu Arg Gly Glu
195 200 205

Pro Ser Asn Glu Pro Ser Thr Glu Thr Asn Lys Thr Gln Glu Gln Ser
210 215 220

Asp Val Lys Leu Pro Lys Gly Lys Arg Lys Lys Lys Gly Arg Lys Ser
225 230 235 240

Asn Glu Asn Ser Glu Val Ile Thr Pro Gly Phe Pro Pro Asn His Asp
245 250 255

Gln Gly Glu Gln Tyr Glu His Asn Arg Val His Lys Pro Asp Arg Val
260 265 270

His Asn Pro Gly His Ser His Val His Leu Pro Glu Arg Asn Gly His
275 280 285

Asp Pro Gly Arg Gly His Gln Asp Leu Asp Pro Asp Asn Glu Gly Glu
290 295 300

6

Leu Arg His Thr Arg Lys Arg Glu Ala Pro His Val Lys Asn Asn Ala
 305 310 315 320

Ile Ile Ser Leu Arg Lys Asp Leu Asn Glu Asp Asp His His His Glu
 325 330 335

Cys Leu Asn Val Thr Gln Leu Leu Lys Tyr Tyr Gly His Gly Ala Asn
 340 345 350

Ser Pro Ile Ser Thr Asp Leu Phe Thr Tyr Leu Cys Pro Ala Leu Leu
 355 360 365

Tyr Gln Ile Asp Ser Arg Leu Cys Ile Glu His Phe Asp Lys Leu Leu
 370 375 380

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

Asn Ile Gly Ala Ser Ala Trp Ile Cys Gly Ile Ile Ser Ile Thr Val
 405 410 415

Ile Ser Leu Leu Ser Leu Leu Gly Val Ile Leu Val Pro Ile Ile Asn
 420 425 430

Gln Gly Cys Phe Lys Phe Leu Leu Thr Phe Leu Val Ala Leu Ala Val
 435 440 445

Gly Thr Met Ser Gly Asp Ala Leu Leu His Leu Leu Pro His Ser Gln
 450 455 460

Gly Gly His Asp His Ser His Gln His Ala His Gly His Gly His Ser
 465 470 475 480

His Gly His Glu Ser Asn Lys Phe Leu Glu Glu Tyr Asp Ala Val Leu
 485 490 495

Lys Gly Leu Val Ala Leu Gly Gly Ile Tyr Leu Leu Phe Ile Ile Glu
 500 505 510

His Cys Ile Arg Met Phe Lys His Tyr Lys Gln Gln Arg Gly Lys Gln
 515 520 525

Lys Trp Phe Met Lys Gln Asn Thr Glu Glu Ser Thr Ile Gly Arg Lys
 530 535 540

Leu Ser Asp His Lys Leu Asn Asn Thr Pro Asp Ser Asp Trp Leu Gln
 545 550 555 560

Leu Lys Pro Leu Ala Gly Thr Asp Asp Ser Val Val Ser Glu Asp Arg
565 570 575

Leu Asn Glu Thr Glu Leu Thr Asp Leu Glu Gly Gln Gln Glu Ser Pro
580 585 590

Pro Lys Asn Tyr Leu Cys Ile Glu Glu Glu Lys Ile Ile Asp His Ser
595 600 605

His Ser Asp Gly Leu His Thr Ile His Glu His Asp Leu His Ala Ala
610 615 620

Ala His Asn His His Gly Glu Asn Lys Thr Val Leu Arg Lys His Asn
625 630 635 640

His Gln Trp His His Lys His Ser His His Ser His Gly Pro Cys His
645 650 655

Ser Gly Ser Asp Leu Lys Glu Thr Gly Ile Ala Asn Ile Ala Trp Met
660 665 670

Val Ile Met Gly Asp Gly Ile His Asn Phe Ser Asp Gly Leu Ala Ile
675 680 685

Gly Ala Ala Phe Ser Ala Gly Leu Thr Gly Gly Ile Ser Thr Ser Ile
690 695 700

Ala Val Phe Cys His Glu Leu Pro His Glu Leu Gly Asp Phe Ala Val
705 710 715 720

Leu Leu Lys Ala Gly Met Thr Val Lys Gln Ala Ile Val Tyr Asn Leu
725 730 735

Leu Ser Ala Met Met Ala Tyr Ile Gly Met Leu Ile Gly Thr Ala Val
740 745 750

Gly Gln Tyr Ala Asn Asn Ile Thr Leu Trp Ile Phe Ala Val Thr Ala
755 760 765

Gly Met Phe Leu Tyr Val Ala Leu Val Asp Met Leu Pro Glu Met Leu
770 775 780

His Gly Asp Gly Asp Asn Glu Glu His Gly Phe Cys Pro Val Gly Gln
785 790 795 800

<400>	3						
cacgatttgg	tgcagccggg	gtttggtacc	gagcggagag	gagatgcaca	cggcactcga		60
gtgtgaggaa	aatagaaat	gaaggtacat	atgcacacaa	aattttgcct	catttgtttg		120
ctgacattta	tttttcatca	ttgcaaccat	tgccatgaag	aacatgacca	tggccctgaa		180
gcgcttcaca	gacagcatcg	tggaatgaca	gaattggagc	caagcaaatt	ttcaaagcaa		240
gctgctgaaa	atgaaaaaaaa	atactatat	gaaaaacttt	ttgagcgtta	tggtgaaaat		300
ggaagattat	ccttttttgg	tttgagaaaa	cttttaacaa	acttgggcct	tggagagaga		360
aaagtagttg	agattaatca	tgaggatctt	ggccacgata	atgtttctca	tttagatatt		420
ttggcagttc	aagagggaaa	gcattttcac	tcacataacc	accagcattc	ccataatcat		480
ttaaattcag	aaaatcaaac	tgtgaccagt	gtatccacaa	aaagaaacca	taaatgtgat		540
ccagagaaa	g	agacagttga	agtgtctgta	aaatctgatg	ataaacatat	gcatgaccat	600
aatcacccgc	tacgtcatca	ccatcgtttg	catcatcatc	ttgatcataa	caacactcac		660
cattttcata	atgattccat	tactcccagt	gagcgtgggg	agcctagcaa	tgaaccttca		720
acagagacca	ataaaaccca	ggaacaatct	gatgttaa	at	taccgaaagg	aaagaggaag	780
aaaaaaggga	ggaaaagtaa	tgaaaattct	gagggttatta	caccagggttt	tccccctaac		840
catgatcagg	gtgaacagta	tgagcataat	cgggtccaca	aacctgatcg	tgtacataac		900
ccaggtcatt	ctcatgtaca	tcttccagaa	cgtaatggtc	atgatcctgg	tcgtggacac		960
caagatcttg	atcctgataa	tgaagggtgaa	cttcgacata	ctagaaagag	agaagcacca		1020
catgttaaaa	ataatgcaat	aatttctttg	agaaaagatc	taaatgaaga	tgaccatcat		1080
catgaatggt	tgaacgtcac	tcagttatta	aaatactatg	gtcatgggtgc	caactctccc		1140
atctcaactg	atttattttac	atacctttgc	cctgcattgt	tatatcaa	at	cgacagcaga	1200
ctttgtattg	agcattttga	caaactttta	gttgaagata	taaataagga	taaaaacctg		1260
gttcctgaag	atgaggcaaa	tataggggca	tcagcctgga	tttgtggtat	catttctatc		1320
actgtcatta	gcctgctttc	cttgctaggc	gtgatcttgg	ttcctatcat	taaccaagga		1380
tgcttcaaat	tccttctttac	attccttggt	gcattagctg	taggaacaat	gaqtggagac		1440

gcccttcttc atctactgcc ccattctcag ggtggacatg atcacagtca ccaacatgca 1500
 catgggcatg gacattctca tggacatgaa tctaacaagt ttttggaaga atatgatgct 1560
 gtattgaaag gacttggtgc tctaggaggc atttacttgc tatttatcat tgaacactgc 1620
 attagaatgt ttaagcacta caaacaacaa agaggaaaac agaaatgggt tatgaaacag 1680
 aacacagaag aatcaactat tggaagaaaag ctttcagatc acaagttaaa caatacacca 1740
 gattctgact ggcttcaact caagcctctt gccggaactg atgactcggg tgtttctgaa 1800
 gatcgactta atgaaactga actgacagat ttagaaggcc aacaagaatc ccctcctaaa 1860
 aattaccttt gtatagaaga ggagaaaatc atagaccatt ctcacagtga tggattacat 1920
 accattcatg agcatgatct ccatgctgct gcacataacc accacggcga gaacaaaact 1980
 gtgctgagga agcataatca ccagtggcac cacaagcatt ctcatcattc ccatggcccc 2040
 tgtcattctg gatccgatct gaaagaaaca ggaatagcta atatagcctg gatggtgatc 2100
 atgggggatg gcatccacaa cttcagtgat gggctcgcaa ttggtgcagc tttcagtgct 2160
 ggattgacag gaggaatcag tacttctata gccgtcttct gtcatgaact gccacatgaa 2220
 ttaggagatt ttgcagttct tcttaaagca ggcatgactg taaagcaagc aattgtatac 2280
 aacctcctct ctgccatgat ggcttacata ggcatgctca taggcacagc tgttggtcag 2340
 tatgccaata acatcacact ttggatcttt gcagtcactg caggcatggt cctctatgta 2400
 gccttggtgg atatgcttcc agaaatgttg catggtgatg gtgacaatga agaacatggc 2460
 ttttgtcctg tggggcaatt catccttcag aatttaggat tgctctttgg atttgccatt 2520
 atgctggtga ttgccctcta tgaagataaa atttgtgttg acatccagtt ttgaccttc 2580
 ccagtaatca ctgttgatta cgagaatgtt accatgcagc tttgcatctg ttccttgtag 2640
 tgtatgcaca ttgctcaaag gaaagtcagt ggcttgcaact acttacaagt ttcatagatt 2700
 tgagcctaac cacaagaggc tgggtgcttag tactgttttc cctgcacgta ggggtctttt 2760
 aaaaatataa agcttgatgat aaagagagga gaatatggga ctccatgaac cagtgttgat 2820
 atgtttgatt aagacttttc acaaaataat catataaaac actagtctct ttattagtag 2880
 aaacttctgt ggctatgcag aaatagagat cgaacaaaaa aaaatcattt aaactttaaa 2940
 aatattttta atggactttg gggagacatt ttttgtgtgt ttaagaatg aattgtagtg 3000
 ctctttaatt cagctacata tattcatgtg gtgataggga tcaacttgac acaactttga 3060
 aactgcataa agtagacata ggaactagag gaaagctcag gctgcattag agtatgaatt 3120
 tagcattggg aaaagccctt attcttgaat ctagagttac tatttttgta tatatttgca 3180
 tagtgtttaa acctgcagcc taaactactg aaatttgatg ttgtatgttt gtgtgagctt 3240
 cagtttaatg aaagattcat aatggttctt tgtattatta taatacttgg tgttggggtg 3300

ttctttctgt	tttgtttttt	actttaattt	tgttttgatt	tttttttttt	ttttttggcg	3360
ggggtagggtg	agggtttgga	gcatgtggtc	tttttaaaaa	attgtaaccc	tctagaaaat	3420
atcaaagaaa	tgaaccagac	gtggttttaa	tagttgattt	tcctatttta	acagtaccaa	3480
ctagttaatt	gggaaatgta	agttctgaat	gttcacattg	ctttaccagt	ttggcactgg	3540
aaccaagagc	acatgtcgtg	gctggctaca	aggttgtaaa	gcagaaaatc	gaagtttacc	3600
atgtctgtaa	tgtgtacatg	aagtgtcaat	ttagaacagt	tactaggata	aactccatta	3660
ttgccatggc	tgtcatggta	ccaagtgc	ttggaagatg	catttaaatt	actcagctga	3720
aatcacttga	tcctcttggtg	ccaagatatg	ctgttggtgc	ctgataggga	ttagtctttt	3780
agggtgccctg	ttctcctacc	ataattgtga	atgatttggtg	agaagtgcaa	gccatgttta	3840
tcctgaattt	ttacttaata	atgtgtatta	ctagtcatat	gcatgtagct	ttctgtttac	3900
atcctatgcc	acatggtctt	catttatgcc	aggtaaaactg	tatttgaact	atgtgcagct	3960
agctttgttt	taatctgctt	ggcaaccagt	gtagctgctg	taacaatcta	tcttattggt	4020
caaatatata	agagccaaac	tcttttccat	tccatctaaa	atgttttcat	ttagtactct	4080
tctttcctcc	tactctatga	acttcaaaac	aaaaacaaaa	ctttgagagc	agcacatgca	4140
tccagggtatt	tatagattat	tgccagtgtc	ttttctgtat	gctataagca	agggagctta	4200
ggtgttattt	ctttaattta	tgcttgaatc	tgaaaaatta	tttctgactt	actccatggc	4260
ctccttataa	taagtagaag	ttttatatat	aattaatttt	cagcattggg	cactgaatta	4320
ggacagtcc	catctcattg	cttggccctt	caagcaacct	agctaaaagg	tgctgatatt	4380
ttatttagta	ctgccaaact	caagtgattt	agatatctat	ctatctagat	ttctgaacca	4440
agatatattt	atagttcact	tttgggtttt	tatacccacg	gtaggattct	gcattccagc	4500
attaaatctg	cttcatttta	gaacctttat	aaaagcaata	gctggaatat	actcccagtt	4560
ttaaaataaa	tgccctgattg	atttaaagca	agtaggttat	gctgaagtat	ataaagaagt	4620
tttatattct	ctcaaaaatg	gtattatctt	tctttatttg	ctagattctt	acaaatcttt	4680
taagagggct	gtaacagttg	ctgctagtat	tagggttcca	catcattcta	atgtatagtt	4740
tcaagtctta	atagacaatc	tgaattccac	tacatttctt	ttggctccaa	cattcctttt	4800
agcttgacca	gtctaattta	aaatgtgttt	gttgagggtc	attaacgtta	cttgtacaat	4860
gctgtcactg	tgtgacatcc	atatgaattt	tggtatatat	caatcaatca	atcaatcaca	4920
ttgcattcaa	tcaatcagct	gtgattgatt	gattatgctt	agaaatacta	tagtaactag	4980
atgcagtgtg	aattttttcc	attaacaaac	aaacaagtca	gtggcttaaa	tgtgattatg	5040
gtcctgcaag	gtgattcttg	ctaaaatatc	taaacttttg	ttttgtttta	actgaatcat	5100
tttttaactt	aaaaagctgg	aaaatatcaa	atgctgtttt	ttttttttca	ttgtcaacag	5160

tggtgtgtca ttttatgtat gttcctaattg cttatggaac tcctccaaaa taaagttact 5220
 caaagag 5227

<210> 4
 <211> 5432
 <212> DNA
 <213> Homo sapiens

<400> 4
 agttgatcac tctgaagctt tttggctaaa gcgtttggtg ttagagcttc cattactcat 60
 tcgccttgcc caaggcctca gcaaccgacg ttcgaaagcc aggagaaaag gcgaatgata 120
 aagggcgctc cacgcatgcg ttaagaagcc gcccgaactc ccccgcggcg ttctttcttg 180
 gaacaaaact agcgcggagc cacggaactc cgcagtttgc gtagacttga atttcctatt 240
 cctcggaaga tccatgtgga atccgaaaaa tagaaatgaa ggtacatatg cacacaaaat 300
 tttgcctcat ttgtttgctg acattttattt ttcatcattg caaccattgc catgaagaac 360
 atgaccatgg ccctgaagcg cttcacagac agcatcgtgg aatgacagaa ttggagccaa 420
 gcaaattttc aaagcaagct gctgaaaatg aaaaaaata ctatattgaa aaactttttg 480
 agcgttatgg tgaaaatgga agattatcct tttttggttt ggagaaactt ttaacaaact 540
 tgggccttgg agagagaaaa gtagttgaga ttaatcatga ggatcttggc cacgatcatg 600
 tttctcattt agatattttg gcagttcaag agggaaagca ttttactca cataaccacc 660
 agcattccca taatcattta aattcagaaa atcaaactgt gaccagtgtg tccacaaaaa 720
 gaaaccataa atgtgatcca gagaaaagaga cagttgaagt gtctgtaaaa tctgatgata 780
 aacatatgca tgaccataat caccgcctac gtcacacca tcgtttgcat catcatcttg 840
 atcataacaa cactcaccat tttcataatg attccattac tcccagttag cgtggggagc 900
 ctagcaatga accttcaaca gagaccaata aaaccagga acaatctgat gttaaactac 960
 cgaaaggaaa gaggaagaaa aaaggaggga aaagtaatga aaattctgag gttattacac 1020
 cagggtttcc ccctaaccat gatcagggtg aacagtatga gcataatcgg gtccacaaac 1080
 ctgatcgtgt acataacca ggtcattctc atgtacatct tccagaacgt aatggtcattg 1140
 atcctggtcg tggacaccaa gatcttgatc ctgataatga aggtgaactt cgacatacta 1200
 gaaagagaga agcaccacat gttaaaaaata atgcaataat ttctttgaga aaagatctaa 1260
 atgaagatga ccatcatcat gaatgtttga acgtcactca gttattaaaa tactatggtc 1320
 atggtgccaa ctctcccatc tcaactgatt tatttacata cctttgccct gcattgttat 1380
 atcaaatacg cagcagactt tgtattgagc attttgacaa acttttagtt gaagatataa 1440
 ataaggataa aaacctgggt cctgaagatg aggcaaatat aggggcatca gcctggattt 1500
 gtggtatcat ttctatcact gtcattagcc tgctttcctt gctaggcgtg atcttggttc 1560

ctatcattaa	ccaaggatgc	ttcaaattcc	ttcttacatt	ccttgttgca	ttagctgtag	1620
gaacaatgag	tggagacgcc	cttcttcatc	tactgcccc	ttctcagggt	ggacatgatc	1680
acagtcacca	acatgcacat	gggcatggac	attctcatgg	acatgaatct	aacaagtttt	1740
tggaagaata	tgatgctgta	ttgaaaggac	ttgttgctct	aggaggcatt	tacttgctat	1800
ttatcattga	acactgcatt	agaatgttta	agcactacaa	acaacaaaga	ggaaaacaga	1860
aatggtttat	gaaacagaac	acagaagaat	caactattgg	aagaaagctt	tcagatcaca	1920
agttaaacia	tacaccagat	tctgactggc	ttcaactcaa	gcctcttgcc	ggaactgatg	1980
actcggttgt	ttctgaagat	cgacttaatg	aaactgaact	gacagattta	gaaggccaac	2040
aagaatcccc	tcctaaaaat	tacctttgta	tagaagagga	gaaaatcata	gaccattctc	2100
acagtgatgg	attacatacc	attcatgagc	atgatctcca	tgctgctgca	cataaccacc	2160
acggcgagaa	caaaactgtg	ctgaggaagc	ataatcacca	gtggcaccac	aagcattctc	2220
atcattccca	tggccctgt	cattctggat	ccgatctgaa	agaaacagga	atagctaata	2280
tagcctggat	ggtgatcatg	ggggatggca	tccacaactt	cagtgatggg	ctcgcaattg	2340
gtgcagcttt	cagtgctgga	ttgacaggag	gaatcagtac	ttctatagcc	gtcttctgtc	2400
atgaactgcc	acatgaatta	ggagattttg	cagttcttct	taaagcaggc	atgactgtaa	2460
agcaagcaat	tgtatacaac	ctcctctctg	ccatgatggc	ttacataggc	atgctcatag	2520
gcacagctgt	tggtcagtat	gccaataaca	tcacactttg	gatctttgca	gtcactgcag	2580
gcatgttcct	ctatgtagcc	ttggtggata	tgcttccaga	aatgttgcat	ggtgatgggtg	2640
acaatgaaga	acatggcttt	tgtcctgtgg	ggcaattcat	ccttcagaat	ttaggattgc	2700
tctttggatt	tgccattatg	ctgggtgattg	ccctctatga	agataaaatt	gtgtttgaca	2760
tccagttttg	acctttccca	gtaatcactg	ttgattacga	gaatgttacc	atgcagcttt	2820
gcatctgttc	cttgactgtg	atgcacattg	ctcaaaggaa	agtcagtggc	ttgcactact	2880
tacaagtttc	atagatttga	gcctaaccac	aagaggctgg	tgcttagtac	tgttttccct	2940
gcacgtaggg	gtcttttaaa	aatataaagc	ttgtgataaa	gagaggagaa	tatgggactc	3000
catgaaccag	tgttgatatg	tttgattaag	acttttcaca	aaataatcat	ataaaacact	3060
agtctcttta	ttagtagaaa	cttctgtggc	tatgcagaaa	tagagatcga	acaaaaaaa	3120
atcatttaaa	ctttaaaaaat	attttaaatg	gactttgggg	agacattttt	tgtgtgtttt	3180
aagaatgaat	tgtagtgtc	tttaattcag	ctacatatat	tcatgtgggtg	atagggatca	3240
acttgacaca	actttgaaac	tgcataaagt	agacatagga	actagaggaa	agctcaggct	3300
gcattagagt	atgaatttag	cattgggaaa	agcccttatt	cttgaatcta	gagttactat	3360
ttttgtatat	atttgcatag	tgtttaaacc	tgcagcctaa	actactgaaa	tttgtgattg	3420

tatgtttgtg	tgagcttcag	tttaatgaaa	gattcataat	ggttctttgt	attattataa	3480
tacttggtgt	tggggtgttc	tttctgtttt	gttttttact	ttaattttgt	tttgattttt	3540
tttttttttt	tttggcgggg	gtaggtgagg	gtttggagca	tgtggtcttt	ttaaaaaatt	3600
gtaaccctct	agaaaatatc	aaagaaatga	accagacgtg	gtttaaatag	ttgattttcc	3660
tattttaaca	gtaccaacta	gttaattggg	aaatgtaagt	tctgaatggt	cacattgctt	3720
taccagtttg	gcactggaac	caagagcaca	tgctgtggct	ggctacaagg	ttgtaaagca	3780
gaaaatcgaa	gtttaccatg	tctgtaatgt	gtacatgaag	tgtcaattta	gaacagttac	3840
taggataaac	tccattattg	ccatggctgt	catggtagcc	aagtgacttg	gaagatgcat	3900
ttaaattact	cagctgaaat	cacttgatca	tcttgtgcc	agatatgctg	ttgggtgcctg	3960
atagggatta	gtcttttagg	tgccctgttc	tcctaccata	attgtgaatg	atttgtgaga	4020
agtgcaggcc	atgtttatcc	tgaattttta	cttaataatt	tgtattacta	gtcatatgca	4080
tgtagctttc	tgtttacatc	ctatgccaca	tggtcttcat	ttatgccagg	taaactgtat	4140
ttgaactatg	tgcagctagc	tttgttttaa	tctgcttggc	aaccagtgt	gctgctgtaa	4200
caatctatct	tattgttcaa	atatataaga	gccaaactct	tttccattcc	atctaaaatg	4260
ttttcattta	gtactcttct	ttcctcctac	tctatgaact	tcaaaacaaa	aacaaaactt	4320
tgagagcagc	acatgcatcc	aggtatttat	agattattgc	cagtgtcttt	tctgtatgct	4380
ataagcaagg	gagcttaggt	gttatttctt	taatttatgc	ttgaatctga	aaaattattt	4440
ctgacttact	ccatggcctc	cttataataa	gtagaagttt	tatatataat	taattttcag	4500
cattgggcac	tgaattagga	cagtcctcat	ctcattgctt	ggcccttcaa	gcaacctagc	4560
taaaagggtgc	tgatatttta	tttagtactg	ccaacttcaa	gtgatttaga	tatctatcta	4620
tctagatttc	tgaaccaaga	tatatattata	gttcactttt	gggtttttat	accacaggta	4680
ggattctgca	ttccagcatt	aaatctgctt	catttttagaa	cctttataaa	agcaatagct	4740
ggaatatact	cccagtttta	aaataaatgc	ctgattgatt	taaagcaagt	aggttatgct	4800
gaagtatata	aagaagtttt	atattctctc	aaaaatggta	ttatctttct	ttatttgcta	4860
gattcttaca	aatcttttaa	gagggctgta	acagttgctg	ctagtattag	ggttccacat	4920
cattctaata	tatagtttca	agtcttaata	gacaatctga	attccactac	atttcttttg	4980
gctccaacat	tccttttagc	ttgaccagtc	taatttaaaa	tgtgtttggt	ggaggtcatt	5040
aacgttactt	gtacaatgct	gtcactgtgt	gacatccata	tgaattttgg	tatatatcaa	5100
tcaatcaatc	aatcacattg	cattcaatca	atcagctgtg	attgattgat	tatgcttaga	5160
aatactatag	taactagatg	cagtgtgaat	tttttccatt	aacaaacaaa	caagtcagtg	5220
gcttaaatgt	gattatggtc	ctgcaagggtg	attcttgcta	aaatatctaa	acttttgttt	5280

tggtttaact gaatcatttt ttaacttaaa aagctggaaa atatcaaag ctgttttttt 5340
 tttttcattg tcaacagtgg tgtgtcattt tatgtatgtt cctaagtgtt atggaactcc 5400
 tccaaaataa agttactcaa agagagcaaa ta 5432

<210> 5
 <211> 552
 <212> PRT
 <213> Homo sapiens

<400> 5

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

Leu Ala Ala Gly Leu Arg Leu Leu Pro Met Leu Gly Leu Leu Gln Leu
 20 25 30

Leu Ala Glu Pro Gly Leu Gly Arg Val His His Leu Ala Leu Lys Asp
 35 40 45

Asp Val Arg His Lys Val His Leu Asn Thr Phe Gly Phe Phe Lys Asp
 50 55 60

Gly Tyr Met Val Val Asn Val Ser Ser Leu Ser Leu Asn Glu Pro Glu
 65 70 75 80

Asp Lys Asp Val Thr Ile Gly Phe Ser Leu Asp Arg Thr Lys Asn Asp
 85 90 95

Gly Phe Ser Ser Tyr Leu Asp Glu Asp Val Asn Tyr Cys Ile Leu Lys
 100 105 110

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

Glu Val Arg Val Lys Ser Pro Pro Glu Ala Gly Thr Gln Leu Pro Lys
 130 135 140

Ile Ile Phe Ser Arg Asp Glu Lys Val Leu Gly Gln Ser Gln Glu Pro
 145 150 155 160

Asn Val Asn Pro Ala Ser Ala Gly Asn Gln Thr Gln Lys Thr Gln Asp
 165 170 175

Gly Gly Lys Ser Lys Arg Ser Thr Val Asp Ser Lys Ala Met Gly Glu
 180 185 190

Lys Ser Phe Ser Val His Asn Asn Gly Gly Ala Val Ser Phe Gln Phe
 195 200 205

Phe Phe Asn Ile Ser Thr Asp Asp Gln Glu Gly Leu Tyr Ser Leu Tyr
 210 215 220

Phe His Lys Cys Leu Gly Lys Glu Leu Pro Ser Asp Lys Phe Thr Phe
 225 230 235 240

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

Ala Gly Glu Ile Pro Leu Pro Lys Leu Tyr Ile Ser Met Ala Phe Phe
 260 265 270

Phe Phe Leu Ser Gly Thr Ile Trp Ile His Ile Leu Arg Lys Arg Arg
 275 280 285

Asn Asp Val Phe Lys Ile His Trp Leu Met Ala Ala Leu Pro Phe Thr
 290 295 300

Lys Ser Leu Ser Leu Val Phe His Ala Ile Asp Tyr His Tyr Ile Ser
 305 310 315 320

Ser Gln Gly Phe Pro Ile Glu Gly Trp Ala Val Val Tyr Tyr Ile Thr
 325 330 335

His Leu Leu Lys Gly Ala Leu Leu Phe Ile Thr Ile Ala Leu Ile Gly
 340 345 350

Thr Gly Trp Ala Phe Ile Lys His Ile Leu Ser Asp Lys Asp Lys Lys
 355 360 365

Ile Phe Met Ile Val Ile Pro Leu Gln Val Leu Ala Asn Val Ala Tyr
 370 375 380

Ile Ile Ile Glu Ser Thr Glu Glu Gly Thr Thr Glu Tyr Gly Leu Trp
 385 390 395 400

Lys Asp Ser Leu Phe Leu Val Asp Leu Leu Cys Cys Gly Ala Ile Leu
 405 410 415

Phe Pro Val Val Trp Ser Ile Arg His Leu Gln Glu Ala Ser Ala Thr
 420 425 430

Asp Gly Lys Ala Ala Ile Asn Leu Ala Lys Leu Lys Leu Phe Arg His

435

440

445

Tyr Tyr Val Leu Ile Val Cys Tyr Ile Tyr Phe Thr Arg Ile Ile Ala
 450 455 460

Phe Leu Leu Lys Leu Ala Val Pro Phe Gln Trp Lys Trp Leu Tyr Gln
 465 470 475 480

Leu Leu Asp Glu Thr Ala Thr Leu Val Phe Phe Val Leu Thr Gly Tyr
 485 490 495

Lys Phe Arg Pro Ala Ser Asp Asn Pro Tyr Leu Gln Leu Ser Gln Glu
 500 505 510

Glu Glu Asp Leu Glu Met Glu Ser Val Val Thr Thr Ser Gly Val Met
 515 520 525

Glu Ser Met Lys Lys Val Lys Lys Val Thr Asn Gly Ser Val Glu Pro
 530 535 540

Gln Gly Glu Trp Glu Gly Ala Val
 545 550

<210> 6

<211> 600

<212> PRT

<213> Homo sapiens

<400> 6

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

Leu Ala Ala Gly Leu Arg Leu Leu Pro Met Leu Gly Leu Leu Gln Leu
 20 25 30

Leu Ala Glu Pro Gly Leu Gly Arg Val His His Leu Ala Leu Lys Asp
 35 40 45

Asp Val Arg His Lys Val His Leu Asn Thr Phe Gly Phe Phe Lys Asp
 50 55 60

Gly Tyr Met Val Val Asn Val Ser Ser Leu Ser Leu Asn Glu Pro Glu
 65 70 75 80

Asp Lys Asp Val Thr Ile Gly Phe Ser Leu Asp Arg Thr Lys Asn Asp
 85 90 95

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

Thr Gly Trp Ala Phe Ile Lys His Ile Leu Ser Asp Lys Asp Lys Lys
 355 360 365

Ile Phe Met Ile Val Ile Pro Leu Gln Val Leu Ala Asn Val Ala Tyr
 370 375 380

Ile Ile Ile Glu Ser Thr Glu Glu Gly Thr Thr Glu Tyr Gly Leu Trp
 385 390 395 400

Lys Asp Ser Leu Phe Leu Val Asp Leu Leu Cys Cys Gly Ala Ile Leu
 405 410 415

Phe Pro Val Val Trp Ser Ile Arg His Leu Gln Glu Ala Ser Ala Thr
 420 425 430

Asp Gly Lys Gly Asp Ser Met Gly Pro Leu Gln Gln Arg Ala Asn Leu
 435 440 445

Arg Ala Gly Ser Arg Ile Glu Ser His His Phe Ala Gln Ala Asp Leu
 450 455 460

Glu Leu Leu Ala Ser Ser Cys Pro Pro Ala Ser Val Ser Gln Arg Ala
 465 470 475 480

Gly Ile Thr Ala Ala Ile Asn Leu Ala Lys Leu Lys Leu Phe Arg His
 485 490 495

Tyr Tyr Val Leu Ile Val Cys Tyr Ile Tyr Phe Thr Arg Ile Ile Ala
 500 505 510

Phe Leu Leu Lys Leu Ala Val Pro Phe Gln Trp Lys Trp Leu Tyr Gln
 515 520 525

Leu Leu Asp Glu Thr Ala Thr Leu Val Phe Phe Val Leu Thr Gly Tyr
 530 535 540

Lys Phe Arg Pro Ala Ser Asp Asn Pro Tyr Leu Gln Leu Ser Gln Glu
 545 550 555 560

Glu Glu Asp Leu Glu Met Glu Ser Val Val Thr Thr Ser Gly Val Met
 565 570 575

Glu Ser Met Lys Lys Val Lys Lys Val Thr Asn Gly Ser Val Glu Pro
 580 585 590

Gln Gly Glu Trp Glu Gly Ala Val
 595 600

<210> 7
 <211> 600
 <212> PRT
 <213> Homo sapiens

<400> 7

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

Leu Ala Ala Gly Leu Arg Leu Leu Pro Met Leu Gly Leu Leu Gln Leu
 20 25 30

Leu Ala Glu Pro Gly Leu Gly Arg Val His His Leu Ala Leu Lys Asp
 35 40 45

Asp Val Arg His Lys Val His Leu Asn Thr Phe Gly Phe Phe Lys Asp
 50 55 60

Gly Tyr Met Val Val Asn Val Ser Ser Leu Ser Leu Asn Glu Pro Glu
 65 70 75 80

Asp Lys Asp Val Thr Ile Gly Phe Ser Leu Asp Arg Thr Lys Asn Asp
 85 90 95

Gly Phe Ser Ser Tyr Leu Asp Glu Asp Val Asn Tyr Cys Ile Leu Lys
 100 105 110

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

Glu Val Arg Val Lys Ser Pro Pro Glu Ala Gly Thr Gln Leu Pro Lys
 130 135 140

Ile Ile Phe Ser Arg Asp Glu Lys Val Leu Gly Gln Ser Gln Glu Pro
 145 150 155 160

Asn Val Asn Pro Ala Ser Ala Gly Asn Gln Thr Gln Lys Thr Gln Asp
 165 170 175

Gly Gly Lys Ser Lys Arg Ser Thr Val Asp Ser Lys Ala Met Gly Glu
 180 185 190

Lys Ser Phe Ser Val His Asn Asn Gly Gly Ala Val Ser Phe Gln Phe
 195 200 205

Phe Phe Asn Ile Ser Thr Asp Asp Gln Glu Gly Leu Tyr Ser Leu Tyr
 210 215 220

Phe His Lys Cys Leu Gly Lys Glu Leu Pro Ser Asp Lys Phe Thr Phe
 225 230 235 240

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

Ala Gly Glu Ile Pro Leu Pro Lys Leu Tyr Ile Ser Met Ala Phe Phe
 260 265 270

Phe Phe Leu Ser Gly Thr Ile Trp Ile His Ile Leu Arg Lys Arg Arg
 275 280 285

Asn Asp Val Phe Lys Ile His Trp Leu Met Ala Ala Leu Pro Phe Thr
 290 295 300

Lys Ser Leu Ser Leu Val Phe His Ala Ile Asp Tyr His Tyr Ile Ser
 305 310 315 320

Ser Gln Gly Phe Pro Ile Glu Gly Trp Ala Val Val Tyr Tyr Ile Thr
 325 330 335

His Leu Leu Lys Gly Ala Leu Leu Phe Ile Thr Ile Ala Leu Ile Gly
 340 345 350

Thr Gly Trp Ala Phe Ile Lys His Ile Leu Ser Asp Lys Asp Lys Lys
 355 360 365

Ile Phe Met Ile Val Ile Pro Leu Gln Val Leu Ala Asn Val Ala Tyr
 370 375 380

Ile Ile Ile Glu Ser Thr Glu Glu Gly Thr Thr Glu Tyr Gly Leu Trp
 385 390 395 400

Lys Asp Ser Leu Phe Leu Val Asp Leu Leu Cys Cys Gly Ala Ile Leu
 405 410 415

Phe Pro Val Val Trp Ser Ile Arg His Leu Gln Glu Ala Ser Ala Thr
 420 425 430

Asp Gly Lys Gly Asp Ser Met Gly Pro Leu Gln Gln Arg Ala Asn Leu
 435 440 445

Arg Ala Gly Ser Arg Ile Glu Ser His His Phe Ala Gln Ala Asp Leu

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

 <210> 8
 <211> 6874
 <212> DNA
 <213> Homo sapiens

 <400> 8
 ccgaggtggg cagcacaggc tcctcgacga cttcctaggt cgcaatctcc aggaaaacga 60
 ccacagggtc agcggagcta gccgccgagc cccgctcccc gggcccttcc ggcggctgcg 120
 ccctttcacc ccggacgtgg gcgggagagg aagcggctgg tgatgctgga acaaacatgg 180
 ccgctctggc gcccgtcggc tccccgcct cccgcggtcc taggctggcc gcgggcctcc 240
 ggctgctccc aatgctgggt ttgctgcagt tgctggccga gcctggcctg ggccgcgtcc 300
 atcacctggc actcaaggat gatgtgaggc ataaagtcca tctgaacacc tttggcttct 360
 tcaaggatgg gtacatggtg gtgaatgtca gtagcctctc actgaatgag cctgaagaca 420
 aggatgtgac tattggattt agcctagacc gtacaaagaa tgatggcttt tcttcttacc 480
 tggatgaaga tgtgaattac tgtatttttaa agaaacagtc tgtctctgtc acccttttaa 540

tcctagacat	ctccagaagt	gaggtaagag	taaagtctcc	accagaagct	ggtacccagt	600
taccaaagat	catcttcagc	agggatgaga	aagtccttgg	tcagagccag	gagcctaattg	660
ttaaccctgc	ttcagcaggc	aaccagaccc	agaagacaca	agatgggtgga	aagtctaaaa	720
gaagtacagt	ggattcaaag	gcatgaggag	agaaatcctt	ttctgttcat	aataatgggtg	780
gggcagtgtc	atttcagttt	ttctttaaca	tcagcactga	tgaccaagaa	ggcctttaca	840
gtctttattt	tcataaatgc	cttggaaaag	aattgccaaag	tgacaagttt	acattcagcc	900
ttgatattga	gatcacagag	aagaatcctg	acagctacct	ctcagcagga	gaaattcctc	960
tccccaaatt	atacatctca	atggcctttt	tcttctttct	ttctgggacc	atctggattc	1020
atatccttcg	aaaacgacgg	aatgatgtat	ttaaaatcca	ctggctgatg	gcggcccttc	1080
ctttcaccaa	gtctctttcc	ttgggtgttc	atgcaattga	ctaccactac	atctctctcc	1140
agggcttccc	tatcgaaggc	tgggctgttg	tgtactacat	aactcacctt	ttgaaagggg	1200
cgctactctt	catcaccatt	gcactcattg	gcactggctg	ggctttcatt	aagcacatcc	1260
tttctgataa	agacaaaaag	atcttcatga	ttgtcattcc	actccaggtc	ctggcaaattg	1320
tagcctacat	catcatagag	tccaccgagg	agggcacgac	tgaatatggc	ttgtggaagg	1380
actctctatt	tctggctcgac	ctgttgtgtt	gtggtgccat	cctcttccca	gtgggtgtggt	1440
caatcagaca	tttacaagaa	gcatcagcaa	cagatggaaa	agctgctatt	aacttagcaa	1500
agctgaaact	tttcagacat	tattacgtct	tgattgtgtg	ttacatatac	ttcactagga	1560
tcattgcatt	tctcctcaaa	ctcgtgtttc	cattccagtg	gaagtggctc	taccagctcc	1620
tggatgaaac	ggccacactg	gtcttctttg	ttctaacggg	gtataaattc	cgctccggctt	1680
cagataaacc	ctacctacaa	ctttctcagg	aagaagaaga	cttggaatg	gagtccgttg	1740
tgacaacatc	tggggtgatg	gaaagtatga	agaaagtcaa	gaaggtgacc	aacgggctccg	1800
tggagcccca	gggcgagtgg	gaaggcgccg	tgtgacagag	ccgaccctga	ggatggcact	1860
gtccaaggaa	actgttaact	tattcatagt	cctattggac	agcaggagca	gctcctacag	1920
tgaactattg	gcaccaccga	cagtgcacc	agggcacatg	gctggagcac	agtgccgcgg	1980
aaacctgatt	ttgtactctc	ttttatggaa	acgatctgtg	gctgtttaga	ggcagctgga	2040
tcctctttca	ggcgggaatg	ggagggcggg	cacagggagg	aggagaggaa	gagaaaagga	2100
agaattcatt	tttaatttag	gtttcttttt	ttcttcttca	tttcggagct	ctaagggtgta	2160
tgcagtgtgtg	accccatgtg	tggggaagtg	tagcaaggac	ggctgggtgga	gggggaagga	2220
gggtgcgagg	tgtctgtctg	atgcttttag	aaatgtctac	tgaggaccct	gggacttaag	2280
aagaagggcg	gggagagtgc	cattgcctgt	ttgggagaca	aaaatgaacg	aaaacaggtg	2340
actttggaaa	gcaaagtcaa	aaccagttt	aggatgtagc	acctgcccc	ggattcctgc	2400

cctcggtttt	gccccagacc	cttattccag	atgctgagag	tgaccaggac	agcagctcct	2460
gaggcccagt	ggtcttcttt	ccaacaggaa	aagaaggctg	tgatgtcgct	gtcaggatca	2520
tgccctgtgg	cacagcacag	gtggtgggag	gtggttttct	gactgagatg	ttgcctgatg	2580
gatggaaaga	aatgtatttt	taagttcaaa	aagcattatc	ctgtggcggt	gcctggacat	2640
ccactccctg	acagcccaga	gcagcactgt	ctggcttccc	ttcatgcttg	tggctttggt	2700
gtgtttgatc	agaatttttg	gggaaatgga	aagttttcct	caaggagcag	ctgggggcag	2760
aataggtagt	atttaagcaa	atacttaagt	ccaagcaaat	catccccatt	aaaaagcttt	2820
tcctgtaggc	tagtaggatt	tctaaataga	tgaattcaac	agacttggtc	cccatagtcc	2880
aagagtatgt	atgtgaagaa	agtgaagcatg	attcaacagt	ttcactctca	gggattttag	2940
gatggcaaaa	tacttcacag	aaactcaatg	attaagttcc	cttcacact	tccagagctt	3000
gaatgaacac	aggtagccac	ctaaattgag	cagtattgca	actcagagag	aaaatcatct	3060
gaatagtagg	acaagctcag	aaggtagcatt	gtgactgagg	gcttaaaagg	agacaaaaac	3120
atggccccat	cagggaagct	tcttaatgct	tggggggcca	gctaggtagg	gttgcttcca	3180
aaagctggag	cccacccctg	cctaggggtt	gtcagagagc	cacacctgca	ggggaacagg	3240
tacctccgag	ggtgagagtc	gtggtctctg	ggagttgttt	tctcacctct	ggcttagaag	3300
ggtcaggcag	aaaccacagg	atgtggggtc	acactcactg	tccaagttt	gggaacctga	3360
aaaagtctcc	attcagaaca	tggttgttct	ccctgtccca	tgctatctta	tcttcctaaa	3420
tgactaatga	ggaagcgggt	gttctttttc	tgcactttga	ttcgccatct	gggttctgta	3480
gggtgctctg	aagggtgtgat	ctgccttctg	gctgatgtgg	aggaagagca	agcgcttcc	3540
caggccacag	ctgctcacct	ctcggcagat	attttaggca	agcatccgtg	tgtcttccca	3600
tcttcaggag	aaaggtaaat	gcaccctaag	tgttcacttc	tggacctttt	tcaagttcac	3660
ttgggactgt	gtgacagaag	ggagttggag	ggaggatggg	aatattttta	acactttggt	3720
ttcctgtgca	gaaacataat	accagttttc	gcagaaatgt	gtctcaatct	gtgactacca	3780
aagccctcct	cagtccttcc	ctcagaggga	cacatttgct	gtttctcccg	caagcagatg	3840
ttgtggatga	ggcgatagac	tccttggtgaa	gaacgaaagg	tgtgatgaaa	cctccctgct	3900
cggaagggtc	tccgtggagg	tgtcctcatt	tcacatgctg	ggttttgcaa	gcgagggaagc	3960
caggcagtgg	aggaactaga	gagaggcagg	cgtgtgtgtg	gacaagcgct	ggagccgcag	4020
ccctcagact	ggcacgggaa	cgccagcggt	gggtgttcag	attccacgcg	tatgtctggg	4080
ctcactcaca	gcatggccga	gtgtctgcag	tgctggtcct	gacccttcca	gagcagcagt	4140
ggacagatga	gataagactg	tttcagaaac	aaagatggcc	acagccttcc	taacaagcag	4200
gtcatctggc	catgtctgta	ttgtaactgg	taaaaggctt	caagtcagat	tgatgatcaa	4260

gaaaagtcaa	aacccccagcc	caagattggg	aaagcaggtg	gtgggttccaa	gcttttataaa	4320
aattattgaa	gctctccatc	ctgttctgtg	agtgtgtctt	ctctttctcc	ttcacgtcat	4380
agccgtgacc	caccgttcat	ctctgctctt	gcgtaaagat	gaccgatgga	gtccaaagcc	4440
aagtggcttc	accagctgac	aagccaccct	cctgcagcct	gagtttcaca	gtccactggg	4500
ttcgttgtca	tgcggtgttt	gaatgggttaa	gcccttgtag	tatttcagat	cgggcaaaaa	4560
atatcggatg	cacatagcag	aaccattggg	ggtatttata	gctttgcttt	gtactcctca	4620
ctgtttctgc	ctacgcaaaa	tatccatgtt	tcctctgaga	aatctgttgt	ggactgaaag	4680
cgtctgtggc	tgtgaaatth	aataaagtgt	gtatgctttg	ctagaaaatt	atttcttggg	4740
caataggaac	agtcattgat	ctgtaaatcc	tggctcttaa	cagttagtgg	ccaaggactt	4800
gatcagccca	tttcttggtc	cctcagtgtc	ttaaaattta	agtagcactg	cattttgtaa	4860
tgttgaatat	gactctagtg	acttgtagga	ggcacttggt	aggagatgct	tgcttcagtg	4920
taaaagatgc	tcatggcctg	agtcagttga	gttttctttc	aagaaaccac	ttcagagtga	4980
aatatccagg	gtttccccgc	cctggacatg	tccagcctgc	ccaggcagca	cacagccctg	5040
taagtccacc	tcgtgtgggt	gagatttcct	cctgcgtgat	gacctcatcg	ccatctctgc	5100
tgtctcattc	cacagcctcc	ctccctcttc	tctcctcctc	tgccctcgcc	cttccccctt	5160
ccccatcccc	tccccctcct	cctctgccct	cgcccttacc	cctccccctt	ccccttcgcg	5220
tcctcctccc	tcctccacct	ctttctcctc	ctccttcctc	cctcctccct	cctcttcctc	5280
tctctgccat	ctttctcccc	gtgcctattg	atccacata	ggctcattct	gggtacaccg	5340
gctaaaggct	ttggtgcatt	gcagcgtttt	ctcccagcag	ctgtgtgaaa	gatgcatttt	5400
ctaagctaag	gagaattttc	tcaagagtgg	catactcatg	ccaaatatta	ttgctctggg	5460
ccatataggc	tgggtcttct	ccacactaaa	atgggtgtct	tgttttggtg	cttaaaacag	5520
tctactccag	gcattccagtc	cttacagacc	aaggaagagc	atagcgatgc	ctgttggaat	5580
tgcagatgca	ttctggcctt	ctccccgcgc	ctgaaacatt	ttctttgagg	aaggctctta	5640
gaacattaga	tagtctgctg	aggttgttgg	cccagctcca	tacaccagct	agaacagtgg	5700
aacaactcat	gcttcatgct	gccaagctgc	tgtacttcaa	aggaaacaga	tctagcacac	5760
tgctgcaccc	ctgcttcac	actccacact	tcaccccgct	gcttttctct	gacccgcccc	5820
tggccttgta	agactcacgt	aagctaagtc	caggatgcct	gtggcctgcg	gcttgattct	5880
tccttttagg	attcagcaag	ttaatggctt	cctcgctata	gaagtgagac	tttgacttga	5940
tgctcttggg	tatatcaaaa	agatattcat	ccagaaagta	ccaaatgttc	tgaagacccc	6000
gctcttcaact	ccagttttcc	ctaggggtgt	tctggcaggg	cgttttttaa	aggcatctac	6060
ctgagttgac	gctaataact	gtcaccacct	ggaacgtagt	tatcggtcgg	caggctgaac	6120


```

atactccaga ttccccagag gccacttctg tagcccagcg atgcatctga gcctctctgc 6180
gtggttttatg cttgaaaaat agataatgct tttagatggg tcaactgccag gccatggggc 6240
ccacacatct caggccctgt gtgagggagc aactgagat ggtgcaggag tgaatgggca 6300
tggcttggcc tcgctacctc ggggacctgt tggagtctct gcagcagggt gtctgcagg 6360
gggacggcgt tctgggcaga gtcagaatgg tcagaatgaa acagaacagc caactcacc 6420
acaggacagc ttattttgag gcaagggttt ggatttttga ggaagcagcc agatgaggcg 6480
gtgagcctcc agaaggtcag cttttggagc acgtaagata ctgttacagg gtccagaaat 6540
cgtgttcaca tgggggcttt gactcttcaa acagcttttg cagatcgtaa attgcatttg 6600
cctagtcgtg tgacctcaaa agaagtcaga catatttaat ccagaaatag tttcgtttga 6660
gggagggcct gcaggctctgt aaatagcatt tgctttcctg gttagagatt gggatgcaga 6720
aggagttttc agtatttttt ttaaaacact aatgatcatt gaagagtatt tatgtaaaca 6780
tacaacgtat aatgggtggg ggatccgatc atgggtgatgt acggggtgaa ttctcttgcc 6840
gtgttgcaaa tgtgtaaaat aaagattatc tggc 6874

```

```

<210> 9
<211> 7018
<212> DNA
<213> Homo sapiens

```

```

<400> 9
ccgagggtggg cagcacaggc tcctcgacga cttcctaggt cgcaatctcc aggaaaacga 60
ccacagggtc agcggagcta gccgccgagc cccgctcccc gggcccttcc ggcggtctgcg 120
ccctttcacc ccggacgtgg gcgggagagg aagcggctgg tgatgctgga acaaacatgg 180
ccgctctggc gcccgctggc tccccgcct cccgcggtcc taggctggcc gcgggcctcc 240
ggctgctccc aatgctgggt ttgctgcagt tgctggccga gcctggcctg ggccgcgtcc 300
atcacctggc actcaaggat gatgtgaggc ataaagttca tctgaacacc tttggcttct 360
tcaaggatgg gtacatgggt gtgaatgtca gtagcctctc actgaatgag cctgaagaca 420
aggatgtgac tattggatth agcctagacc gtacaaagaa tgatggcttt tcttcttacc 480
tgatgaaga tgtgaattac tgtattttta agaaacagtc tgtctctgtc acccttttaa 540
tcctagacat ctccagaagt gaggtaagag taaagtctcc accagaagct ggtaccag 600
taccaaagat catcttcagc agggatgaga aagtccttgg tcagagccag gagcctaatt 660
ttaaccctgc ttcagcaggc aaccagaccc agaagacaca agatgggtgga aagtctaaaa 720
gaagtacagt ggattcaaag gccatgggag agaaatcctt ttctgttcat aataatgggtg 780
gggcagtgtc atttcagttt ttctttaaca tcagcactga tgaccaagaa ggcctttaca 840

```

gtctttatatt	tcataaatgc	cttggaanaag	aattgccaag	tgacaagttt	acattcagcc	900
ttgatattga	gatcacagag	aagaatcctg	acagctacct	ctcagcagga	gaaattcctc	960
tcccaaat	atacatctca	atggcctttt	tcttctttct	ttctgggacc	atctggattc	1020
atatccttcg	aaaacgacgg	aatgatgtat	ttaaaatcca	ctggctgatg	gcggcccttc	1080
ctttcaccaa	gtctctttcc	ttggtgttcc	atgcaattga	ctaccactac	atctcctccc	1140
agggcttccc	tatcgaaggc	tgggctgttg	tgtactacat	aactcacctt	ttgaaagggg	1200
cgctactctt	catcaccatt	gcactcattg	gcactggctg	ggctttcatt	aagcacatcc	1260
tttctgataa	agacaaaaag	atcttcatga	ttgtcattcc	actccaggtc	ctggcaaatg	1320
tagcctacat	catcatagag	tccaccgagg	agggcacgac	tgaatatggc	ttgtggaagg	1380
actctctatt	tctggctcgac	ctgttgtgtt	gtggtgccat	cctcttccca	gtgggtgtgtt	1440
caatcagaca	tttacaagaa	gcatcagcaa	cagatggaaa	aggtgacagc	atgggacctc	1500
ttcagcagag	agcgaatcta	agagcaggaa	gtcgcataga	gtctcaccat	tttgcccagg	1560
ctgatcttga	actcctggcc	tctagctgtc	ctcctgcctc	agtctcccaa	agggctggga	1620
ttacagctgc	tattaactta	gcaaagctga	aacttttcag	acattattac	gtcttgattg	1680
tgtgttacat	atacttcact	aggatcattg	catttctcct	caaactcgct	gttccattcc	1740
agtggaagtg	gctctaccag	ctcctggatg	aaacggccac	actggtcttc	tttgttctaa	1800
cggggtataa	attccgtccg	gcttcagata	accctacct	acaactttct	caggaagaag	1860
aagacttgga	aatggagtcc	gttgtgacaa	catctggggg	gatggaaagt	atgaagaaag	1920
tcaagaaggt	gaccaacggc	tccgtggagc	cccagggcga	gtgggaaggc	gccgtgtgac	1980
agagccgacc	ctgaggatgg	cactgtccaa	ggaaactggt	aacttattca	tagtcctatt	2040
ggacagcagg	agcagctcct	acagtgaact	attggcacca	ccgacagtga	caccagggca	2100
catggctgga	gcacagtgcc	gcggaaacct	gattttgtac	tctcttttat	ggaaacgatc	2160
tgtggctgtt	tagaggcagc	tggatcctct	ttcaggcggg	aatgggaggg	cgggcacagg	2220
gaggaggaga	ggaagagaaa	aggaagaatt	catttttaat	ttaggtttct	ttttttcttc	2280
ttcatttcgg	agctctaagg	tgtatgcagt	tgtgacccca	tgtgtgggga	agtgtagcaa	2340
ggacggctgg	tggaggggga	aggaggggtc	gagggtgtctg	tctgatgctt	taggaaatgt	2400
ctactgagga	ccctgggact	taagaagaag	ggcggggaga	gtgccattgc	ctgtttggga	2460
gacaaaaatg	aacgaaaaca	ggtgactttg	gaaagcaaag	tcaaaacca	gtttaggatg	2520
tagcacctgc	cccaggattc	ctgccctcgg	ctttgcccc	gacccttatt	ccagatgctg	2580
agagtgacca	ggacagcagc	tcctgaggcc	cagtgggtctt	ctttccaaca	ggaaaagaag	2640
gctgtgatgt	cgctgtcagg	atcatgccct	gtggcacagc	acaggtgggtg	ggaggtgggtt	2700

ttctgactga gatgttgcct gatggatgga aagaaatgta tttttaagtt caaaaagcat	2760
tatcctgtgg cgttgcctgg acatccactc cctgacagcc cagagcagca ctgtctggct	2820
tcccttcatg cttgtggcctt tgttgtgttt gatcagaatt ttgggggaaa tggaaagttt	2880
tcctcaagga gcagctgggg gcagaatagg tagtatttaa gcaaatactt aagtccaagc	2940
aaatcatccc cattaataaag cttttcctgt aggctagtag gatttctaaa tagatgaatt	3000
caacagactt ggtccccata gtccaagagt atgtatgtga agaaagtgag catgattcaa	3060
cagtttact ctcagggatt ttaggatggc aaaatacttc acagaaactc aatgattaag	3120
ttcccttcca cacttccaga gcttgaatga acacaggtag ccacctaaat tgagcagtat	3180
tgcaactcag agagaaaatc atctgaatag taggacaagc tcagaaggta cattgtgact	3240
gagggcttaa aaggagacca aaacatggcc ccatcagga agcttcttaa tgcttggggg	3300
gccagctagg tagggttgct tccaaaagct ggagcccacc cctgcctagg gttgtcaga	3360
gagccacacc tgcaggggaa caggtaacct cgagggtag agtcgtggc tctgggagtt	3420
gttttctcac ctctggctta gaagggtcag gcagaaacca caggatgtgg ggtcacactc	3480
actgtcccaa gtttggaac ctgaaaaagt ctccattcag aacatggttg ttctccctgt	3540
cccatgctat cttatcttcc taaatgacta atgaggaagc ggggtgttctt tttctgcact	3600
ttgattcgcc atctgggttc tgtaggggtc tctgaagggtg tgatctgcct tctggctgat	3660
gtggaggaag agcaagcgcc ttcccaggcc acagctgctc acctctcggc agatatttta	3720
ggcaagcatc cgtgtgtctt cccatcttca ggagaaagg aaatgcaccc taagtgttca	3780
cttctggacc tttttcaagt tcaactggga ctgtgtgaca gaaggagtt ggaggagga	3840
tgggaatatt tttaacactt tgttttcctg tgcagaaaca taataccagt tttcgagaa	3900
atgtgtctca atctgtgact accaaagccc tctcagtc ttcctcaga gggacacatt	3960
tgctgtttct cccgcaagca gatgttgtg atgaggcgat agactccttg gcaagaacga	4020
aagggtgat gaaacctccc tgctcggaag ggtctccgtg gaggtgtcct catttcacat	4080
gctgggtttt gcaagcgagg aagccaggca gtggaggaac tagagagagg caggcgtgtg	4140
tgtggacaag cgctggagcc gcagccctca gactggcacg ggaacgccag cgttgggtgt	4200
tcagattcca cgcgtatgtc tgggctcact cacagcatgg ccgagtgtct gcagtgtgg	4260
tcctgaccct tccagagcag cagtggacag atgagataag actgtttcag aaacaaagat	4320
ggccacagcc ttctaataa gcaggtcatc tggccatgtc tgtattgtaa ctggtaaaag	4380
gcttcaagtc agattgatga tcaagaaaag tcaaaaaccc agcccaagat tgggaaagca	4440
ggtggtggtt ccaagctttt aaaaaattat tgaagctctc catcctgttc tgtgagtgtg	4500
tcttctcttt ctcttccag tcatagccgt gaccacccgt tcctctctgc tcttgcgtaa	4560

agatgaccga	tggagtccaa	agccaagtgg	cttcaccagc	tgacaagcca	ccctcctgca	4620
gcctgagttt	cacagtccac	tgggttcggt	gtcatgcggt	gtttgaatgg	ttaagccctt	4680
gcagtatttc	agatcgggca	aaaaatatcg	gatgcacata	gcagaaccat	tggtgggtatt	4740
tatagctttg	ctttgtactc	ctcactgttt	ctgcctacgc	aaaatatcca	tgtttcctct	4800
gagaaatctg	ttgtggactg	aaagcgctgc	tggctgtgaa	atttaataaa	gtgtgtatgc	4860
tttgctagaa	aattatttct	tggacaatag	gaacagtcac	tgatctgtaa	atcctggctc	4920
ttaacagtga	gtggccaagg	acttgatcag	cccattttct	ggccctcag	tgctttaaaa	4980
tttaagtagc	actgcatttt	gtaatgttga	atatgactct	agtgacttgt	aggaggcact	5040
tgtgaggaga	tgcttgcttc	agtgtaaaag	atgctcatgg	cctgagtcag	ttgagttttc	5100
tttcaagaaa	ccacttcaga	gtgaaatatc	cagggtttcc	ccgccctgga	catgtccagc	5160
ctgcccaggc	agcacacagc	cctgtaagtc	cacctcgtgt	gggtgagatt	tcctcctgcg	5220
tgatgacctc	atcgccatct	ctgctgtctc	attccacagc	ctccctccct	cttctctcct	5280
cctctgccct	cgcccttccc	ccttccccat	cccctcccc	tcctcctctg	ccctcgccct	5340
tacccctccc	ccttccccct	ccgctcctcc	tcctcctcc	acctctttct	cctcctcctt	5400
ccctcctcct	ccctcctctt	cccttctctg	ccatctttct	ccccgtgcct	attgatccca	5460
cataggctca	ttctgggtac	accggctaaa	ggctttggtg	cattgcagcg	ttttctccca	5520
gcagctgtgt	gaaagatgca	ttttctaagc	taaggagaat	tttctcaaga	gtggcatact	5580
catgccaaat	attattgctc	tgggccatat	aggctggtct	tcctccacac	taaaatgggt	5640
gtcttgTTTT	ggtacttaaa	acagtctact	ccaggcatcc	agtccttaca	gaccaaggaa	5700
gagcatagcg	atgcctgttg	gaattgcaga	tgcatctctg	ccttctcccc	cgctctgaaa	5760
cattttcttt	gaggaaggct	cttagaacat	tagatagtct	gctgagggtg	ttggcccagc	5820
tccatacacc	cagtagaaca	gtggaacaac	tcatgcttca	tgctgccaag	ctgctgtact	5880
tcaaaggaaa	cagatctagc	acactgctgc	accctgctt	ccacactcca	cacttcaccc	5940
cgctgctttt	ctctgaccgg	cccctggcct	tgtaagactc	acgtaagcta	agtccaggat	6000
gcctgtggcc	tgcggcttga	ttcttccctt	taggattcag	caagttaatg	gcttcctcgc	6060
tatagaagtg	agactttgac	ttgatgcctc	ttggtatatc	aaaaagatat	tcatccagaa	6120
agtaccaa	gttctgaaa	acccgctctt	cactccagtt	ttccctaggg	tgtttctggc	6180
aggcggtttt	taaaaggcat	ctacctgagt	tgacgcta	acttgtcacc	acctggaacg	6240
tagttatcgg	tcggcaggct	gaacatactc	cagattcccc	agaggccact	tctgtagccc	6300
agcgatgcat	ctgagcctct	ctgcgtgggt	tatgcttgaa	aaatagataa	tgctttttaga	6360
tggttcactg	ccaggccatg	ggccccacac	atctcaggcc	ctgtgtgagg	gagcacactg	6420

```

agatggtgca ggagtgaatg ggcattggctt ggcctcgcta cctcggggac ctgttggagt 6480
tctggcagca ggggtgtctgc aggtgggacg gcgttctggg cagagtcaga atggtcagaa 6540
tgaaacagaa cagccaactc acccacagga cagcttattt tgaggcaagg ttttggattt 6600
tggaggaagc agccagatga ggcggtgagc ctccagaagg tcagcctttg gagcacgtaa 6660
gatactgtta caggggtccag aaatcgtgtt cacatggggg ctttgactct tcaaacagct 6720
tttgcagatc gtaaattgca tttgcctagt cgtgtgacct caaaagaagt cagacatatt 6780
taatccagaa atagtttctg ttgagggagg gcttgcaggt ctgtaaatag catttgcttt 6840
cctggttaga gattgggatg cagaaggagt tttcagtatt ttttttaaaa cactaatgat 6900
cattgaagag tatttatgta aacatacaac gtataatggg tgggggatcc gatcatgggtg 6960
atgtacgggg tgaattctct tgccgtgttg caaatgtgta aaataaagat tatctggc 7018

```

```

<210> 10
<211> 7353
<212> DNA
<213> Homo sapiens

```

```

<400> 10
attattgcaa ccatttcgct tgtattttgag tgtgaagcgc ctagaaaacc acaggacccc 60
tacggcgagc cggaatttt tagatatattt cctccgagtc aacgctcagt gaaatcagtt 120
caatcagtgg cccgacaccg tgcggctgac acagcttatt ccccgaccct gagatcaggg 180
gtccccggag cccaaggctg cttccaaagc tcagcgaggc ggaggtgcgg cccgggctgg 240
tctggttcgg ccaccgttgt tatggcaacc gccaataggt tggcttcatt tctaactgaa 300
agtctgcaca ggagcggccg atcgaagggc cccgaggtgg gcagcacagg ctctctgacg 360
acttcctagg tcgcaatctc caggaaaacg accacagggc cagcggagct agccgccgag 420
ccccgctccc cgggcccttc cggcggtgac gccctttcac cccggacgtg ggcgggagag 480
gaagcggctg gtgatgctgg aacaaacatg gccgctctgg cgcccgctcg ctccccgcc 540
tcccgcggtc ctaggctggc cgcgggcctc cggtgctcc caatgctggg tttgctgcag 600
ttgctggccg agcctggcct gggccgctc catcacctgg cactcaagga tgatgtgagg 660
cataaagttc atctgaacac ctttggcttc ttcaaggatg ggtacatggg ggtgaatgtc 720
agtagcctct cactgaatga gcctgaagac aaggatgtga ctattggatt tagcctagac 780
cgtacaaaga atgatggctt ttcttcttac ctggatgaag atgtgaatta ctgtatttta 840
aagaaacagt ctgtctctgt caccctttta atcctagaca tctccagaag tgaggtaaga 900
gtaaagtctc caccagaagc tggtaaccag ttaccaaaaga tcatcttcag cagggatgag 960
aaagtccttg gtcagagcca ggagcctaata gtaaccctg cttcagcagg caaccagacc 1020
cagaagacac aagatgggtg aaagtctaaa agaagtacag tggattcaaa ggccatggga 1080

```

gagaaatcct	tttctgttca	taataatggt	ggggcagtgt	catttcagtt	tttctttaac	1140
atcagcactg	atgaccaaga	aggcctttac	agtctttatt	ttcataaatg	ccttggaana	1200
gaattgccaa	gtgacaagtt	tacattcagc	cttgatattg	agatcacaga	gaagaatcct	1260
gacagctacc	tctcagcagg	agaaattcct	ctcccaaat	tatacatctc	aatggccttt	1320
ttcttctttc	tttctgggac	catctggatt	catatccttc	gaaaacgacg	gaatgatgta	1380
tttaaaatcc	actggctgat	ggcggccctt	cctttcacca	agtctctttc	cttgggtgttc	1440
catgcaattg	actaccacta	catctcctcc	cagggcttcc	ctatcgaagg	ctgggctgtt	1500
gtgtactaca	taactcacct	tttgaaaggg	gcgctactct	tcatcaccat	tgactcatt	1560
ggcactgggt	gggctttcat	taagcacatc	ctttctgata	aagacaaaaa	gatcttcattg	1620
attgtcattc	cactccaggt	cctggcaaat	gtagcctaca	tcatcataga	gtccaccgag	1680
gagggcacga	ctgaatatgg	cttgtggaag	gactctctat	ttctggtcga	cctgttgtgt	1740
tgtggtgcca	tcctcttccc	agtgggtgtg	tcaatcagac	atttacaaga	agcatcagca	1800
acagatggaa	aaggtgacag	catgggacct	cttcagcaga	gagcgaatct	aagagcagga	1860
agtcgcatag	agtctcacca	ttttgcccag	gctgatcttg	aactcctggc	ctctagctgt	1920
cctcctgcct	cagtctccca	aagggctggg	attacagctg	ctattaactt	agcaaagctg	1980
aaacttttca	gacattatta	cgtcttgatt	gtgtgttaca	tatacttcac	taggatcatt	2040
gcattttctc	tcaaactcgc	tgttccattc	cagtgggaagt	ggctctacca	gctcctggat	2100
gaaacggcca	cactggtctt	ctttgttcta	acgggggtata	aattccgtcc	ggcttcagat	2160
aaccctacc	tacaactttc	tcaggaagaa	gaagacttgg	aatggagtc	cgttgtgaca	2220
acatctgggg	tgatggaaag	tatgaagaaa	gtcaagaagg	tgaccaacgg	ctccgtggag	2280
ccccagggcg	agtgggaagg	cgccgtgtga	cagagccgac	cctgaggatg	gcactgtcca	2340
aggaaactgt	taacttattc	atagtcctat	tggacagcag	gagcagctcc	tacagtgaac	2400
tattggcacc	accgacagtg	acaccagggc	acatggctgg	agcacagtgc	cgcggaacc	2460
tgattttgta	ctctctttta	tggaaacgat	ctgtggctgt	ttagaggcag	ctggatcctc	2520
tttcaggcgg	gaatgggagg	gcgggcacag	ggaggaggag	aggaagagaa	aaggaagaat	2580
tcatttttaa	tttaggtttc	tttttttctt	cttcatttcg	gagctctaag	gtgtatgcag	2640
ttgtgacccc	atgtgtgggg	aagtgtagca	aggacggctg	gtggaggggg	aaggaggggtg	2700
cgagggtgtc	gtctgatgct	ttaggaaatg	tctactgagg	accctgggac	ttaagaagaa	2760
gggcggggag	agtgccattg	cctgttttgg	agacaaaaat	gaacgaaaac	aggtgacttt	2820
ggaaagcaaa	gtcaaaaccc	agttaggat	gtagcacctg	ccccaggatt	cctgccctcg	2880
gctttgcccc	agacccttat	tccagatgct	gagagtgacc	aggacagcag	ctcctgaggc	2940

ccagtgggtct	tctttccaac	aggaaaagaa	ggctgtgatg	tcgctgtcag	gatcatgccc	3000
tgtggcacag	cacaggtggt	gggaggtggt	tttctgactg	agatgttgcc	tgatggatgg	3060
aaagaaatgt	atttttaagt	tcaaaaagca	ttatcctgtg	gcgttgccctg	gacatccact	3120
ccctgacagc	ccagagcagc	actgtctggc	ttcccttcat	gcttgtggct	ttgttgtggt	3180
tgatcagaat	tttgggggaa	atggaaaagt	ttcctcaagg	agcagctggg	ggcagaatag	3240
gtagtattta	agcaaatact	taagtccaag	caaatcatcc	ccattaataaa	gcttttctctg	3300
taggctagta	ggattttctaa	atagatgaat	tcaacagact	tggtcccat	agtccaagag	3360
tatgtatgtg	aagaaagtga	gcatgattca	acagtttcac	tctcagggat	tttaggatgg	3420
caaaatactt	cacagaaaact	caatgattaa	gttcccttcc	acacttccag	agcttgaatg	3480
aacacaggta	gccacctaaa	ttgagcagta	ttgcaactca	gagagaaaat	catctgaata	3540
gtaggacaag	ctcagaaggt	acattgtgac	tgagggctta	aaaggagacc	aaaacatggc	3600
cccatcaggg	aagcttctta	atgcttgggg	ggccagctag	gtaggggtgc	ttccaaaagc	3660
tggagcccac	ccctgcctag	gggttgtcag	agagccacac	ctgcagggga	acaggtacct	3720
ccgaggggtga	gagtcgtggt	ctctgggagt	tgttttctca	cctctggctt	agaaggggtca	3780
ggcagaaacc	acaggatgtg	gggtcacact	cactgtccca	agtttgggaa	cctgaaaaag	3840
tctccattca	gaacatgggt	gttctccctg	tcccatgcta	tcttatcttc	ctaaatgact	3900
aatgaggaag	cgggtgttct	ttttctgcac	tttgattcgc	catctgggtt	ctgtaggggtg	3960
ctctgaaggt	gtgatctgcc	ttctggctga	tgtggaggaa	gagcaagcgc	cttcccaggc	4020
cacagctgct	cacctctcgg	cagatathtt	aggcaagcat	ccgtgtgtct	tcccatcttc	4080
aggagaaagg	taaatgcacc	ctaagtgttc	acttctggac	ctttttcaag	ttcacttggg	4140
actgtgtgac	agaagggagt	tggagggagg	atgggaatat	ttttaacact	ttgttttctt	4200
gtgcagaaac	ataataccag	ttttcgcaga	aatgtgtctc	aatctgtgac	taccaaagcc	4260
ctcctcagtc	cttccctcag	agggacacat	ttgctgtttc	tcccgcagc	agatgttgtg	4320
gatgaggcga	tagactcctt	ggcaagaacg	aaaggtgtga	tgaaacctcc	ctgctcggaa	4380
gggtctccgt	ggaggtgtcc	tcatttcaca	tgctgggttt	tgcaagcgag	gaagccaggc	4440
agtggaggaa	ctagagagag	gcaggcgtgt	gtgtggacaa	gcgctggagc	cgcagccctc	4500
agactggcac	gggaacgcca	gcgttgggtg	ttcagattcc	acgcgtatgt	ctgggctcac	4560
tcacagcatg	gccgagtgtc	tgcaagtgtg	gtcctgaccc	ttccagagca	gcagtggaca	4620
gatgagataa	gactgtttca	gaaacaaaga	tggccacagc	cttcctaaca	agcaggtcat	4680
ctggccatgt	ctgtattgta	actggtaaaa	ggcttcaagt	cagattgatg	atcaagaaaa	4740
gtcaaaaccc	cagcccaaga	ttgggaaaagc	aggtggtggt	tccaagcttt	taaaaaatta	4800

ttgaagctct	ccatcctggt	ctgtgagtg	gtcttctctt	tctccttcac	gtcatagccg	4860
tgaccacccg	ttcatctctg	ctcttgcgta	aagatgaccg	atggagtcca	aagccaagtg	4920
gcttcaccag	ctgacaagcc	accctcctgc	agcctgagtt	tcacagtcca	ctgggttcgt	4980
tgtcatgcgg	tgtttgaatg	gttaagccct	tgcagtattt	cagatcgggc	aaaaaatatc	5040
ggatgcacat	agcagaacca	ttggtggtat	ttatagcttt	gctttgtact	cctcactggt	5100
tctgcctacg	caaaatatcc	atgtttcctc	tgagaaatct	gttgtggact	gaaagcgctg	5160
ctggctgtga	aatttaataa	agtgtgtatg	ctttgctaga	aaattatttc	ttggacaata	5220
ggaacagtca	ttgatctgta	aatcctggct	cttaacagtg	agtggccaag	gacttgatca	5280
gcccatttct	tgggtccctca	gtgctttaaa	atttaagtag	cactgcattt	tgtaatgttg	5340
aatatgactc	tagtgacttg	taggaggcac	ttgtgaggag	atgcttgctt	cagtgtaaaa	5400
gatgctcatg	gcctgagtca	gttgagtttt	ctttcaagaa	accacttcag	agtgaaatat	5460
ccagggtttc	ccgcccctgg	acatgtccag	cctgcccagg	cagcacacag	ccctgtaagt	5520
ccacctcgtg	tgggtgagat	ttcctcctgc	gtgatgacct	catcgccatc	tctgctgtct	5580
cattccacag	cctccctccc	tcttctctcc	tcctctgccc	tcgcccttcc	cccttcccca	5640
tccctccccc	ctcctcctct	gccctcgccc	ttaccctctc	cccttcccct	tccgctctct	5700
ctccctcctc	cacctctttc	tcctcctcct	tcctcctccc	tcctcctct	tcccttctct	5760
gccatctttc	tccccgtgcc	tattgatccc	acataggctc	attctgggta	caccggctaa	5820
aggctttggg	gcattgcagc	gttttctccc	agcagctgtg	tgaaagatgc	attttctaag	5880
ctaaggagaa	ttttctcaag	agtggcatac	tcatgccaaa	tattattgct	ctgggccata	5940
taggctgggc	ttcctccaca	ctaaaatggg	tgtcttggtt	tggtacttaa	aacagtctac	6000
tccaggcatc	cagtccttac	agaccaagga	agagcatagc	gatgcctggt	ggaattgcag	6060
atgcattctg	gccttctccc	ccgtcctgaa	acattttctt	tgaggaaggc	tcttagaaca	6120
ttagatagtc	tgctgagggt	gttggtccag	ctccatacac	ccagtagaac	agtggaacaa	6180
ctcatgcttc	atgctgcaa	gctgctgtac	ttcaaaggaa	acagatctag	cacactgctg	6240
caccctgct	tccacactcc	acacttcacc	ccgctgcttt	tctctgacct	gccctgggcc	6300
ttgtaagact	cacgtaagct	aagtccagga	tgctgtggc	ctgaggcttg	attcttcctt	6360
ttaggattca	gcaagttaat	ggcttcctcg	ctatagaagt	gagactttga	cttgatgcct	6420
cttggtatat	caaaaagata	ttcatccaga	aagtaccaa	tgttctgaaa	gaccgctctt	6480
tactccagt	ttccctagg	gtgtttctgg	caggcgcttt	ttaaaaggca	tctacctgag	6540
ttgacgctaa	tacttgctac	cacctggaac	gtagttatcg	gtcggcaggc	tgaacatact	6600
ccagattccc	cagaggccac	ttctgtagcc	cagcgatgca	tctgagcctc	tctgctgggt	6660


```

ttatgcttga aaaatagata atgcttttag atggttcact gccaggccat gggccccaca 6720
catctcaggc cctgtgtgag ggagcacact gagatgggtgc aggagtgaat gggcatggct 6780
tggcctcgct acctcgggga cctgttggag ttctggcagc aggggtgtctg caggtgggac 6840
ggcgttcttg gcagagtcag aatggtcaga atgaaacaga acagccaact caccacagg 6900
acagcttatt ttgaggcaag gttttggatt ttggaggaag cagccagatg aggcggtgag 6960
cctccagaag gtcagccttt ggagcacgta agatactgtt acagggcca gaaatcgtgt 7020
tcacatgggg gctttgactc ttcaaacagc ttttgcagat cgtaaattgc atttgcctag 7080
tcgtgtgacc tcaaaagaag tcagacatat ttaatccaga aatagtttcg tttgagggag 7140
ggcttgcagg tctgtaaata gcatttgctt tcctggttag agattgggat gcagaaggag 7200
ttttcagtat tttttttaa acactaatga tcattgaaga gtatttatgt aaacatacaa 7260
cgtataatgg gtgggggatc cgatcatggt gatgtacggg gtgaattctc ttgccgtgtt 7320
gcaaatgtgt aaaataaaga ttatctggca gaa 7353

```

```

<210> 11
<211> 279
<212> PRT
<213> Homo sapiens

```

```

<400> 11

```

```

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

```

```

Met Leu Pro Ala Val Lys Ala Thr Trp Leu Tyr Gly Ile Gln Ile Thr
20          25          30

```

```

Ser Leu Leu Leu Val Cys Ile Leu Gln Phe Phe Asn Ser Met Ile Leu
35          40          45

```

```

Gly Ser Leu Leu Ile Ser Phe Asn Leu Ser Val Phe Ile Ala Arg Lys
50          55          60

```

```

Leu Gln Lys Asn Leu Lys Thr Gly Ser Phe Leu Asn Arg Leu Gly Lys
65          70          75          80

```

```

Leu Leu Leu His Leu Phe Met Val Leu Cys Leu Thr Leu Phe Leu Asn
85          90          95

```

```

Asn Ile Ile Lys Lys Ile Leu Asn Leu Lys Ser Asp Glu His Ile Phe
100         105         110

```

```

Lys Phe Leu Lys Ala Lys Phe Gly Leu Gly Ala Thr Arg Asp Phe Asp

```

115

120

125

Ala Asn Leu Tyr Leu Cys Glu Glu Ala Phe Gly Leu Leu Pro Phe Asn
 130 135 140

Thr Phe Gly Arg Leu Ser Asp Thr Leu Leu Phe Tyr Ala Tyr Ile Phe
 145 150 155 160

Val Leu Ser Ile Thr Val Ile Val Ala Phe Val Val Ala Phe His Asn
 165 170 175

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

Thr Val Asp Leu Lys Pro Glu Thr Ala Tyr Asn Leu Ile His Thr Ile
 195 200 205

Leu Phe Gly Phe Leu Ala Leu Ser Thr Met Arg Met Lys Tyr Leu Trp
 210 215 220

Thr Ser His Met Cys Val Phe Ala Ser Phe Gly Leu Cys Ser Pro Glu
 225 230 235 240

Ile Trp Glu Leu Leu Leu Lys Ser Val His Leu Tyr Asn Pro Lys Arg
 245 250 255

Ile Cys Ile Met Arg Tyr Ser Val Pro Ile Leu Ile Leu Leu Tyr Leu
 260 265 270

Cys Tyr Lys Asn Gln Lys Ser
 275

<210> 12

<211> 102

<212> PRT

<213> Homo sapiens

<400> 12

Met Met Ser Ile Arg Gln Arg Arg Glu Ile Arg Ala Thr Glu Val Ser
 1 5 10 15

Glu Asp Phe Pro Ala Gln Glu Glu Asn Val Lys Leu Glu Asn Lys Leu
 20 25 30

Pro Ser Gly Cys Thr Ser Arg Arg Leu Trp Lys Ile Leu Ser Leu Thr
 35 40 45

35

Ile Gly Gly Thr Ile Ala Leu Cys Ile Gly Leu Leu Thr Ser Val Tyr
 50 55 60

Leu Ala Thr Leu His Glu Asn Asp Leu Trp Phe Ser Asn Ile Lys Val
 65 70 75 80

Trp Ser Phe Phe Asp His Cys Ile Ile His Ser Val Gly Ser Pro Val
 85 90 95

Val Ser His Val Asp Glu
 100

<210> 13
 <211> 716
 <212> PRT
 <213> Homo sapiens

<400> 13

Met Met Ser Ile Arg Gln Arg Arg Glu Ile Arg Ala Thr Glu Val Ser
 1 5 10 15

Glu Asp Phe Pro Ala Gln Glu Glu Asn Val Lys Leu Glu Asn Lys Leu
 20 25 30

Pro Ser Gly Cys Thr Ser Arg Arg Leu Trp Lys Ile Leu Ser Leu Thr
 35 40 45

Ile Gly Gly Thr Ile Ala Leu Cys Ile Gly Leu Leu Thr Ser Val Tyr
 50 55 60

Leu Ala Thr Leu His Glu Asn Asp Leu Trp Phe Ser Asn Ile Lys Glu
 65 70 75 80

Val Glu Arg Glu Ile Ser Phe Arg Thr Glu Cys Gly Leu Tyr Tyr Ser
 85 90 95

Tyr Tyr Lys Gln Met Leu Gln Ala Pro Thr Leu Val Gln Gly Phe His
 100 105 110

Gly Leu Ile Tyr Asp Asn Lys Thr Glu Ser Met Lys Thr Ile Asn Leu
 115 120 125

Leu Gln Arg Met Asn Ile Tyr Gln Glu Val Phe Leu Ser Ile Leu Tyr
 130 135 140

Arg Val Leu Pro Ile Gln Lys Tyr Leu Glu Pro Val Tyr Phe Tyr Ile
 145 150 155 160

Tyr Thr Leu Phe Gly Leu Gln Ala Ile Tyr Val Thr Ala Leu Tyr Ile
 165 170 175

Thr Ser Trp Leu Leu Ser Gly Thr Trp Leu Ser Gly Leu Leu Ala Ala
 180 185 190

Phe Trp Tyr Val Thr Asn Arg Ile Asp Thr Thr Arg Val Glu Phe Thr
 195 200 205

Ile Pro Leu Arg Glu Asn Trp Ala Leu Pro Phe Phe Ala Ile Gln Ile
 210 215 220

Ala Ala Ile Thr Tyr Phe Leu Arg Pro Asn Leu Gln Pro Leu Ser Glu
 225 230 235 240

Arg Leu Thr Leu Leu Ala Ile Phe Ile Ser Thr Phe Leu Phe Ser Leu
 245 250 255

Thr Trp Gln Phe Asn Gln Phe Met Met Leu Met Gln Ala Leu Val Leu
 260 265 270

Phe Thr Leu Asp Ser Leu Asp Met Leu Pro Ala Val Lys Ala Thr Trp
 275 280 285

Leu Tyr Gly Ile Gln Ile Thr Ser Leu Leu Leu Val Cys Ile Leu Gln
 290 295 300

Phe Phe Asn Ser Met Ile Leu Gly Ser Leu Leu Ile Ser Phe Asn Leu
 305 310 315 320

Ser Val Phe Ile Ala Arg Lys Leu Gln Lys Asn Leu Lys Thr Gly Ser
 325 330 335

Phe Leu Asn Arg Leu Gly Lys Leu Leu Leu His Leu Phe Met Val Leu
 340 345 350

Cys Leu Thr Leu Phe Leu Asn Asn Ile Ile Lys Lys Ile Leu Asn Leu
 355 360 365

Lys Ser Asp Glu His Ile Phe Lys Phe Leu Lys Ala Lys Phe Gly Leu
 370 375 380

Gly Ala Thr Arg Asp Phe Asp Ala Asn Leu Tyr Leu Cys Glu Glu Ala
 385 390 395 400

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

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

Leu Asp Ile Ala Asn Gly His Met Met Asp Gly Pro Gly Glu Asn Asp
 660 665 670

Pro Asp Leu Lys Pro Ala Asp His Pro Arg Phe Cys Glu Glu Ile Lys
 675 680 685

Arg Asn Leu Pro Pro Tyr Val Ala Tyr Phe Thr Arg Val Phe Gln Asn
 690 695 700

Lys Thr Phe His Val Tyr Lys Leu Ser Arg Asn Lys
 705 710 715

<210> 14
 <211> 112
 <212> PRT
 <213> Homo sapiens

<400> 14

Met Met Ser Ile Arg Gln Arg Arg Glu Ile Arg Ala Thr Glu Val Ser
 1 5 10 15

Glu Asp Phe Pro Ala Gln Glu Glu Asn Val Lys Leu Glu Asn Lys Leu
 20 25 30

Pro Ser Gly Cys Thr Ser Arg Arg Leu Trp Lys Ile Leu Ser Leu Thr
 35 40 45

Ile Gly Gly Thr Pro Phe Ala Leu Asp Phe Leu His Leu Ser Thr Leu
 50 55 60

Pro Arg Tyr Met Lys Met Ile Tyr Gly Phe Leu Ile Leu Arg Lys Trp
 65 70 75 80

Ser Glu Lys Ser His Ser Glu Gln Ser Val Ala Cys Ile Thr Pro Thr
 85 90 95

Thr Ser Arg Cys Cys Arg Leu Gln Pro Ser Cys Lys Val Ile Thr Thr
 100 105 110

<210> 15
 <211> 1841
 <212> DNA
 <213> Homo sapiens

<400> 15
 aagtttgcgg agcggcttct gctcgtcggc cgtgcggcga ggcagggcct gggctgcgac 60
 cccggcgggc gctcgcggtc ttgggagagc tggggcgcggt gcctgaactt cccggctgcc 120

cctgtccttg gagacctacc tgatggggac gccaggtgtg caggggctg gcgcgtagga 180
 gtgatttgga gaacaatgca tgtaagtctg acatcatgat gtccatccgg caaagaagag 240
 aaataagagc cacagaagtt tctgaagact ttccagccca agaagaaaat gtgaagttgg 300
 aaaataaatt gccatctggt tgtaccagta gaagattatg gaagattttg tcattgacaa 360
 ttggtggaac cattgccctt tgcattggac ttcttacatc tgtctacctt gccacgttac 420
 atgaaaatga tttatggttt tctaataatta aggaagtgga gcgagaaatc tcattcagaa 480
 cagagtgtgg cctgtattac tcctactaca agcagatgct gcaggctcca accctcgtgc 540
 aaggttttca tggcctaata tatgataata aaactgaatc tatgaagaca attaacctcc 600
 ttcagcgaat gaatattttac caagaggttt ttctcagtat tttatataga gttctaccca 660
 tacagaaata tttagagcca gtttattttt atattttacac cttatttggg ctccaggcga 720
 tctatgtcac agctctctac ataaccagct ggctactcag tggtagatgg ctgtcaggac 780
 tgttggcagc tttctggtat gtcacaaata gaatagatac cacaagagtt gagtttacca 840
 tcccactgag ggagaactgg gcgctgccat tctttgcaat tcagatagca gcaattacat 900
 atttcctgag accaaactta cagcctcttt ctgaaaggct gacacttctt gccattttca 960
 tatcaacttt tctctttagt ctgacatggc aatttaataca atttatgatg ctgatgcaag 1020
 cattagtgtc gttcacactg gactccctgg acatgctgcc agcagtgaag gcgacatggc 1080
 tgtatggaat acagataaca agtttactcc tggctctgcat tcttcagttt tttaattcca 1140
 tgattcttgg atcactgctt atcagtttta acctttcagt attcattgca agaaaacttc 1200
 agaaaaatct gaaaactgga agcttcctta ataggcttgg gaaacttttg ttacatttat 1260
 ttatggtttt atgtttgaca ctttttctca acaacataat taagaaaatt cttaacctga 1320
 agtcagatga acacatatat aaatttctga aggcaaaatt tgggcttggg gcaacaaggg 1380
 attttgatgc aaatctctat ctgtgtgaag aagcttttgg cctcctgcct tttaatacat 1440
 ttggaaggct ttcagatact ctgctttttt atgcttacat attcgttctg tccatcacag 1500
 tgattgtagc attcgttggt gcctttcata atctcagtga ttctacaaat caacaatccg 1560
 tgggtaaaat ggaaaaaggc acagttgacc tgaaaccaga aactgcctac aacttaatac 1620
 ataccattct gtttggttgc ttggcattga gtacaatgag aatgaagtac ctctggacgt 1680
 cacacatgtg tgtgttcgca tcattcggcc tatgtagccc tgaaatatgg gagttacttc 1740
 tgaagtcagt ccatctttat aacccaaaga ggatatgtat aatgcgatat tcagtaccga 1800
 tattaatact gctgtatcta tgctataaga atcagaaatc t 1841

<210> 16
 <211> 2206
 <212> DNA

<213> Homo sapiens

<400> 16

```

cggttctgcc ctccttgtag ccgcggcgcg ctgcggcccc tggcgcgggc ccgttcccgc      60
ctagccccgt cggcctcctt cccctcccgg agccgcgcgt gaggacggct gaggccgcag      120
gagtgatttg gagaacaatg catgtaagtc tgacatcatg atgtccatcc ggcaaagaag      180
agaaataaga gccacagaag tttctgaaga ctttccagcc caagaagaaa atgtgaagtt      240
ggaaaataaa ttgccatctg gttgtaccag tagaagatta tggaagattt tgtcattgac      300
aattggtgga accattgccc tttgcattgg acttcttaca tctgtctacc ttgccacgtt      360
acatgaaaat gatttatggt tttctaatat taaggatatg agtttctttg accattgtat      420
cattcactca gtgggatctc cagtagtaag ccatgtggat gaatgaccaa ggcaacacag      480
ttttgccata aagaatccaa tctctagaaa ggttggaacta tagagtgaag taacttttgt      540
gtttattatt ttaaaataac atattagaat ctttttttaa atttttcttt attatttatt      600
tatttttgag atggagtctc actctgtcac ccaggctgga gtgcggtggc gcaatcttgg      660
ctcactacaa cctctgcctc gcaggttcag gtgattcttc tggcttagcc tccaagtag      720
ctgggactat aggtgcgtgc caccacaccc agctaatttt tgtattttta ctagagacgg      780
ggtttcagca tattgaccag gctgatctcg aactcctgac cttgtgatct gcctgtctca      840
gcctcccaaa gtgctgggat tacaggcgtg agccactgcg tccagccaga atctttattt      900
ttcattttta ttttttgaga tagggatttg ctctgtcacc caggctagaa tgcaagtggg      960
caaacatggg tcaactgcagc ctcaacctcc tgggctcaag tgagtatcct gcctaagctt     1020
cctgtgtcac tgggacccca ggcatgcacc acctcaccaa gctaaatttg attttttgtt     1080
agagacaggg tctcactttg ttgcccatgc tggctctgaa ctctggggct caagcgatcc     1140
tactgccctg gtcttccaaa atatgagaat gagccatagc acccagccca gaatttttat     1200
aatcaagtga gttttttctt tttcattaac ttattccatt tatttagcag ttattctaaa     1260
ttagtatttt tcaagttata gattgtgaaa ttagtgcagt aggtcatgag taacattttt     1320
cttaatgaaa tcaaaaagaa agaatactat cacatctagt agggttgagg attgttttgt     1380
gaaactttta attttatata tatatatata tgcacaaact gggtcacagt atacaaggta     1440
cttccttttc ttttttttct tgttggctac aacaggaaaa aaaaaaaca gaaaaggaaa     1500
taaaaaagcc actgctttaa atcatggggg ctaaatgtgg ctccacagag ggtcctcagc     1560
atgttcatga ctatctaata ctctgtgcaa gtggttttgc agggcatagg gcgatgggga     1620
agccatatgt ttccagggaa aggaactgta attttaatca gattttcagg agggttagcc     1680
gggcgtcacg cctgtaatcc cagcactttg ggaggtcgag gcgggcagat cacttgaagt     1740
caggagttca agaccagcct ggccaacatg gtggaaccct atcttacta aaaatacaaa     1800

```


aattagccgg gcatggtgac acacacctgt aatctcagct actcaggagg ctgaggcaca 1860
agaatcactt gaactcggga ggaagagggt gcagtgagct gagatccac cactgcactc 1920
cagcctgggc aacagagcaa tactctttat caaaaaaaaa aagaaaaaag ttgaggggggt 1980
ggctctgtgac tctttaaaca cgtttccttg ttttctttct ctctctcttt ttcaacattt 2040
ctagaactcc tcttggcatt gttttcagaa ctcgtatata acttacatgt ggaaatttgc 2100
atccaaatat accttacatt ttaatctaata atgtcatgat ctttaaccta aactgtggtg 2160
tctaatagact agttgcttgt aaaaataaac aaacaccttc aaagcc 2206

<210> 17

<211> 4456

<212> DNA

<213> Homo sapiens

<400> 17

aagtttgcgg agcggcttct gctcgtcggc cgtgcggcga ggagggcct gggctgcgac 60
cccggcggcc gctcgcggtc ttgggagagc tggggcgcggt gcctgaactt cccggctgcc 120
cctgtccttg gagacctacc tgatggggac gccaggtgtg caggggcgtg gcgcgtagga 180
gtgatttggg gaacaatgca tgtaagtctg acatcatgat gtccatccgg caaagaagag 240
aaataagagc cacagaagtt tctgaagact ttccagccca agaagaaaat gtgaagttgg 300
aaaataaatt gccatctggt tgtaccagta gaagattatg gaagattttg tcattgacaa 360
ttggtggaac cattgccctt tgcattggac ttcttacatc tgtctacctt gccacgttac 420
atgaaaatga tttatggttt tctaataatta aggaagtgga gcgagaaatc tcattcagaa 480
cagagtgtgg cctgtattac tcctactaca agcagatgct gcaggctcca accctcgtgc 540
aaggttttca tggcctaata tatgataata aaactgaatc tatgaagaca attaacctcc 600
ttcagcgaat gaatattttac caagaggttt ttctcagtat tttatataga gttctaccca 660
tacagaaata tttagagcca gtttatTTTT atatttacac cttatttggg ctccaggcga 720
tctatgtcac agctctctac ataaccagct ggctactcag tggtagatgg ctgtcaggac 780
tgttggcagc tttctggtat gtcacaaata gaatagatac cacaagagtt gagtttacca 840
tcccactgag ggagaactgg gcgctgccat tctttgcaat tcagatagca gcaattacat 900
atttcctgag accaaaactta cagcctcttt ctgaaaggct gacacttctt gccattttca 960
tatcaacttt tctcttttagt ctgacatggc aatttaatac atttatgatg ctgatgcaag 1020
cattagtgtt gttcacactg gactccctgg acatgctgcc agcagtgaag gcgacatggc 1080
tgtatggaat acagataaca agtttactcc tggctctgcat tcttcagttt tttaattcca 1140
tgattcttgg atcactgctt atcagtttta acctttcagt attcattgca agaaaacttc 1200

agaaaaatct	gaaaactgga	agcttcctta	ataggcttgg	gaaacttttg	ttacatttat	1260
ttatggtttt	atgtttgaca	ctttttctca	acaacataat	taagaaaatt	cttaacctga	1320
agtcagatga	acacatat	aaatttctga	aggcaaaatt	tgggcttggg	gcaacaaggg	1380
atgttgatgc	aaatctctat	ctgtgtgaag	aagcttttgg	cctcctgcct	tttaatacat	1440
ttggaaggct	ttcagatact	ctgctttttt	atgcttacat	attcgttctg	tccatcacag	1500
tgattgtagc	attcgttggt	gcctttcata	atctcagtga	ttctacaaat	caacaatccg	1560
tgggtaaaat	ggaaaaaggc	acagttgacc	tgaaaccaga	aactgcctac	aacttaatac	1620
ataccattct	gttttgattc	ttggcattga	gtacaatgag	aatgaagtac	ctctggacgt	1680
cacacatgtg	tgtgttcgca	tcattcggcc	tatgtagccc	tgaaatatgg	gagttacttc	1740
tgaagtcagt	ccatctttat	aacccaaaga	ggatatgtat	aatgcgatat	tcagtaccga	1800
tattaatact	gctgtatcta	tgctataagt	tctggccagg	aatgatggat	gaactctccg	1860
agttgagaga	attctatgat	ccagatacag	tggagctgat	gaactggatt	aactctaaca	1920
ctccaagaaa	ggctgtgttt	gcgggaagca	tgcagttgct	ggccggagtc	aagctgtgca	1980
cggggaaggac	cctaaccaac	caccgcact	atgaagacag	cagcctgaga	gagcggacca	2040
gagcggttta	tcagatatat	gccaagaggg	caccagagga	agtgcatgcc	ctcctaaggt	2100
ccttcggcac	tgactacgta	atcctggaag	acagcatctg	ctacgagcgg	aggcaccgcc	2160
ggggctgccg	actccgggac	ctgctggaca	ttgccaacgg	ccacatgatg	gatggcccag	2220
gagagaatga	tcctgatttg	aaacctgcag	accaccctcg	cttctgtgaa	gagatcaaaa	2280
gaaacctgcc	tcctacgtg	gcctacttca	ccagagtgtt	ccagaacaaa	accttccacg	2340
tttacaagct	gtccagaaac	aagtagcgca	gattttctgcc	cagtgtctat	ttttgatacg	2400
gagaaactgc	atcatgatga	aactcaatag	atgacgtttc	ctatgtaagt	aggtagccca	2460
aaccttcaag	ctgtgatatg	agtaagttct	acagatgttt	acacaagtgt	tgccatcttt	2520
gaaagcatct	tctacaagca	gaagtctttt	tcgttgtgtg	tctatctttc	tcattaatgt	2580
tcttttagcct	aaatgttaac	aactttctaa	gagtgcacta	gaattatgtt	gttgagagaga	2640
atgatgtgtg	ttccatggat	acctggatag	gcacataaca	tgttggaaga	tgagcacctg	2700
ctcaggattt	gaaatacggt	taattttcag	gtgacttaag	acagctatga	ttgaatcaac	2760
tagagatgat	gatcgactta	tttaatatga	tttactgggt	gaagaccaat	tggtagcttt	2820
ttaaaaagca	ctttagtgtc	ctgtttttacc	ttaaaatggt	ataatatattt	ccagttgtca	2880
tgctgtcaac	attaacaaaa	aaaatcatgt	taaggctttg	tatcaaacad	tttgttacac	2940
tctgtctgaa	atgtaatgtg	gagtacttca	gcagtatgtg	tcatgtattg	tgtgtgtctg	3000
tgtgtgtgca	tgtgcacaca	tgtgttttaa	tgctgggcac	agaaaagtgt	tacaagttcc	3060

```

atatcgtaag tccttaaagg ggcagaaata tatgtagcca agtagaattt attacatttt 3120
agtgttatta ttttaaaact tactgatact ctttaacctc tcctgcagta atagttttgc 3180
tttattttctt actcatttca atttattggg tttgcaaaat tttgtaaact ttttgtgttt 3240
ttagcctttg tatttttttac agcctagaat cttgcaaagt ctgaatattt tttaaatggt 3300
ctatcttaac tagttcacta atacagtatt tttagcagac agcattttca gacagcattt 3360
tcataccaag tttgacttgt ggtctccaat cttactggga aggccttggg agtgtaattc 3420
ttttccttat taaaaggtaa ccaagtgcct ctaagtcatg cttattttgta aacaacaaag 3480
aagagtatat gtacctgctc aaaatttttt tgataatcgc ttatataatt aatttctaatt 3540
gatgaggaca tgtaaaagtt gccagtaaga acatagtatg catttaatta aatcaagatg 3600
gctaattggaa ttaactttct cccctgttct tgccagggtg aaatgattta agcatttctc 3660
cttgacgttg tattgaagta aattaccata ggcatcaaga tggctgcatc acattttcaa 3720
atgattttat attcagttgc tacttataaa gcagcattca aaaagtcttt tacactgtca 3780
tggtggacac aagcagactc agcttttatc aaaacttggt taaataaaaa attgacagta 3840
gctgggttat taaattatgc aactgaaact cctgaattat atcttttctg tatcccttaa 3900
taagattgga gaccactgcc gtttaggata atacaataat aaaacgtttt aatcagtact 3960
aaaactttta ttaagccaat aatgatgcat gcctgttgta gctgacagca tgggtcagta 4020
catccttcag cgagtgcctt actctaattg aaaccaagca cacgtaaggt acaatatggt 4080
agactctgtg attttgtttt caaaatcctc tgttatggct atattttaaatt ttattttaaa 4140
tattcctgta tgtattcatc taagcatttg ggcatttgga gtcttaatat acaagaaaca 4200
cgtacttaaa tttttatgct tatcaccgca atgatggcaa acagtgattt tttttttcat 4260
agtttaggtg tcattgttgc cagcaccttt agtgctcagt cttcagtga aaatataaag 4320
tgccaaaaaa atcttgcaag acagaatcca tacttaacac tctttccaag aactgtgac 4380
catgtacagt agctatttcc tgatgaccaa atctctcaac gaatcatggt attaataaat 4440
attttttagca ctcac 4456

```

<210> 18

<211> 336

<212> DNA

<213> Homo sapiens

<400> 18

```

atgatgtcca tccggcaaag aagagaaata agagccacag aagtttctga agactttcca 60
gcccaagaag aaaatgtgaa gttggaaaat aaattgccat ctggttgtag cagtagaaga 120
ttatggaaga ttttgtcatt gacaattggg ggaacccctc ttgcattgga cttcttacat 180
ctgtctacct tgccacgtta catgaaaatg atttatgggt ttctaataat aaggaagtgg 240

```

agcgagaaat ctcatcaga acagagtgtg gcctgtatta ctctactac aagcagatgc 300
 tgcaggctcc aaccctcgtg caaggtaatt acaact 336

<210> 19
 <211> 173
 <212> PRT
 <213> Homo sapiens

<400> 19

Met Thr Leu Cys His Arg Asp Ser Phe Gly Ser Trp His Leu Phe His
 1 5 10 15

Leu Leu Leu Leu Glu Tyr Met Ile His Ile Leu Gln Ser Cys Leu Glu
 20 25 30

Glu Glu Glu Glu Glu Glu Asp Met Gly Thr Val Lys Glu Met Leu Pro
 35 40 45

Asp Asp Pro Thr Leu Gly Gln Pro Asp Gln Ala Leu Phe His Ser Leu
 50 55 60

Asn Ser Ser Leu Ser Gln Ala Cys Ala Ser Pro Ser Met Glu Pro Leu
 65 70 75 80

Gly Val Met Pro Thr His Met Gly Gln Gly Arg Tyr Pro Val Gly Val
 85 90 95

Ser Asn Met Val Leu Arg Ile Leu Gly Phe Leu Val Asp Thr Ala Met
 100 105 110

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

Ala Val Lys Leu Ser Leu Pro Met Gly Gln Glu Ala Leu Ile Thr Leu
 130 135 140

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

Ser Glu Asp Ile Tyr Phe Arg Glu Asn Asn Ala Asn Val
 165 170

<210> 20
 <211> 1907
 <212> DNA
 <213> Homo sapiens

<400> 20
 ataactccaa cgctcaagca agtcaaggac acccacggac tcaacaccgc gaccagattg 60
 gaaaaggtgt tggctcgacaa cttctgcatt tgccaagagt gcagcgtccc tcgctgtctc 120
 atgtatgaga ttacgtgga gacctgtggg caaaacactg agaaccaagt caaccgggcc 180
 acctttggga agcttgtgag attgggtttt ccggaccttg gcaccggag gctgggcact 240
 agaggaagtg ccaggtatca ttatgatgga atctgtatca agaaaagctc tttcttctat 300
 gcccagtatt gctacctgat aggtgaaaaa aggtatcaca gtggagatgc cattgccttt 360
 gaaaaatcta ctaattataa cagcattatc caacaagaag caacatgtga agatcattca 420
 ccgatgaaga cagacccagt tggatcccct ttgtctgaat tcaggagatg tccatttctg 480
 gagcaagaac aggcaaagaa atactcctgt aatatgatgg ccttccttg tgacgaatac 540
 tgcaactatt gtcgagacat ttacgaaat gtgaggaact gagaacttga gaggggtggag 600
 gacttgctta cttccttctg gaagtctctg cagcaagaca cagtcatgct gatgtcattg 660
 cctgacgtgt gccagctctt taaatgctac gacgtccagc tgtacaaggg aattgaggat 720
 gttctccttc atgacttctt ggaagatggt tctattcagt acctgaaatc tgtgcagtta 780
 tttagtaaga aatttaagct gtggctcctt aatgctttgg aagggtgtcc agccctcttg 840
 cagatctcca aactcaaaga ctatgcgaat ggtattgaaa agtaagaggc gtgtcagcgt 900
 tttgaagtca gatctacagg ccatcatcaa tcaaggcact ttggctactt ctaagaaagc 960
 cctggcaagt gaccggagtg gcgcagatga actggagaac aaccagaga tgaaatgttt 1020
 aagaaactta atttctttgc tgggaacatc aacagatctc agggatttcc tcagctgtct 1080
 gtcttcacat ctccaagcat ttgtgttcca gacaagcaga agcaaagaag agtttaccaa 1140
 attggccgcc agcttccagc tgagatggaa tcttcttctc actgctgtaa gcaaagccat 1200
 gaccctctgc cacagagata gttttggctc ctggcatctg tttcacttgt tgcttttggga 1260
 atatatgatt catatacttc agtcatgcct agaggaggaa gaggaggagg aggacatggg 1320
 gactgtcaag gaaatgctac cagatgacct gactctcggc cagccagacc aggcactttt 1380
 ccattctctg aattcctcac tgctgcaggc gtgtgccagc cccagcatgg agccactggg 1440
 ggtgatgccc acacacatgg gccagggccg atatcccgtg ggtgtgagca acatggctct 1500
 caggatcctg ggcttcctgg tggacactgc catgggcaat aagctcatcc aggtgctgtt 1560
 ggaagatgaa accactgaaa gcgcagttaa actcagcctt cctatgggac aagaagccct 1620
 cataacccta aaagatggac aacaatttgt gattcagata tcagatgtac ccaaagctc 1680
 tgaagatatt tatttcagag aaaacaatgc taatgtgtga gattatttat ttgaatagag 1740
 aataagaaaa ctgatagact tgcattctta aaaatattaa atactaaagt ttttctattg 1800
 acgaaagatg atgttatgta tataatagat gtagcattgt ctattttatg tttatatgta 1860

tttcaaggag gtggtttcga taaaatatgt aaactgattt ggagaat

1907

<210> 21
 <211> 1328
 <212> PRT
 <213> Homo sapiens

<400> 21

Met Ser Ser Gly Asp Pro Ala His Leu Gly Leu Cys Leu Trp Leu Trp
 1 5 10 15

Leu Gly Ala Thr Leu Gly Arg Glu Gln Val Gln Ala Ser Gly Leu Leu
 20 25 30

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

Ser Glu Gly Ser Gly Leu Gly Tyr Leu Val Gln Val Lys Pro Met Ala
 50 55 60

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

Thr Val Gly Gly Leu Ser Pro Ser Lys Gly Tyr Thr Leu Gln Ile Phe
 85 90 95

Glu Leu Thr Gly Ser Gly Arg Phe Leu Leu Ala Arg Arg Glu Phe Val
 100 105 110

Ile Glu Asp Leu Lys Ser Ser Ser Leu Asp Arg Ser Ser Gln Arg Pro
 115 120 125

Leu Gly Ser Gly Ala Pro Glu Pro Thr Pro Ser His Thr Gly Ser Pro
 130 135 140

Asp Pro Glu Gln Ala Ser Glu Pro Gln Val Ala Phe Thr Pro Ser Gln
 145 150 155 160

Asp Pro Arg Thr Pro Gly Gly Ser Glu Trp Arg Glu Thr Gly Pro Gln
 165 170 175

Phe Arg Cys Leu Pro Pro Val Pro Ala Asp Met Val Phe Leu Val Asp
 180 185 190

Gly Ser Trp Ser Ile Gly His Ser His Phe Gln Gln Val Lys Asp Phe
 195 200 205

Leu Ala Ser Val Ile Ala Pro Phe Glu Ile Gly Pro Asp Lys Val Gln
 210 215 220

Val Gly Leu Thr Gln Tyr Ser Gly Asp Ala Gln Thr Glu Trp Asp Leu
 225 230 235 240

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

Arg Tyr Lys Gly Gly Asn Thr Phe Thr Gly Leu Ala Leu Thr His Val
 260 265 270

Leu Gly Gln Asn Leu Gln Pro Ala Ala Gly Leu Arg Pro Glu Ala Ala
 275 280 285

Lys Val Val Ile Leu Val Thr Asp Gly Lys Ser Gln Asp Asp Val His
 290 295 300

Thr Ala Ala Arg Val Leu Lys Asp Leu Gly Val Asn Val Phe Ala Val
 305 310 315 320

Gly Val Lys Asn Ala Asp Glu Ala Glu Leu Arg Leu Leu Ala Ser Pro
 325 330 335

Pro Arg Asp Ile Thr Val His Ser Val Leu Asp Phe Leu Gln Leu Gly
 340 345 350

Ala Leu Ala Gly Leu Leu Ser Arg Leu Ile Cys Gln Arg Leu Gln Gly
 355 360 365

Gly Ser Pro Arg Gln Gly Pro Ala Ala Ala Pro Ala Leu Asp Thr Leu
 370 375 380

Pro Ala Pro Thr Ser Leu Val Leu Ser Gln Val Thr Ser Ser Ser Ile
 385 390 395 400

Arg Leu Ser Trp Thr Pro Ala Pro Arg His Pro Leu Lys Tyr Leu Ile
 405 410 415

Val Trp Arg Ala Ser Arg Gly Gly Thr Pro Arg Glu Val Val Val Glu
 420 425 430

Gly Pro Ala Ala Ser Thr Glu Leu His Asn Leu Ala Ser Arg Thr Glu
 435 440 445

Tyr Leu Val Ser Val Phe Pro Ile Tyr Glu Gly Gly Val Gly Glu Gly

450		455		460
Leu Arg Gly Leu Val Thr Thr Ala Pro Leu Pro Pro Pro Arg Ala Leu				
465		470		475 480
Thr Leu Ala Ala Val Thr Pro Arg Thr Val His Leu Thr Trp Gln Pro				
	485		490	495
Ser Ala Gly Ala Thr His Tyr Leu Val Arg Cys Ser Pro Ala Ser Pro				
	500		505	510
Lys Gly Glu Glu Glu Glu Arg Glu Val Gln Val Gly Arg Pro Glu Val				
	515		520	525
Leu Leu Asp Gly Leu Glu Pro Gly Arg Asp Tyr Glu Val Ser Val Gln				
	530		535	540
Ser Leu Arg Gly Pro Glu Gly Ser Glu Ala Arg Gly Ile Arg Ala Arg				
545		550		555 560
Thr Pro Thr Leu Ala Pro Pro Arg His Leu Gly Phe Ser Asp Val Ser				
	565		570	575
His Asp Ala Ala Arg Val Phe Trp Glu Gly Ala Pro Arg Pro Val Arg				
	580		585	590
Leu Val Arg Val Thr Tyr Val Ser Ser Glu Gly Gly His Ser Gly Gln				
	595		600	605
Thr Glu Ala Pro Gly Asn Ala Thr Ser Ala Thr Leu Gly Pro Leu Ser				
	610		615	620
Ser Ser Thr Thr Tyr Thr Val Arg Val Thr Cys Leu Tyr Pro Gly Gly				
625		630		635 640
Gly Ser Ser Thr Leu Thr Gly Arg Val Thr Thr Lys Lys Ala Pro Ser				
	645		650	655
Pro Ser Gln Leu Ser Met Thr Glu Leu Pro Gly Asp Ala Val Gln Leu				
	660		665	670
Ala Trp Val Ala Ala Ala Pro Ser Gly Val Leu Val Tyr Gln Ile Thr				
	675		680	685
Trp Thr Pro Leu Gly Glu Gly Lys Ala His Glu Ile Ser Val Pro Gly				
	690		695	700

Asn Leu Gly Thr Ala Val Leu Pro Gly Leu Gly Arg His Thr Glu Tyr
705 710 715 720

Asp Val Thr Ile Leu Ala Tyr Tyr Arg Asp Gly Ala Arg Ser Asp Pro
725 730 735

Val Ser Leu Arg Tyr Thr Pro Ser Thr Val Ser Arg Ser Pro Pro Ser
740 745 750

Asn Leu Ala Leu Ala Ser Glu Thr Pro Asp Ser Leu Gln Val Ser Trp
755 760 765

Thr Pro Pro Leu Gly Arg Val Leu His Tyr Trp Leu Thr Tyr Ala Pro
770 775 780

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

Ser His Val Thr Leu Pro Asp Leu Gln Ala Ala Thr Lys Tyr Arg Val
805 810 815

Leu Val Ser Ala Ile Tyr Ala Ala Gly Arg Ser Glu Ala Val Ser Ala
820 825 830

Thr Gly Gln Thr Ala Cys Pro Ala Leu Arg Pro Asp Gly Ser Leu Pro
835 840 845

Gly Phe Asp Leu Met Val Ala Phe Ser Leu Val Glu Lys Ala Tyr Ala
850 855 860

Ser Ile Arg Gly Val Ala Met Glu Pro Ser Ala Phe Gly Gly Thr Pro
865 870 875 880

Thr Phe Thr Leu Phe Lys Asp Ala Gln Leu Thr Arg Arg Val Ser Asp
885 890 895

Val Tyr Pro Ala Pro Leu Pro Pro Glu His Thr Ile Val Phe Leu Val
900 905 910

Arg Leu Leu Pro Glu Thr Pro Arg Glu Ala Phe Ala Leu Trp Gln Met
915 920 925

Thr Ala Glu Asp Phe Gln Pro Leu Leu Gly Val Leu Leu Asp Ala Gly
930 935 940

Lys Lys Ser Leu Thr Tyr Phe His Arg Asp Pro Arg Ala Ala Leu Gln

945		950		955		960
Glu Ala Thr Phe Asp Pro Gln Glu Val Arg Lys Ile Phe Phe Gly Ser						
		965		970		975
Phe His Lys Val His Val Ala Val Gly Arg Ser Lys Val Arg Leu Tyr						
		980		985		990
Val Asp Cys Arg Lys Val Ala Glu Arg Pro Leu Gly Glu Met Gly Ser						
		995		1000		1005
Pro Pro Ala Ala Gly Phe Val Thr Leu Gly Arg Leu Ala Lys Ala						
		1010		1015		1020
Arg Gly Pro Arg Ser Ser Ser Ala Ala Phe Gln Leu Gln Met Leu						
		1025		1030		1035
Gln Ile Val Cys Ser Asp Thr Trp Ala Asp Glu Asp Arg Cys Cys						
		1040		1045		1050
Glu Leu Pro Ala Ser Arg Asp Gly Glu Thr Cys Pro Ala Phe Val						
		1055		1060		1065
Ser Ala Cys Ser Cys Ser Ser Glu Thr Pro Gly Pro Pro Gly Pro						
		1070		1075		1080
Gln Gly Pro Pro Gly Leu Pro Gly Arg Asn Gly Thr Pro Gly Glu						
		1085		1090		1095
Gln Gly Phe Pro Gly Pro Arg Gly Glu Pro Gly Pro Pro Gly Gln						
		1100		1105		1110
Met Gly Pro Glu Gly Pro Gly Gly Gln Gln Gly Ser Pro Gly Thr						
		1115		1120		1125
Gln Gly Arg Ala Val Gln Gly Pro Val Gly Pro Pro Gly Val Lys						
		1130		1135		1140
Gly Glu Lys Gly Asp His Gly Leu Pro Gly Leu Gln Gly His Pro						
		1145		1150		1155
Gly His Gln Gly Ile Pro Gly Arg Val Gly Leu Gln Gly Pro Lys						
		1160		1165		1170
Gly Met Arg Gly Leu Glu Gly Thr Ala Gly Leu Pro Gly Pro Gly						
		1175		1180		1185

Pro Arg Gly Phe Gln Gly Met Ala Gly Ala Arg Gly Thr Ser Gly
1190 1195 1200

Glu Arg Gly Pro Pro Gly Thr Val Gly Pro Thr Gly Leu Pro Gly
1205 1210 1215

Pro Lys Gly Glu Arg Gly Glu Lys Gly Glu Pro Gln Ser Leu Ala
1220 1225 1230

Thr Leu Tyr Gln Leu Val Ser Gln Ala Cys Glu Ser Ala Ile Gln
1235 1240 1245

Thr His Val Ser Lys Phe Asp Ser Phe His Glu Asn Thr Arg Pro
1250 1255 1260

Pro Met Pro Ile Leu Glu Gln Lys Leu Glu Pro Gly Thr Glu Pro
1265 1270 1275

Leu Gly Ser Pro Gly Thr Arg Ser Lys Ala Leu Val Pro Gly Glu
1280 1285 1290

Trp Gly Arg Gly Gly Arg His Leu Glu Gly Arg Gly Glu Pro Gly
1295 1300 1305

Ala Val Gly Gln Met Gly Ser Pro Gly Gln Gln Gly Ala Ser Thr
1310 1315 1320

Gln Gly Leu Trp Glu
1325

<210> 22

<211> 1278

<212> PRT

<213> Homo sapiens

<400> 22

Met Ser Ser Gly Asp Pro Ala His Leu Gly Leu Cys Leu Trp Leu Trp
1 5 10 15

Leu Gly Ala Thr Leu Gly Arg Glu Gln Val Gln Ala Ser Gly Leu Leu
20 25 30

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

Ser Glu Gly Ser Gly Leu Gly Tyr Leu Val Gln Val Lys Pro Met Ala
50 55 60

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

53

Thr Ala Ala Arg Val Leu Lys Asp Leu Gly Val Asn Val Phe Ala Val
 305 310 315 320

Gly Val Lys Asn Ala Asp Glu Ala Glu Leu Arg Leu Leu Ala Ser Pro
 325 330 335

Pro Arg Asp Ile Thr Val His Ser Val Leu Asp Phe Leu Gln Leu Gly
 340 345 350

Ala Leu Ala Gly Leu Leu Ser Arg Leu Ile Cys Gln Arg Leu Gln Gly
 355 360 365

Gly Ser Pro Arg Gln Gly Pro Ala Ala Ala Pro Ala Leu Asp Thr Leu
 370 375 380

Pro Ala Pro Thr Ser Leu Val Leu Ser Gln Val Thr Ser Ser Ser Ile
 385 390 395 400

Arg Leu Ser Trp Thr Pro Ala Pro Arg His Pro Leu Lys Tyr Leu Ile
 405 410 415

Val Trp Arg Ala Ser Arg Gly Gly Thr Pro Arg Glu Val Val Val Glu
 420 425 430

Gly Pro Ala Ala Ser Thr Glu Leu His Asn Leu Ala Ser Arg Thr Glu
 435 440 445

Tyr Leu Val Ser Val Phe Pro Ile Tyr Glu Gly Gly Val Gly Glu Gly
 450 455 460

Leu Arg Gly Leu Val Thr Thr Ala Pro Leu Pro Pro Pro Arg Ala Leu
 465 470 475 480

Thr Leu Ala Ala Val Thr Pro Arg Thr Val His Leu Thr Trp Gln Pro
 485 490 495

Ser Ala Gly Ala Thr His Tyr Leu Val Arg Cys Ser Pro Ala Ser Pro
 500 505 510

Lys Gly Glu Glu Glu Glu Arg Glu Val Gln Val Gly Arg Pro Glu Val
 515 520 525

Leu Leu Asp Gly Leu Glu Pro Gly Arg Asp Tyr Glu Val Ser Val Gln
 530 535 540

Ser Leu Arg Gly Pro Glu Gly Ser Glu Ala Arg Gly Ile Arg Ala Arg
 545 550 555 560

Thr	Pro	Thr	Leu	Ala	Pro	Pro	Arg	His	Leu	Gly	Phe	Ser	Asp	Val	Ser		
				565					570					575			
His	Asp	Ala	Ala	Arg	Val	Phe	Trp	Glu	Gly	Ala	Pro	Arg	Pro	Val	Arg		
			580					585					590				
Leu	Val	Arg	Val	Thr	Tyr	Val	Ser	Ser	Glu	Gly	Gly	His	Ser	Gly	Gln		
		595					600					605					
Thr	Glu	Ala	Pro	Gly	Asn	Ala	Thr	Ser	Ala	Thr	Leu	Gly	Pro	Leu	Ser		
	610					615						620					
Ser	Ser	Thr	Thr	Tyr	Thr	Val	Arg	Val	Thr	Cys	Leu	Tyr	Pro	Gly	Gly		
625					630					635					640		
Gly	Ser	Ser	Thr	Leu	Thr	Gly	Arg	Val	Thr	Thr	Lys	Lys	Ala	Pro	Ser		
				645					650					655			
Pro	Ser	Gln	Leu	Ser	Met	Thr	Glu	Leu	Pro	Gly	Asp	Ala	Val	Gln	Leu		
			660					665					670				
Ala	Trp	Val	Ala	Ala	Ala	Pro	Ser	Gly	Val	Leu	Val	Tyr	Gln	Ile	Thr		
		675					680					685					
Trp	Thr	Pro	Leu	Gly	Glu	Gly	Lys	Ala	His	Glu	Ile	Ser	Val	Pro	Gly		
	690					695					700						
Asn	Leu	Gly	Thr	Ala	Val	Leu	Pro	Gly	Leu	Gly	Arg	His	Thr	Glu	Tyr		
705					710					715					720		
Asp	Val	Thr	Ile	Leu	Ala	Tyr	Tyr	Arg	Asp	Gly	Ala	Arg	Ser	Asp	Pro		
				725					730					735			
Val	Ser	Leu	Arg	Tyr	Thr	Pro	Ser	Thr	Val	Ser	Arg	Ser	Pro	Pro	Ser		
			740					745					750				
Asn	Leu	Ala	Leu	Ala	Ser	Glu	Thr	Pro	Asp	Ser	Leu	Gln	Val	Ser	Trp		
		755					760					765					
Thr	Pro	Pro	Leu	Gly	Arg	Val	Leu	His	Tyr	Trp	Leu	Thr	Tyr	Ala	Pro		
	770					775					780						
Ala	Ser	Gly	Leu	Gly	Pro	Glu	Lys	Ser	Val	Ser	Val	Pro	Gly	Ala	Arg		
785					790					795					800		

Ser His Val Thr Leu Pro Asp Leu Gln Ala Ala Thr Lys Tyr Arg Val
 805 810 815

Leu Val Ser Ala Ile Tyr Ala Ala Gly Arg Ser Glu Ala Val Ser Ala
 820 825 830

Thr Gly Gln Thr Ala Cys Pro Ala Leu Arg Pro Asp Gly Ser Leu Pro
 835 840 845

Gly Phe Asp Leu Met Val Ala Phe Ser Leu Val Glu Lys Ala Tyr Ala
 850 855 860

Ser Ile Arg Gly Val Ala Met Glu Pro Ser Ala Phe Gly Gly Thr Pro
 865 870 875 880

Thr Phe Thr Leu Phe Lys Asp Ala Gln Leu Thr Arg Arg Val Ser Asp
 885 890 895

Val Tyr Pro Ala Pro Leu Pro Pro Glu His Thr Ile Val Phe Leu Val
 900 905 910

Arg Leu Leu Pro Glu Thr Pro Arg Glu Ala Phe Ala Leu Trp Gln Met
 915 920 925

Thr Ala Glu Asp Phe Gln Pro Leu Leu Gly Val Leu Leu Asp Ala Gly
 930 935 940

Lys Lys Ser Leu Thr Tyr Phe His Arg Asp Pro Arg Ala Ala Leu Gln
 945 950 955 960

Glu Ala Thr Phe Asp Pro Gln Glu Val Arg Lys Ile Phe Phe Gly Ser
 965 970 975

Phe His Lys Val His Val Ala Val Gly Arg Ser Lys Val Arg Leu Tyr
 980 985 990

Val Asp Cys Arg Lys Val Ala Glu Arg Pro Leu Gly Glu Met Gly Ser
 995 1000 1005

Pro Pro Ala Ala Gly Phe Val Thr Leu Gly Arg Leu Ala Lys Ala
 1010 1015 1020

Arg Gly Pro Arg Ser Ser Ser Ala Ala Phe Gln Leu Gln Met Leu
 1025 1030 1035

Gln Ile Val Cys Ser Asp Thr Trp Ala Asp Glu Asp Arg Cys Cys
 1040 1045 1050

Glu	Leu	Pro	Ala	Ser	Arg	Asp	Gly	Glu	Thr	Cys	Pro	Ala	Phe	Val
1055						1060					1065			
Ser	Ala	Cys	Ser	Cys	Ser	Ser	Glu	Thr	Pro	Gly	Pro	Pro	Gly	Pro
1070						1075					1080			
Gln	Gly	Pro	Pro	Gly	Pro	Pro	Gly	Val	Lys	Gly	Glu	Lys	Gly	Asp
1085						1090					1095			
His	Gly	Leu	Pro	Gly	Leu	Gln	Gly	His	Pro	Gly	His	Gln	Gly	Ile
1100						1105					1110			
Pro	Gly	Arg	Val	Gly	Leu	Gln	Gly	Pro	Lys	Gly	Met	Arg	Gly	Leu
1115						1120					1125			
Glu	Gly	Thr	Ala	Gly	Leu	Pro	Gly	Pro	Gly	Pro	Arg	Gly	Phe	Gln
1130						1135					1140			
Gly	Met	Ala	Gly	Ala	Arg	Gly	Thr	Ser	Gly	Glu	Arg	Gly	Pro	Pro
1145						1150					1155			
Gly	Thr	Val	Gly	Pro	Thr	Gly	Leu	Pro	Gly	Pro	Lys	Gly	Glu	Arg
1160						1165					1170			
Gly	Glu	Lys	Gly	Glu	Pro	Gln	Ser	Leu	Ala	Thr	Leu	Tyr	Gln	Leu
1175						1180					1185			
Val	Ser	Gln	Ala	Cys	Glu	Ser	Ala	Ile	Gln	Thr	His	Val	Ser	Lys
1190						1195					1200			
Phe	Asp	Ser	Phe	His	Glu	Asn	Thr	Arg	Pro	Pro	Met	Pro	Ile	Leu
1205						1210					1215			
Glu	Gln	Lys	Leu	Glu	Pro	Gly	Thr	Glu	Pro	Leu	Gly	Ser	Pro	Gly
1220						1225					1230			
Thr	Arg	Ser	Lys	Ala	Leu	Val	Pro	Gly	Glu	Trp	Gly	Arg	Gly	Gly
1235						1240					1245			
Arg	His	Leu	Glu	Gly	Arg	Gly	Glu	Pro	Gly	Ala	Val	Gly	Gln	Met
1250						1255					1260			
Gly	Ser	Pro	Gly	Gln	Gln	Gly	Ala	Ser	Thr	Gln	Gly	Leu	Trp	Glu
1265						1270					1275			

<210> 23
 <211> 1283
 <212> PRT
 <213> Homo sapiens

<400> 23

Met Ser Ser Gly Asp Pro Ala His Leu Gly Leu Cys Leu Trp Leu Trp
 1 5 10 15

Leu Gly Ala Thr Leu Gly Arg Glu Gln Val Gln Ala Ser Gly Leu Leu
 20 25 30

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

Ser Glu Gly Ser Gly Leu Gly Tyr Leu Val Gln Val Lys Pro Met Ala
 50 55 60

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

Thr Val Gly Gly Leu Ser Pro Ser Lys Gly Tyr Thr Leu Gln Ile Phe
 85 90 95

Glu Leu Thr Gly Ser Gly Arg Phe Leu Leu Ala Arg Arg Glu Phe Val
 100 105 110

Ile Glu Asp Leu Lys Ser Ser Ser Leu Asp Arg Ser Ser Gln Arg Pro
 115 120 125

Leu Gly Ser Gly Ala Pro Glu Pro Thr Pro Ser His Thr Gly Ser Pro
 130 135 140

Asp Pro Glu Gln Ala Ser Glu Pro Gln Val Ala Phe Thr Pro Ser Gln
 145 150 155 160

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

Pro Ala Asp Met Val Phe Leu Val Asp Gly Ser Trp Ser Ile Gly His
 180 185 190

Ser His Phe Gln Gln Val Lys Asp Phe Leu Ala Ser Val Ile Ala Pro
 195 200 205

Phe Glu Ile Gly Pro Asp Lys Val Gln Val Gly Leu Thr Gln Tyr Ser
 210 215 220

Gly Asp Ala Gln Thr Glu Trp Asp Leu Asn Ser Leu Ser Thr Lys Glu
225 230 235 240

Gln Val Leu Ala Ala Val Arg Arg Leu Arg Tyr Lys Gly Gly Asn Thr
245 250 255

Phe Thr Gly Leu Ala Leu Thr His Val Leu Gly Gln Asn Leu Gln Pro
260 265 270

Ala Ala Gly Leu Arg Pro Glu Ala Ala Lys Val Val Ile Leu Val Thr
275 280 285

Asp Gly Lys Ser Gln Asp Asp Val His Thr Ala Ala Arg Val Leu Lys
290 295 300

Asp Leu Gly Val Asn Val Phe Ala Val Gly Val Lys Asn Ala Asp Glu
305 310 315 320

Ala Glu Leu Arg Leu Leu Ala Ser Pro Pro Arg Asp Ile Thr Val His
325 330 335

Ser Val Leu Asp Phe Leu Gln Leu Gly Ala Leu Ala Gly Leu Leu Ser
340 345 350

Arg Leu Ile Cys Gln Arg Leu Gln Gly Gly Ser Pro Arg Gln Gly Pro
355 360 365

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

Leu Ser Gln Val Thr Ser Ser Ser Ile Arg Leu Ser Trp Thr Pro Ala
385 390 395 400

Pro Arg His Pro Leu Lys Tyr Leu Ile Val Trp Arg Ala Ser Arg Gly
405 410 415

Gly Thr Pro Arg Glu Val Val Val Glu Gly Pro Ala Ala Ser Thr Glu
420 425 430

Leu His Asn Leu Ala Ser Arg Thr Glu Tyr Leu Val Ser Val Phe Pro
435 440 445

Ile Tyr Glu Gly Gly Val Gly Glu Gly Leu Arg Gly Leu Val Thr Thr
450 455 460

Ala Pro Leu Pro Pro Pro Arg Ala Leu Thr Leu Ala Ala Val Thr Pro

465		470		475		480
Arg Thr Val His	Leu Thr Trp Gln Pro Ser Ala Gly Ala Thr His Tyr					
	485		490			495
Leu Val Arg Cys Ser Pro Ala Ser Pro Lys Gly Glu Glu Glu Glu Arg						
	500		505			510
Glu Val Gln Val Gly Arg Pro Glu Val Leu Leu Asp Gly Leu Glu Pro						
	515		520		525	
Gly Arg Asp Tyr Glu Val Ser Val Gln Ser Leu Arg Gly Pro Glu Gly						
	530		535		540	
Ser Glu Ala Arg Gly Ile Arg Ala Arg Thr Pro Thr Leu Ala Pro Pro						
545		550		555		560
Arg His Leu Gly Phe Ser Asp Val Ser His Asp Ala Ala Arg Val Phe						
	565		570			575
Trp Glu Gly Ala Pro Arg Pro Val Arg Leu Val Arg Val Thr Tyr Val						
	580		585			590
Ser Ser Glu Gly Gly His Ser Gly Gln Thr Glu Ala Pro Gly Asn Ala						
	595		600			605
Thr Ser Ala Thr Leu Gly Pro Leu Ser Ser Ser Thr Thr Tyr Thr Val						
	610		615			620
Arg Val Thr Cys Leu Tyr Pro Gly Gly Gly Ser Ser Thr Leu Thr Gly						
625		630		635		640
Arg Val Thr Thr Lys Lys Ala Pro Ser Pro Ser Gln Leu Ser Met Thr						
	645		650			655
Glu Leu Pro Gly Asp Ala Val Gln Leu Ala Trp Val Ala Ala Ala Pro						
	660		665			670
Ser Gly Val Leu Val Tyr Gln Ile Thr Trp Thr Pro Leu Gly Glu Gly						
	675		680			685
Lys Ala His Glu Ile Ser Val Pro Gly Asn Leu Gly Thr Ala Val Leu						
	690		695			700
Pro Gly Leu Gly Arg His Thr Glu Tyr Asp Val Thr Ile Leu Ala Tyr						
705		710		715		720

Tyr Arg Asp Gly Ala Arg Ser Asp Pro Val Ser Leu Arg Tyr Thr Pro
 725 730 735
 Ser Thr Val Ser Arg Ser Pro Pro Ser Asn Leu Ala Leu Ala Ser Glu
 740 745 750
 Thr Pro Asp Ser Leu Gln Val Ser Trp Thr Pro Pro Leu Gly Arg Val
 755 760 765
 Leu His Tyr Trp Leu Thr Tyr Ala Pro Ala Ser Gly Leu Gly Pro Glu
 770 775 780
 Lys Ser Val Ser Val Pro Gly Ala Arg Ser His Val Thr Leu Pro Asp
 785 790 795 800
 Leu Gln Ala Ala Thr Lys Tyr Arg Val Leu Val Ser Ala Ile Tyr Ala
 805 810 815
 Ala Gly Arg Ser Glu Ala Val Ser Ala Thr Gly Gln Thr Ala Cys Pro
 820 825 830
 Ala Leu Arg Pro Asp Gly Ser Leu Pro Gly Phe Asp Leu Met Val Ala
 835 840 845
 Phe Ser Leu Val Glu Lys Ala Tyr Ala Ser Ile Arg Gly Val Ala Met
 850 855 860
 Glu Pro Ser Ala Phe Gly Gly Thr Pro Thr Phe Thr Leu Phe Lys Asp
 865 870 875 880
 Ala Gln Leu Thr Arg Arg Val Ser Asp Val Tyr Pro Ala Pro Leu Pro
 885 890 895
 Pro Glu His Thr Ile Val Phe Leu Val Arg Leu Leu Pro Glu Thr Pro
 900 905 910
 Arg Glu Ala Phe Ala Leu Trp Gln Met Thr Ala Glu Asp Phe Gln Pro
 915 920 925
 Leu Leu Gly Val Leu Leu Asp Ala Gly Lys Lys Ser Leu Thr Tyr Phe
 930 935 940
 His Arg Asp Pro Arg Ala Ala Leu Gln Glu Ala Thr Phe Asp Pro Gln
 945 950 955 960
 Glu Val Arg Lys Ile Phe Phe Gly Ser Phe His Lys Val His Val Ala

965

970

975

Val Gly Arg Ser Lys Val Arg Leu Tyr Val Asp Cys Arg Lys Val Ala
 980 985 990

Glu Arg Pro Leu Gly Glu Met Gly Ser Pro Pro Ala Ala Gly Phe Val
 995 1000 1005

Thr Leu Gly Arg Leu Ala Lys Ala Arg Gly Pro Arg Ser Ser Ser
 1010 1015 1020

Ala Ala Phe Gln Leu Gln Met Leu Gln Ile Val Cys Ser Asp Thr
 1025 1030 1035

Trp Ala Asp Glu Asp Arg Cys Cys Glu Leu Pro Ala Ser Arg Asp
 1040 1045 1050

Gly Glu Thr Cys Pro Ala Phe Val Ser Ala Cys Ser Cys Ser Ser
 1055 1060 1065

Glu Thr Pro Gly Pro Pro Gly Pro Gln Gly Pro Pro Gly Leu Pro
 1070 1075 1080

Gly Arg Asn Gly Thr Pro Gly Glu Gln Gly Phe Pro Gly Pro Arg
 1085 1090 1095

Gly Pro Pro Gly Val Lys Gly Glu Lys Gly Asp His Gly Leu Pro
 1100 1105 1110

Gly Leu Gln Gly His Pro Gly His Gln Gly Ile Pro Gly Arg Val
 1115 1120 1125

Gly Leu Gln Gly Pro Lys Gly Met Arg Gly Leu Glu Gly Thr Ala
 1130 1135 1140

Gly Leu Pro Gly Pro Gly Pro Arg Gly Phe Gln Gly Met Ala Gly
 1145 1150 1155

Ala Arg Gly Thr Ser Gly Glu Arg Gly Pro Pro Gly Thr Val Gly
 1160 1165 1170

Pro Thr Gly Leu Pro Gly Pro Lys Gly Glu Arg Gly Glu Lys Gly
 1175 1180 1185

Glu Pro Gln Ser Leu Ala Thr Leu Tyr Gln Leu Val Ser Gln Ala
 1190 1195 1200

Ser His Val Ser Lys Phe Asp Ser Phe His Glu Asn Thr Arg Pro
 1205 1210 1215

Pro Met Pro Ile Leu Glu Gln Lys Leu Glu Pro Gly Thr Glu Pro
 1220 1225 1230

Leu Gly Ser Pro Gly Thr Arg Ser Lys Ala Leu Val Pro Gly Glu
 1235 1240 1245

Trp Gly Arg Gly Gly Arg His Leu Glu Gly Arg Gly Glu Pro Gly
 1250 1255 1260

Ala Val Gly Gln Met Gly Ser Pro Gly Gln Gln Gly Ala Ser Thr
 1265 1270 1275

Gln Gly Leu Trp Glu
 1280

<210> 24

<211> 3987

<212> DNA

<213> Homo sapiens

<400> 24

```

atgagctccg gagaccctgc acacctcggc ctctgcctct ggctgtggct gggcgccacc      60
ctgggaagag agcaagttca agcaagcggc ctctgaggc tggctgtgct gcctgaggac      120
cggctgcaga tgaagtggag agagtcggag gggagcggcc tcggctacct ggtgcaggcg      180
aagcccatgg caggggactc ggaacaggag gtgatactga ccaccaagac ccctaaggcc      240
acagtggggg gcctgagccc ctccaagggc tacaccttgc agatcttcga gctcactggc      300
tctgggcgct tcctgctagc tcggaggggag tttgtgattg aggatctgaa gagtagctcc      360
ctggacagga gcagccagag gcccctcggc tctggagccc cggagcccac cccctcccac      420
acggggagcc cagaccctga gcaggcttct gagccccaag ttgccttcac accaagccag      480
gatccgcgca ctcttggtgg gtcagagtgg agagagaccg gccccagtt ccgctgcctg      540
ccccccgtgc ctgctgacat ggtcttcctg gtggacgggt cctggagcat tggccacagt      600
cacttccagc aggtcaagga ctctctggcc agtgtcatcg caccctttga aatcggggccg      660
gataagggtcc aagtaggcct gactcagtac agcgggggatg ctgagactga gtgggacctg      720
aactccctca gcaccaagga acagggtgctg gcagctgtgc gccgcctccg ctacaagggg      780
gggaacacgt tcacaggcct tgccctgacc cacgtgctgg ggagaaacct gcagccggcg      840
gctggcctcc gtccagaggc agccaagggtg gtgattctgg tgacggacgg caagtcccag      900
gacgatgtgc aactgctgc ccgtgtcctc aaggacctgg gcgtgaacgt cttcgctgtg      960

```

gggtgtgaaga	acgccgatga	ggctgagctg	aggtcctctg	cgccccgcc	gagggacatc	1020
accgtccaca	gcgtgctgga	cttcctgcag	ctcggcgcg	tggctggcct	gctcagccgt	1080
ctcatctgcc	agaggctcca	gggtgggagc	ccgcggcagg	gccagcagc	ggctccagcc	1140
ctggacaccc	tccctgcccc	caccagcctg	gtcctgagcc	aggtgacctc	ctccagcatc	1200
cgctgtcct	ggactccagc	cccccggcac	cccctcaagt	atctgatcgt	ttggcgagcc	1260
tctagagggtg	gcacccccag	ggaggtgggtg	gtggagggac	ccgccgcctc	cacggagctg	1320
cacaacctgg	cctcccgcac	agagtacctg	gtctccgtgt	tccccatcta	tgagggcggg	1380
gttggcgaag	gcctgcgggg	cctggtgacc	acagcacctc	tgcctccgcc	ccgggcgctg	1440
accctggccg	cagtgcgcgc	cagaaccgtc	cacctcacct	ggcagccctc	ggccggggcc	1500
accactacc	tgggtgcgatg	ttctcctgct	tcccccaagg	gtgaagagga	ggagcgagag	1560
gtgcaggctc	ggcgggccga	ggtgctgctg	gatggcctgg	aacctggcag	ggactatgag	1620
gtctcggtgc	agagcctgcg	aggccctgag	ggcagcgagg	cccggggcat	ccgtgccagg	1680
acccccaccc	tggccccccc	gagacacctg	ggcttctcag	acgtgagcca	cgacgcggca	1740
cgagtgttct	gggaggggtgc	cccgaggcct	gtgcgcctgg	tcagggtcac	ctatgtgtcc	1800
agcgaggggtg	gacactcggg	gcagacagag	gctcctggga	acgccacctc	ggccacgctg	1860
gggcctctct	cttcctccac	cacctacact	gtccgtgtca	cctgcctcta	ccctgggggt	1920
ggctcctcta	cgctgactgg	ccgggtgacc	accaagaaag	ctcccagccc	aagccagctg	1980
tccatgacgg	agctgccagg	ggatgcagtc	cagctggcgt	gggtggccgc	agccccgtct	2040
ggcgtgcttg	tctaccagat	cacgtggacg	cccctgggag	aggggaaggc	tcacgagatc	2100
tctgtcccag	ggaacctcgg	cacggccgtc	ctgcctggcc	tagggaggca	cacagagtac	2160
gacgtcacca	tcttggccta	ctacagggac	ggggcccgc	gtgaccctgt	gtccctccgc	2220
tataccccct	ccacggtgag	caggagccca	ccctccaacc	tggccctggc	ctcggagacc	2280
cccgacagcc	tgcaggtcag	ctggacgccc	ccgcttggcc	gcgtgctcca	ttactggctc	2340
acctacgccc	ccgcctctgg	cttgggaccc	gagaaatccg	tctctgtgcc	aggagccagg	2400
agccacgtga	cactgcccga	cctgcaggca	gccacgaagt	acagggtcct	ggtctcagct	2460
atctatgcag	caggcaggag	tgaggctgtg	tctgccacgg	gccagacagc	ctgcccagcc	2520
ctccgccctg	acggctccct	cccagggttt	gacctgatgg	tggccttcag	cctggtggaa	2580
aaggcttatg	cgtccatccg	gggcgtggcc	atggagccct	ctgccttcgg	tggaaccccg	2640
accttcacgc	tcttcaagga	cgcccagctg	acaagacggg	tcagtgcagt	ctaccagcc	2700
cccctacctc	cagagcacac	catcgtcttc	cttgtgcgcc	tacttcccga	gacaccccg	2760
gaggccttcg	cgctgtggca	gatgacagcc	gaggacttcc	agccctcct	tggggttctg	2820

ctggatgccg ggaagaagtc cctgacctac ttccaccgtg accccagggc tgccttgacg 2880
 gaggccacct tcgaccgcga ggaagtgagg aagattttct tcgggagctt ccacaagggtg 2940
 cacgtggctg tgggccgctc caaggtcagg ctctatgtgg actgccggaa ggtggctgag 3000
 cggcccccttg gggagatggg cagcccaccc gctgcgggct tcgtcacgct ggggaggctg 3060
 gccaaggcca ggggcccccg gagcagttcg gccgcgtttc agctccagat gctgcagatc 3120
 gtgtgcagtg acacctgggc cgatgaggac cgggtgctgtg agtccctgc ctcgagggat 3180
 ggagagacct gccccgcctt cgtgtctgcc tgttcctgtt cctcagagac ccctgggccc 3240
 ccaggacctc aaggaccccc aggcctccct gggaggaatg gcacccagg agagcagggc 3300
 ttcccagggc ccaggggaga gcccgggcca cccggacaga tgggaccaga aggtcctgga 3360
 gggcagcagg gctcgcgggg gacccagggc cgtgcagtcc aggggcctgt ggggccacca 3420
 ggggtcaaag gagagaaggg agaccatggg cttccaggct tgcagggcca ccccgccac 3480
 cagggcatcc ccgggagagt tggcctccag ggaccaaagg gaatgagagg cctggaggga 3540
 actgctggcc tgcctggacc cggccccagg gggttccagg gcatggcagg ggccaggggc 3600
 actagtggag agcgaggacc tccagggacc gtggggccca caggactgcc agggcccaaa 3660
 ggggaacgag gagagaaggg cgagccgcag tcccttgcca ccctctacca gcttgtgagc 3720
 caggcctgtg agtctgccat tcagacacac gtgtcaaagt tcgactcctt ccacgagaac 3780
 accaggcccc ccattgcccatt cttggagcag aagctggagc cgggactga gccctgggg 3840
 tccccctggca cccgcagcaa ggccctgggt cctggagaat gggggcgtgg tggccgccac 3900
 cttgagggca gaggggagcc tggagctgtt ggtcagatgg gcagccctgg gcagcagggg 3960
 gctagcacc accggcctctg ggagtga 3987

<210> 25

<211> 3837

<212> DNA

<213> Homo sapiens

<400> 25

atgagctccg gagaccctgc acacctcggc ctctgcctct ggctgtggct gggcgccacc 60
 ctgggaagag agcaagttca agcaagcggc ctctgaggc tggctgtgct gcctgaggac 120
 cggctgcaga tgaagtggag agagtcggag gggagcggc tcggctacct ggtgcagggtg 180
 aagcccatgg caggggactc ggaacaggag gtgatactga ccaccaagac ccctaaggcc 240
 acagtggggg gcctgagccc ctccaagggc tacaccttgc agatcttcga gctcactggc 300
 tctgggcgct tctgctagc tcggagggag tttgtgattg aggatctgaa gagtagctcc 360
 ctggacagga gcagccagag gccctcggc tctggagccc cggagccac ccctccac 420

acggggagacc	cagaccctga	gcaggcttct	gagccccaag	ttgccttcac	accaagccag	480
gatccgcgca	ctcctgggtg	gtcagagtgg	agagagaccg	gccccagtt	ccgctgcctg	540
ccccccgtgc	ctgctgacat	ggtcttcctg	gtggacgggt	cctggagcat	tggccacagt	600
cacttccagc	aggtcaagga	cttcctggcc	agtgtcatcg	caccctttga	aatcggggccg	660
gataaggtcc	aagtaggcct	gactcagtac	agcggggatg	ctcagactga	gtgggacctg	720
aactccctca	gcaccaagga	acaggtgctg	gcagctgtgc	gccgcctccg	ctacaagggg	780
gggaacacgt	tcacaggcct	tgccctgacc	cacgtgctgg	ggcagaacct	gcagccggcg	840
gctggcctcc	gtccagaggc	agccaagggtg	gtgattctgg	tgacggacgg	caagtcccag	900
gacgatgtgc	acactgctgc	ccgtgtcctc	aaggacctgg	gctgtaacgt	cttcgctgtg	960
ggtgtgaaga	acgccgatga	ggctgagctg	aggtcctctg	cgtccccgcc	gagggacatc	1020
accgtccaca	gcgtgctgga	cttcctgcag	ctcggcgcg	tggctggcct	gctcagccgt	1080
ctcatctgcc	agaggctcca	gggtgggagc	ccgcggcagg	gccagcagc	ggctccagcc	1140
ctggacaccc	tccctgcccc	caccagcctg	gtcctgagcc	aggtgacctc	ctccagcatc	1200
cgctgtcct	ggactccagc	cccccgccac	cccctcaagt	atctgatcgt	ttggcgagcc	1260
tctagagggtg	gcacccccag	ggaggtgggtg	gtggagggac	ccgccgcctc	cacggagctg	1320
cacaacctgg	cctcccgcac	agagtacctg	gtctccgtgt	tccccatcta	tgagggcggg	1380
gttggcgaag	gcctgcgggg	cctggtgacc	acagcacctc	tgcctccgcc	ccgggcgctg	1440
accctggccg	cagtgcgcgc	cagaaccgtc	cacctcacct	ggcagccctc	ggccggggcc	1500
accactacc	tgggtgcgatg	ttctcctgct	tcccccaagg	gtgaagagga	ggagcgagag	1560
gtgcaggctg	ggcgggccga	ggtgctgctg	gatggcctgg	aacctggcag	ggactatgag	1620
gtctcggtgc	agagcctgcg	aggccctgag	ggcagcgagg	cccggggcat	ccgtgccagg	1680
acccccaccc	tggccccccc	gagacacctg	ggcttctcag	acgtgagcca	cgacgcggca	1740
cgagtgttct	gggaggggtg	cccagggcct	gtgcgcctgg	tcagggtcac	ctatgtgtcc	1800
agcgaggggtg	gacactcggg	gcagacagag	gctcctggga	acgccacctc	ggccacgctg	1860
gggcctctct	cttcctccac	cacctacact	gtccgtgtca	cctgcctcta	ccctgggggt	1920
ggctcctcta	cgctgactgg	ccgggtgacc	accaagaaag	ctcccagccc	aagccagctg	1980
tccatgacgg	agctgccagg	ggatgcagtc	cagctggcgt	gggtggccgc	agccccgtct	2040
ggcgtgcttg	tctaccagat	cacgtggacg	cccctgggag	aggggaaggc	tcacgagatc	2100
tctgtcccag	ggaacctcgg	cacggccgtc	ctgcctggcc	tagggaggca	cacagagtac	2160
gacgtcacca	tcttggccta	ctacagggac	ggggcccgca	gtgaccctgt	gtccctccgc	2220
tataccccct	ccacggtgag	caggagccca	ccctccaacc	tggccctggc	ctcggagacc	2280

cccgacagcc tgcaggtcag ctggacgccc ccgcttgccc gcgtgctcca ttactggctc 2340
 acctacgccc ccgcctctgg cttgggaccc gagaaatccg tctctgtgcc aggagccagg 2400
 agccacgtga cactgcccga cctgcaggca gccacgaagt acagggtcct ggtctcagct 2460
 atctatgcag caggcaggag tgaggctgtg tctgccacgg gccagacagc ctgcccagcc 2520
 ctccgcccctg acggctccct cccagggttt gacctgatgg tggccttcag cctggtgga 2580
 aaggcttatg cgtccatccg gggcgtggcc atggagccct ctgccttcgg tgggacccc 2640
 accttcacgc tcttcaagga cgcccagctg acaagacggg tcagtgcagt ctaccagcc 2700
 cccctacctc cagagcacac catcgtcttc cttgtgcgcc tacttcccga gacacccgt 2760
 gaggccttcg cgctgtggca gatgacagcc gaggacttcc agcccctcct tggggttctg 2820
 ctggatgccg ggaagaagtc cctgacctac ttccaccgtg acccagggc tgccttgca 2880
 gaggccacct tcgaccgca ggaagtgagg aagattttct tcgggagctt ccacaaggtg 2940
 cacgtggctg tgggccgctc caaggtcagg ctctatgtgg actgccgaa ggtggctgag 3000
 cggccccttg gggagatggg cagcccaccc gctgcgggct tcgtcacgct ggggaggctg 3060
 gccaaggcca ggggcccccg gagcagttcg gccgcgtttc agtccagat gctgcagatc 3120
 gtgtgcagtg acacctgggc cgatgaggac cgggtgctgtg agtccctgc ctgagggat 3180
 ggagagacct gccccgcctt cgtgtctgcc tgttcctgtt cctcagagac ccctgggccc 3240
 ccaggacctc aaggaccccc aggtccacca ggggtcaaag gagagaaggg agaccatggg 3300
 cttccaggct tgcagggccca ccccgccac cagggcatcc ccgggagagt tggcctccag 3360
 ggaccaaagg gaatgagagg cctggaggga actgctggcc tgcttgacc tggccccagg 3420
 gggttccagg gcatggcagg ggccaggggc actagtggag agcgaggacc tccagggacc 3480
 gtggggccca caggactgcc agggcccaa ggggaacgag gagagaaggg cgagccgcag 3540
 tcccttgcca ccctctacca gcttgtgagc caggcctgtg agtctgccat tcagacacac 3600
 gtgtcaaagt tcgactcctt ccacgagaac accaggcccc ccatgcccat cttggagcag 3660
 aagctggagc cgggcactga gcccctgggg tcccctggca cccgcagcaa ggccttggtt 3720
 cctggagaat gggggcgtgg tggccgccac cttgagggca gaggggagcc tggagctgtt 3780
 ggtcagatgg gcagccctgg gcagcagggg gctagcacc agggcctctg ggagtga 3837

<210> 26

<211> 4168

<212> DNA

<213> Homo sapiens

<400> 26

ataagctcca gccttcctgt ggccacagca ggaccagagt ggaccagcac acccaggag 60

agaggactgg ggtcccagga gtaggaggag cccgagcacc atgagctccg gagaccctgc 120

acacctcggc	ctctgcctct	ggctgtggct	gggcgccacc	ctgggaagag	agcaagttca	180
agcaagcggg	ctcctgaggg	tggctgtgct	gcctgaggac	cggctgcaga	tgaagtggag	240
agagtcggag	gggagcggcc	tcggctacct	ggtgcagggt	aagcccatgg	caggggactc	300
ggaacaggag	gtgatactga	ccaccaagac	ccctaaggcc	acagtggggg	gcctgagccc	360
ctccaagggc	tacaccttgc	agatcttcga	gctcactggc	tctgggcgct	tcttgctagc	420
tcggagggag	tttgtgattg	aggatctgaa	gagtagctcc	ctggacagga	gcagccagag	480
gccccctcgg	tctggagccc	cggagcccac	cccctcccac	acggggagcc	cagaccctga	540
gcaggcttct	gagccccaag	ttgccttcac	accaagccag	gatccgcgca	ctcctgcccg	600
cccccagttc	cgctgcctgc	cccccgctgc	tgctgacatg	gtcttcctgg	tggacgggtc	660
ctggagcatt	ggccacagtc	acttccagca	ggtcaaggac	ttcctggcca	gtgtcatcgc	720
accctttgaa	atcggggccg	ataaggtcca	agtaggcctg	actcagtaca	gcggggatgc	780
tcagactgag	tgggacctga	actccctcag	caccaaggaa	caggtgctgg	cagctgtgcg	840
ccgcctccgc	tacaaggggg	ggaacacggt	cacaggcctt	gccctgaccc	acgtgctggg	900
gcagaacctg	cagccggcgg	ctggcctccg	tccagaggca	gccaagggtg	tgattctggt	960
gacggacggc	aagtcccagg	acgatgtgca	cactgctgcc	cgtgtcctca	aggacctggg	1020
cgtgaacgtc	ttcgctgtgg	gtgtgaagaa	cgccgatgag	gctgagctga	ggctcctggc	1080
gtccccgccg	agggacatca	ccgtccacag	cgtgctggac	ttcctgcagc	tcggcgcgct	1140
ggctggcctg	ctcagccgtc	tcattctgcca	gaggctccag	ggtgggagcc	cgcggcaggg	1200
cccagcagcg	gctccagccc	tggacaccct	ccctgcccc	accagcctgg	tcttgagcca	1260
ggtgacctcc	tccagcatcc	gctgtcctg	gactccagcc	ccccggcacc	ccctcaagta	1320
tctgatcggt	tggcgagcct	ctagagggtg	cacccccagg	gaggtgggtg	tggagggacc	1380
cgcgcctcc	acggagctgc	acaacctggc	ctccgcaca	gagtacctgg	tctccgtggt	1440
ccccatctat	gagggcgggg	ttggcgaagg	cctgcggggc	ctggtgacca	cagcacctct	1500
gcctccgccc	cgggcgctga	ccctggccgc	agtgacgccc	agaaccgtcc	acctcacctg	1560
gcagccctcg	gccggggcca	cccactacct	ggtgcgatgt	tctcctgctt	cccccaaggg	1620
tgaagaggag	gagcgagagg	tgcaggctcg	gcggcccag	gtgctgctgg	atggcctgga	1680
acctggcagg	gactatgagg	tctcggtgca	gagcctgcga	ggccctgagg	gcagcgaggc	1740
ccggggcatc	cgtgccagga	ccccaccct	ggcccccccg	agacacctgg	gcttctcaga	1800
cgtgagccac	gacgcggcac	gagtgttctg	ggaggggtgc	ccgaggcctg	tgcgctggt	1860
cagggtcacc	tatgtgtcca	gcgaggggtg	acactcgggg	cagacagagg	ctcctgggaa	1920
cgccacctcg	gccacgctgg	ggcctctctc	ttcctccacc	acctacactg	tccgtgtcac	1980

ctgcctctac	cctgggggtg	gctcctctac	gctgactggc	cgggtgacca	ccaagaaagc	2040
tcccagccca	agccagctgt	ccatgacgga	gctgccaggg	gatgcagtcc	agctggcgtg	2100
ggtggccgca	gccccgtctg	gcgtgcttgt	ctaccagatc	acgtggacgc	ccctgggaga	2160
ggggaaggct	cacgagatct	ctgtcccagg	gaacctcggc	acggccgtcc	tgcttggcct	2220
agggaggcac	acagagtacg	acgtcaccat	cttggcctac	tacagggacg	gggcccgcag	2280
tgaccctgtg	tccctccgct	ataccccctc	cacggtgagc	aggagcccac	cctccaacct	2340
ggccctggcc	tcggagaccc	ccgacagcct	gcaggtcagc	tggacgcccc	cgcttggccg	2400
cgtgctccat	tactggctca	cctacgcccc	cgctcttggc	ttgggacccg	agaaatccgt	2460
ctctgtgcca	ggagccagga	gccacgtgac	actgcccgac	ctgcaggcag	ccacgaagta	2520
cagggtcctg	gtctcagcta	tctatgcagc	aggcaggagt	gaggctgtgt	ctgccacggg	2580
ccagacagcc	tgccagccc	tccgccctga	cggctccctc	ccagggtttg	acctgatggt	2640
ggccttcagc	ctggtggaaa	aggcttatgc	gtccatccgg	ggcgtggcca	tggagccctc	2700
tgcttccggt	gggacccccga	ccttcacgct	cttcaaggac	gccagctga	caagacgggt	2760
cagtgcgctc	taccagccc	ccctacctcc	agagcacacc	atcgtcttcc	ttgtgcgcct	2820
acttcccag	acaccccgtg	aggccttcgc	gctgtggcag	atgacagccg	aggacttcca	2880
gccccctcct	ggggttctgc	tggatgccgg	gaagaagtcc	ctgacctact	tccaccgtga	2940
ccccagggct	gccttgacag	aggccacctt	cgacccgcag	gaagtgagga	agattttctt	3000
cgggagcttc	cacaagggtg	acgtggctgt	gggccgctcc	aaggtcaggc	tctatgtgga	3060
ctgccggaag	gtggctgagc	ggccccttgg	ggagatgggc	agcccacccg	ctgcgggctt	3120
cgtcacgctg	gggaggctgg	ccaaggccag	gggcccccg	agcagttcgg	ccgcgtttca	3180
gctccagatg	ctgcagatcg	tgtgcagtga	cacctgggcc	gatgaggacc	ggtgctgtga	3240
gctccctgcc	tcgagggatg	gagagacctg	ccccgccttc	gtgtctgcct	gttctgttcc	3300
ctcagagacc	cctgggcccc	caggacctca	aggaccccc	ggcctccctg	ggaggaatgg	3360
caccccagga	gagcagggtc	tcccagggcc	caggggtcca	ccaggggtca	aaggagagaa	3420
gggagaccat	gggcttccag	gcttgacagg	ccaccccggc	caccagggca	tccccgggag	3480
agttggcctc	cagggaccaa	agggaatgag	aggcctggag	ggaactgctg	gcctgcctgg	3540
acctggcccc	aggggggttc	agggcattgg	aggggccagg	ggcactagtg	gagagcgagg	3600
acctccaggg	accgtggggc	ccacaggact	gccagggccc	aaaggggaac	gaggagagaa	3660
gggcgagccg	cagtcccttg	ccaccctcta	ccagcttgtg	agccaggcct	cacacgtgtc	3720
aaagttcgac	tccttccacg	agaacaccag	gcccccatg	cccatcttgg	agcagaagct	3780
ggagccgggc	actgagcccc	tggggtcccc	tggcacccgc	agcaaggccc	tggttcttgg	3840

```

agaatggggg cgtggtggcc gccaccttga gggcagaggg gagcctggag ctgttggtca 3900
gatgggcagc cctgggcagc aggggggctag caccagggc ctctgggagt gacaggacat 3960
tttctgcact gccccgagga acgctgagcc ttctccctg ggtttgtctg gacaccgaga 4020
gcgaccacat cctggagaag ccaggagaaa agctcaggaa gagcctgcag gtggaaggag 4080
agggaagcag cggcctcggc caaggccac cccatactct tggctctgta gcatttccaa 4140
gttcagataa acccctgagt gctcaccc 4168

```

```

<210> 27
<211> 740
<212> PRT
<213> Homo sapiens
<400> 27

```

```

Ala Val Arg Ala Glu Pro Gly Leu Glu Glu Leu Ser Ser Gly Leu Arg
1          5          10          15

```

```

Ala His Ser Pro Ser Ala Thr Thr Val Cys Glu Pro Glu Ala Gln Gly
20          25          30

```

```

Ser Ala Ser Gly Cys Arg Tyr Ala Ala His Pro His Trp Gly Leu Gly
35          40          45

```

```

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

```

```

Val Cys Glu Pro Ala Gly Arg Gly Lys Pro His Pro Pro Ala Ala Pro
65          70          75          80

```

```

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

```

```

Pro Gly Ala Arg Ala Arg Thr Ser Pro Pro Pro Ala Ser Ala Arg Asn
100          105          110

```

```

Met Ala Ala Arg Pro Ala Ala Thr Leu Ala Trp Ser Leu Leu Leu Leu
115          120          125

```

```

Ser Ser Ala Leu Leu Arg Glu Gly Cys Arg Ala Arg Phe Val Ala Glu
130          135          140

```

```

Arg Asp Ser Glu Asp Asp Gly Glu Glu Pro Val Val Phe Pro Glu Ser
145          150          155          160

```

```

Pro Leu Gln Ser Pro Thr Val Leu Val Ala Val Leu Ala Arg Asn Ala

```

165

170

175

Ala His Thr Leu Pro His Phe Leu Gly Cys Leu Glu Arg Leu Asp Tyr
 180 185 190

Pro Lys Ser Arg Met Ala Ile Trp Ala Ala Thr Asp His Asn Val Asp
 195 200 205

Asn Thr Thr Glu Ile Phe Arg Glu Trp Leu Lys Asn Val Gln Arg Leu
 210 215 220

Tyr His Tyr Val Glu Trp Arg Pro Met Asp Glu Pro Glu Ser Tyr Pro
 225 230 235 240

Asp Glu Ile Gly Pro Lys His Trp Pro Thr Ser Arg Phe Ala His Val
 245 250 255

Met Lys Leu Arg Gln Ala Ala Leu Arg Thr Ala Arg Glu Lys Trp Ser
 260 265 270

Asp Tyr Ile Leu Phe Ile Asp Val Asp Asn Phe Leu Thr Asn Pro Gln
 275 280 285

Thr Leu Asn Leu Leu Ile Ala Glu Asn Lys Thr Ile Val Ala Pro Met
 290 295 300

Leu Glu Ser Arg Gly Leu Tyr Ser Asn Phe Trp Cys Gly Ile Thr Pro
 305 310 315 320

Lys Ala Lys Gly Phe Tyr Lys Arg Thr Pro Asp Tyr Val Gln Ile Arg
 325 330 335

Glu Trp Lys Arg Thr Gly Cys Phe Pro Val Pro Met Val His Ser Thr
 340 345 350

Phe Leu Ile Asp Leu Arg Lys Glu Ala Ser Asp Lys Leu Thr Phe Tyr
 355 360 365

Pro Pro His Gln Asp Tyr Thr Trp Thr Phe Asp Asp Ile Ile Val Phe
 370 375 380

Ala Phe Ser Ser Arg Gln Ala Gly Ile Gln Met Tyr Leu Cys Asn Arg
 385 390 395 400

Glu His Tyr Gly Tyr Leu Pro Ile Pro Leu Lys Pro His Gln Thr Leu
 405 410 415

Gln Glu Asp Ile Glu Asn Leu Ile His Val Gln Ile Glu Ala Met Ile
 420 425 430

Asp Arg Pro Pro Met Glu Pro Ser Gln Tyr Val Ser Val Val Pro Lys
 435 440 445

Tyr Pro Asp Lys Met Gly Phe Asp Glu Ile Phe Met Ile Asn Leu Lys
 450 455 460

Arg Arg Lys Asp Arg Arg Asp Arg Met Leu Arg Thr Leu Tyr Glu Gln
 465 470 475 480

Glu Ile Glu Val Lys Ile Val Glu Ala Val Asp Gly Lys Ala Leu Asn
 485 490 495

Thr Ser Gln Leu Lys Ala Leu Asn Ile Glu Met Leu Pro Gly Tyr Arg
 500 505 510

Asp Pro Tyr Ser Ser Arg Pro Leu Thr Arg Gly Glu Ile Gly Cys Phe
 515 520 525

Leu Ser His Tyr Ser Val Trp Lys Glu Val Ile Asp Arg Glu Leu Glu
 530 535 540

Lys Thr Leu Val Ile Glu Asp Asp Val Arg Phe Glu His Gln Phe Lys
 545 550 555 560

Lys Lys Leu Met Lys Leu Met Asp Asn Ile Asp Gln Ala Gln Leu Asp
 565 570 575

Trp Glu Leu Ile Tyr Ile Gly Arg Lys Arg Met Gln Val Lys Glu Pro
 580 585 590

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

Tyr Trp Thr Leu Gly Tyr Val Ile Ser Leu Glu Gly Ala Gln Lys Leu
 610 615 620

Val Gly Ala Asn Pro Phe Gly Lys Met Leu Pro Val Asp Glu Phe Leu
 625 630 635 640

Pro Val Met Tyr Asn Lys His Pro Val Ala Glu Tyr Lys Glu Tyr Tyr
 645 650 655

Glu Ser Arg Asp Leu Lys Ala Phe Ser Ala Glu Pro Leu Leu Ile Tyr

660

665

670

Pro Thr His Tyr Thr Gly Gln Pro Gly Tyr Leu Ser Asp Thr Glu Thr
 675 680 685

Ser Thr Ile Trp Asp Asn Glu Thr Val Ala Thr Asp Trp Asp Arg Thr
 690 695 700

His Ala Trp Lys Ser Arg Lys Gln Ser Arg Ile Tyr Ser Asn Ala Lys
 705 710 715 720

Asn Thr Glu Ala Leu Pro Pro Pro Thr Ser Leu Asp Thr Val Pro Ser
 725 730 735

Arg Asp Glu Leu
 740

<210> 28
 <211> 626
 <212> PRT
 <213> Homo sapiens

<400> 28

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

Ser Ser Ala Leu Leu Arg Glu Gly Cys Arg Ala Arg Phe Val Ala Glu
 20 25 30

Arg Asp Ser Glu Asp Asp Gly Glu Glu Pro Val Val Phe Pro Glu Ser
 35 40 45

Pro Leu Gln Ser Pro Thr Val Leu Val Ala Val Leu Ala Arg Asn Ala
 50 55 60

Ala His Thr Leu Pro His Phe Leu Gly Cys Leu Glu Arg Leu Asp Tyr
 65 70 75 80

Pro Lys Ser Arg Met Ala Ile Trp Ala Ala Thr Asp His Asn Val Asp
 85 90 95

Asn Thr Thr Glu Ile Phe Arg Glu Trp Leu Lys Asn Val Gln Arg Leu
 100 105 110

Tyr His Tyr Val Glu Trp Arg Pro Met Asp Glu Pro Glu Ser Tyr Pro
 115 120 125

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

Gln Leu Lys Ala Leu Asn Ile Glu Met Leu Pro Gly Tyr Arg Asp Pro
 385 390 395 400

Tyr Ser Ser Arg Pro Leu Thr Arg Gly Glu Ile Gly Cys Phe Leu Ser
 405 410 415

His Tyr Ser Val Trp Lys Glu Val Ile Asp Arg Glu Leu Glu Lys Thr
 420 425 430

Leu Val Ile Glu Asp Asp Val Arg Phe Glu His Gln Phe Lys Lys Lys
 435 440 445

Leu Met Lys Leu Met Asp Asn Ile Asp Gln Ala Gln Leu Asp Trp Glu
 450 455 460

Leu Ile Tyr Ile Gly Arg Lys Arg Met Gln Val Lys Glu Pro Glu Lys
 465 470 475 480

Ala Val Pro Asn Val Ala Asn Leu Val Glu Ala Asp Tyr Ser Tyr Trp
 485 490 495

Thr Leu Gly Tyr Val Ile Ser Leu Glu Gly Ala Gln Lys Leu Val Gly
 500 505 510

Ala Asn Pro Phe Gly Lys Met Leu Pro Val Asp Glu Phe Leu Pro Val
 515 520 525

Met Tyr Asn Lys His Pro Val Ala Glu Tyr Lys Glu Tyr Tyr Glu Ser
 530 535 540

Arg Asp Leu Lys Ala Phe Ser Ala Glu Pro Leu Leu Ile Tyr Pro Thr
 545 550 555 560

His Tyr Thr Gly Gln Pro Gly Tyr Leu Ser Asp Thr Glu Thr Ser Thr
 565 570 575

Ile Trp Asp Asn Glu Thr Val Ala Thr Asp Trp Asp Arg Thr His Ala
 580 585 590

Trp Lys Ser Arg Lys Gln Ser Arg Ile Tyr Ser Asn Ala Lys Asn Thr
 595 600 605

Glu Ala Leu Pro Pro Pro Thr Ser Leu Asp Thr Val Pro Ser Arg Asp
 610 615 620

Glu Leu
625

<210> 29
<211> 363
<212> PRT
<213> Homo sapiens

<400> 29

Met Phe Ser Asp Cys Trp Leu Cys Pro Ser Leu Gly Ser Ser Gly Ile
1 5 10 15

Gln Met Tyr Leu Cys Asn Arg Glu His Tyr Gly Tyr Leu Pro Ile Pro
20 25 30

Leu Lys Pro His Gln Thr Leu Gln Glu Asp Ile Glu Asn Leu Ile His
35 40 45

Val Gln Ile Glu Ala Met Ile Asp Arg Pro Pro Met Glu Pro Ser Gln
50 55 60

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

Ile Phe Met Ile Asn Leu Lys Arg Arg Lys Asp Arg Arg Asp Arg Met
85 90 95

Leu Arg Thr Leu Tyr Glu Gln Glu Ile Glu Val Lys Ile Val Glu Ala
100 105 110

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

Glu Met Leu Pro Gly Tyr Arg Asp Pro Tyr Ser Ser Arg Pro Leu Thr
130 135 140

Arg Gly Glu Ile Gly Cys Phe Leu Ser His Tyr Ser Val Trp Lys Glu
145 150 155 160

Val Ile Asp Arg Glu Leu Glu Lys Thr Leu Val Ile Glu Asp Asp Val
165 170 175

Arg Phe Glu His Gln Phe Lys Lys Lys Leu Met Lys Leu Met Asp Asn
180 185 190

Ile Asp Gln Ala Gln Leu Asp Trp Glu Leu Ile Tyr Ile Gly Arg Lys
195 200 205

Arg Met Gln Val Lys Glu Pro Glu Lys Ala Val Pro Asn Val Ala Asn
 210 215 220

Leu Val Glu Ala Asp Tyr Ser Tyr Trp Thr Leu Gly Tyr Val Ile Ser
 225 230 235 240

Leu Glu Gly Ala Gln Lys Leu Val Gly Ala Asn Pro Phe Gly Lys Met
 245 250 255

Leu Pro Val Asp Glu Phe Leu Pro Val Met Tyr Asn Lys His Pro Val
 260 265 270

Ala Glu Tyr Lys Glu Tyr Tyr Glu Ser Arg Asp Leu Lys Ala Phe Ser
 275 280 285

Ala Glu Pro Leu Leu Ile Tyr Pro Thr His Tyr Thr Gly Gln Pro Gly
 290 295 300

Tyr Leu Ser Asp Thr Glu Thr Ser Thr Ile Trp Asp Asn Glu Thr Val
 305 310 315 320

Ala Thr Asp Trp Asp Arg Thr His Ala Trp Lys Ser Arg Lys Gln Ser
 325 330 335

Arg Ile Tyr Ser Asn Ala Lys Asn Thr Glu Ala Leu Pro Pro Pro Thr
 340 345 350

Ser Leu Asp Thr Val Pro Ser Arg Asp Glu Leu
 355 360

<210> 30
 <211> 234
 <212> PRT
 <213> Homo sapiens

<400> 30

Met Leu Pro Gly Tyr Arg Asp Pro Tyr Ser Ser Arg Pro Leu Thr Arg
 1 5 10 15

Gly Glu Ile Gly Cys Phe Leu Ser His Tyr Ser Val Trp Lys Glu Val
 20 25 30

Ile Asp Arg Glu Leu Glu Lys Thr Leu Val Ile Glu Asp Asp Val Arg
 35 40 45

Phe Glu His Gln Phe Lys Lys Lys Leu Met Lys Leu Met Asp Asn Ile
 50 55 60

Asp Gln Ala Gln Leu Asp Trp Glu Leu Ile Tyr Ile Gly Arg Lys Arg
65 70 75 80

Met Gln Val Lys Glu Pro Glu Lys Ala Val Pro Asn Val Ala Asn Leu
85 90 95

Val Glu Ala Asp Tyr Ser Tyr Trp Thr Leu Gly Tyr Val Ile Ser Leu
100 105 110

Glu Gly Ala Gln Lys Leu Val Gly Ala Asn Pro Phe Gly Lys Met Leu
115 120 125

Pro Val Asp Glu Phe Leu Pro Val Met Tyr Asn Lys His Pro Val Ala
130 135 140

Glu Tyr Lys Glu Tyr Tyr Glu Ser Arg Asp Leu Lys Ala Phe Ser Ala
145 150 155 160

Glu Pro Leu Leu Ile Tyr Pro Thr His Tyr Thr Gly Gln Pro Gly Tyr
165 170 175

Leu Ser Asp Thr Glu Thr Ser Thr Ile Trp Asp Asn Glu Thr Val Ala
180 185 190

Thr Asp Trp Asp Arg Thr His Ala Trp Lys Ser Arg Lys Gln Ser Arg
195 200 205

Ile Tyr Ser Asn Ala Lys Asn Thr Glu Ala Leu Pro Pro Pro Thr Ser
210 215 220

Leu Asp Thr Val Pro Ser Arg Asp Glu Leu
225 230

<210> 31

<211> 5188

<212> DNA

<213> Homo sapiens

<400> 31

cacaactcgc ggctctaggg aaggccacag acctcagctg tacgagcggg acctggacta 60

gaggaacttt cctcaggact cagggcacac agcccctcgg ccactactgt ctgcgagccc 120

gaggcgcagg ggagcgccag cggctgcagg tacgctgcgc acccgccactg gggcctgggc 180

ggtgcagcgg cggcgggagg gtcctgggaa ccgcagccgc cgaggccagt gtgtgagccg 240

gccggccgcg gcaagccgca tcccccggcc gccctcgca gcccttgct ccccggcagc 300

cgccgcgcgc	ctcaggcagc	ccagccgggc	gctcgcgcga	ggacttcccc	gccgcccgc	360
tcggccccga	acatggctgc	gcgccctgct	gccaccctcg	cctggctcgt	actgctcttc	420
tcctcagccc	tgctccgcga	aggctgccga	gcgcgcttcg	tcgccgagcg	ggactcggag	480
gacgacggag	aggagccggt	ggttttcccc	gagtcgcccc	tgacagagccc	cacggtgctc	540
gtggcggtcc	tcgcccgcaa	cgcggcgcac	acgctgccgc	acttcctcgg	ctgcctggag	600
cggttggtgact	acccaagag	caggatggcc	atctgggcag	ccactgatca	caatgtggat	660
aatacaacag	aaatattcag	ggagtgggtg	aaaaatgtac	agagactcta	tcactatgtg	720
gagtggaggc	ctatggatga	accagagtct	taccctgatg	aaattggacc	aaagcactgg	780
ccaacctccc	ggtttgcccc	tgtgatgaaa	ctacgacagg	cagcccttcg	aactgcgagg	840
gaaaaatggg	cagactacat	tctgttcata	gatgttgaca	atttcctgac	taatccacag	900
accctcaatc	tactgattgc	agaaaaacaaa	actattgtgg	cccccatgct	ggagtctcgg	960
ggcctgtatt	ctaatttctg	gtgcggaatc	accctaagg	caaagggctt	ctataagagg	1020
acccagact	acgttcagat	tcgagaatgg	aagaggacag	gctgcttccc	cgtccccatg	1080
gtccactcca	ccttccta	tgacctcagg	aaggaggcct	cggacaagct	gactttctac	1140
ccccacacc	aggactacac	ctggaccttt	gatgacatca	ttgtctttgc	cttctccagc	1200
aggcaagcag	gcatccagat	gtacctctgc	aacagagagc	actatggcta	cctgccccatc	1260
cccctgaagc	cccatcagac	actgcaggaa	gacatcgaga	acctcatcca	tgtgcagatt	1320
gaagcaatga	ttgaccgtcc	tccaatggaa	ccctcccagt	atgtctcagt	tgtccctaaa	1380
tatccagaca	agatgggatt	tgatgagatt	ttcatgataa	acctcaaacg	cagaaaggac	1440
aggcgggacc	ggatgctgcg	cacactgtat	gaacaggaga	ttgaggtcaa	gattgtcgag	1500
gctgtggatg	gaaaggcact	caacacaagc	cagctgaagg	caactgaatat	tgaaatgctg	1560
cctggctatc	gagatcccta	ttcctccagg	cctctaacaa	ggggtgaaat	cggctgcttt	1620
ctcagccact	actcagtctg	gaaagaggta	attgatcgag	agctagagaa	gactcttgta	1680
attgaagacg	atgtgcgttt	tgagcatcag	tttaagaaga	agctgatgaa	gctgatggat	1740
aacattgacc	aggctcagct	ggactgggaa	ctgatttata	ttggtaggaa	gaggatgcaa	1800
gtaaaggagc	cagagaaagc	agtgcccaat	gtggcaaacc	tggtcgaagc	cgactattcc	1860
tactggaccc	tgggctacgt	catctctctg	gaaggagcac	agaagctggg	tggagccaat	1920
ccttttggga	agatgctgcc	agtggatgag	tttctgccag	tcatgtacaa	caagcatccc	1980
gtagccgagt	acaaggagta	ttatgaatcc	agggacctga	aagccttctc	tgacagaaccc	2040
ttgctcatct	accctacgca	ctacacaggc	cagccggggg	acctgagtga	cacggagacc	2100
tccaccatct	gggacaatga	gacagtggcc	accgactggg	ataggacaca	tgacctggaag	2160

tcccggaagc	aaagccgcat	ctacagcaat	gccaaagaaca	cagaggccct	gccaccgcca	2220
acctccctgg	acactgtgcc	ttcaagggat	gagctatgaa	ggctccctgg	gagtgtggcc	2280
cacatcagtt	caacatcctc	tggtttttct	aaagggctat	tcattctgttt	gctccagttt	2340
tctgttttgt	tttgttctta	gtggtcacag	tcattctaacc	aaagtgatct	agtgtgatag	2400
atcgaaatta	acataattttt	gaccatggaa	ggaaataagg	aaattcaacc	caaatttccc	2460
aagacggctg	aaagacaggt	tttttggaag	ctgttaagat	aaactgtaat	ccagacacct	2520
aattcttcag	ttcactactc	atgtgatact	gattcccaca	ttaagggtga	acaacatggc	2580
tcagagtctt	gttcaagaga	aagtgatcac	cgagctgtca	catcagcaaa	tatgtagtca	2640
aggcagccag	gccaaactaga	ccacacttat	tggtctagtt	tgtccgtttt	atatgacatt	2700
gaaaacttgt	gtgtgcaact	tttgggggac	aggaatcact	taaaatcata	tttatttggc	2760
ttttatttta	aaggattctg	tcacaagtct	tattgaaaag	tagatttttt	aaaaaaaaaa	2820
aatcttagtc	cctgttatcc	agtaggggtg	ggtatttggt	tccgactgag	acttggcctg	2880
tgaccatcat	ggcagttgga	gttctcatat	agaggtgacc	agtttgccat	gtggatataa	2940
tttagtagat	atttgacagt	ttgtgtaggt	atttgaggga	aaaaactcaa	tgtttggttt	3000
ttttattatg	gccactcgag	tcaggatgct	ctattttataa	agataaatgt	aatatataaa	3060
gggtgaggac	tggtctgtga	tcctgccctg	tcccgggttt	gcgcgtgct	acagagcttc	3120
acgctctccg	ctccaccctt	tagcctggga	accaccgca	ggtgtgagtt	ctgtgagtca	3180
ctgctaagag	acagagcaca	ttttcaggcc	agcaactatc	cttgccagag	ttttttcatt	3240
atattttgaa	ttatttattt	tacaaaatgg	gcgaagatat	tgtcttttagg	ataaggcaga	3300
gaaacagatg	ttgcagactt	ccacggcacc	cgggggagtg	gtgggtgtgg	acacattggt	3360
tcggcaatct	gattctcctg	aatttcccag	ccaggctctt	gtggggaggc	ctgtggatgg	3420
ggggatttga	actatttgga	aacaaatgat	tctctatctc	aggtgagaaa	cctgggtcaga	3480
aacaaagggc	tggtcacctg	atttaggcca	gcaaccaggg	aagctcttag	aatcccaggc	3540
ggacaccctt	tctcaaaaaga	tatcccctaa	gagtcctttc	tgctttcttc	acagattgat	3600
tttatgtaaa	atgcagagtt	ggactacacg	atttcttccc	actccacaat	ctgtcatcct	3660
agtatagatc	atggtgggtt	ccctcaagtt	tatgtttctca	tgccctcaat	ctgtaaatth	3720
ttgtctccag	aaaaaccctc	ccaggcatcc	cataccagca	ccgttctca	tactgtcca	3780
tgcaccatgc	agccatatgg	ggggccgtgc	acaccccaaa	ccctgagctt	cacacttaaa	3840
ctcatgggga	gggcccctca	gagcagagtc	cacaggcggg	tggtgctaca	tacacaagct	3900
tagtgtacga	gtgtaagata	cactttaagc	cagacaccta	attcttcagt	tactgcccc	3960
tgtgatactg	attgccacat	taagggttgaa	cagcatggct	cagagtctag	agaaagtgat	4020

caccaagctg tctcatcacc aaataggtag tcaaggcagc ctcactctccc caggtgaggg 4080
 gcgggtcccc actttaggac aagaggcagc ttgccttcca ccagacgcca gcctcggcct 4140
 tccttccccga ctactgtgg gtacccttct acactgacca gcaagctagg ccgctggagg 4200
 aaagggaaact caccacaactc taaattgtgc cgcttagact tagctgtcag tgtgacttcc 4260
 tttcccacccc acccccagaa aaacagaaaag agcatctggg gagcgagtga aaattcctta 4320
 ggtgattcct aagatttcct tgggtatctg gtttttgttt tcatatttga gtgtgtgcat 4380
 gtgtgcatga ctttaatgac ttttttaatg ggggtggagg tggctggggg gctgggggtg 4440
 aaggaagttt gggttgattt ttgtggtgtt ttgtttaata gagaattttt tttttcctgt 4500
 tccccgtca gctggtctga cagatttaag aactctcatt cttaaaagac tttggactta 4560
 aattctagca ttttagacta ggactgttct actgtgaaga aagttctgtc tcctttagcc 4620
 cggtttgttt ctccctgctc aggtctagaa tcccaagcag tgttcttttc tggatgaacac 4680
 tgtgagccgc agatgtgact ttttttttaa agtcatctct tcagcaatcc agaggttcct 4740
 tgacctcatt atttgccta tctctccctt atagtcctaa gccaagacat ttgaccttg 4800
 acatttgacc tttgcagtgt catgtgaggg cgtcagtata gaggccttg catctgggcc 4860
 tggcaccgc tctctgcctc tggaggctaa accctgtctg gatttctctt gggatctaac 4920
 gtgggatctt ctggacagac aaccgtgaca tcagcagtgc tgggtgctgct gtgtgtggac 4980
 tgaacacctg cactttgcag aggacacgct gcatggggcc cgcttgcggt tcattcaggc 5040
 ctgctgcagg agctctgaga acaagaaaga gtggacaccc gttcccctgc atcatctgtc 5100
 ttgcgtgcta tttcagagtg gggaaagtga aaactatttg ctttctggag ctctttgtga 5160
 aaaattaaaa aaaaacttag ctcaaaga 5188

<210> 32
 <211> 5182
 <212> DNA
 <213> Homo sapiens

<400> 32
 cacaactcgc ggctctaggg aaggccacag acctcagctg tacgagcgga acctggacta 60
 gaggaacttt cctcaggact cagggcacac agcccctcgg ccactactgt ctgcgagccc 120
 gaggcgcagg ggagcgccag cggctgcagg tacgctgcgc acccgactg gggcctgggc 180
 ggtgcagcgg cggcgggagg gtcctgggaa ccgcagccgc cgaggccagt gtgtgagccg 240
 gccggccgc gcaagccgca tccccggcc gccctcgc gcccttgct ccccggcagc 300
 cgccgccgc ctcaggcagc ccagccgggc gctcgcgcca ggacttcccc gccgccgcc 360
 tcggcccgga acatggctgc gcgccctgct gccaccctcg cctggctcgt actgctcctc 420
 tcctcagccc tgctccgcga aggctgccga gcgcgcttcg tcgccgagcg ggactcggag 480

gacgacggag	aggagccggt	ggttttcccc	gagtcgcccc	tgcagagccc	cacggtgctc	540
gtggcggtcc	tcgcccgcaa	cgcggcgcac	acgtcgccgc	acttcctcgg	ctgcctggag	600
cggctggact	accccaagag	caggatggcc	atctgggcag	ccactgatca	caatgtggat	660
aatacaacag	aaatattcag	ggagtgggtg	aaaaatgtac	agagactcta	tcactatgtg	720
gagtggaggc	ctatggatga	accagagtct	taccctgatg	aaattggacc	aaagcactgg	780
ccaacctccc	ggtttgccca	tgtgatgaaa	ctacgacagg	cagcccttcg	aactgcgagg	840
gaaaaatgg	cagactacat	tctgttcata	gatgttgaca	atttcctgac	taatccacag	900
accctcaatc	tactgattgc	agaaaacaaa	actattgtgg	cccccattgct	ggagtctcgg	960
ggcctgtatt	ctaatttctg	gtgcggaatc	accctaagg	gcttctataa	gaggacccca	1020
gactacgttc	agattcgaga	atggaagagg	acaggctgct	tccccgtccc	catggtccac	1080
tccaccttcc	taattgacct	caggaaggag	gcctcggaca	agctgacttt	ctacccccca	1140
caccaggact	acacctggac	ctttgatgac	atcattgtct	ttgccttctc	cagcaggcaa	1200
gcaggcatcc	agatgtacct	ctgcaacaga	gagcactatg	gctacctgcc	catccccctg	1260
aagccccatc	agacactgca	ggaagacatc	gagaacctca	tccatgtgca	gattgaagca	1320
atgattgacc	gtcctccaat	ggaaccctcc	cagtatgtct	cagttgtccc	taaatatcca	1380
gacaagatgg	gatttgatga	gattttcatg	ataaacctca	aacgcagaaa	ggacaggcgg	1440
gaccggatgc	tgcgcacact	gtatgaacag	gagattgagg	tcaagattgt	cgaggctgtg	1500
gatggaaagg	cactcaacac	aagccagctg	aaggcactga	atattgaaat	gctgcctggc	1560
tatcgagatc	cctattcctc	caggcctcta	acaaggggtg	aaatcggctg	ctttctcagc	1620
cactactcag	tctggaaaga	ggtaattgat	cgagagctag	agaagactct	tgtaattgaa	1680
gacgatgtgc	gttttgagca	tcagtttaag	aagaagctga	tgaagctgat	ggataacatt	1740
gaccaggctc	agctggactg	ggaactgatt	tatattggta	ggaagaggat	gcaagtaaag	1800
gagccagaga	aagcagtgcc	caatgtggca	aacctggtcg	aagccgacta	ttcctactgg	1860
accctgggct	acgtcatctc	tctggaagga	gcacagaagc	tggttgagac	caatcctttt	1920
gggaagatgc	tgccagtgga	tgagtttctg	ccagtcatgt	acaacaagca	tcccgtagcc	1980
gagtacaagg	agtattatga	atccagggac	ctgaaagcct	tctctgcaga	acccttgctc	2040
atctacccta	cgactacac	aggccagccg	gggtacctga	gtgacacgga	gacctccacc	2100
atctgggaca	atgagacagt	ggccaccgac	tgggatagga	cacatgcctg	gaagtcccgg	2160
aagcaaagcc	gcatctacag	caatgccaa	aacacagagg	ccctgccacc	gccaacctcc	2220
ctggacactg	tgcttcaag	ggatgagcta	tgaaggctcc	ctgggagtgt	ggcccacatc	2280
agttcaacat	cctctgggtt	ttctaaagg	ctattcatct	gtttgctcca	gttttctgtt	2340

ttgttttgtt	cttagtggtc	acagtcatct	aaccaaagtg	atctagtgtg	atagatcgaa	2400
attaacatat	ttttgaccat	ggaaggaaat	aaggaaattc	aacccaaatt	tccaagacg	2460
gctgaaagac	agggtttttg	gaaactgtta	agataaactg	taatccagac	acctaattct	2520
tcagttcact	actcatgtga	tactgattcc	cacattaagg	ttgaacaaca	tggctcagag	2580
tcttgttcaa	gagaaagtga	tcaccgagct	gtcacatcag	caaatatgta	gtcaaggcag	2640
ccaggccaac	tagaccacac	ttattggtct	agtttgtccg	ttttatatga	cattgaaaac	2700
ttgtgtgtgc	aacttttggg	ggacaggaat	cacttaaaat	catattttatt	tggcttttta	2760
tttaaaggat	tctgtcacia	gtcttattga	aaagtagatt	ttttaaaaaa	aaaaaatctt	2820
agtccctggt	atccagtagg	ggtgggtatt	tgggtccgac	tgagacttgg	cctgtgacca	2880
tcatggcagt	tggagttctc	atatagaggt	gaccagtttg	ccatgtggat	ataatttagt	2940
agatatttga	cagtttgtgt	aggatattga	gggaaaaaac	tcaatgtttg	gcttttttat	3000
tatggccact	cgagtcagga	tgctctattt	ataaagataa	atgtaatata	taaaggggtga	3060
ggactggctg	tgcacccctg	cctgtcccgg	gtttgcgcgc	tgctacagag	cttcacgctc	3120
tccgctccac	cccttagcct	gggaacccac	cgcaggtgtg	agttctgtga	gtcactgcta	3180
agagacagag	cacattttca	ggccagcaac	tatccttgcc	agagtttttt	cattatatatt	3240
tgaattattt	attttacaaa	atgggcgaag	atattgtctt	taggataagg	cagagaaaaca	3300
gatgttgcag	acttccacgg	caccgcgggg	agtgggtggg	gtggacacat	tggttcggca	3360
atctgattct	cctgaatttc	ccagccaggc	tcttgtgggg	aggcctgtgg	atggggggat	3420
ttgaactatt	tggaaacaaa	tgattctcta	tctcaggtga	gaaacctggg	cagaaacaaa	3480
gggctgggtca	cctgattttag	gccagcaacc	agggagctc	ttagaatccc	aggcggacac	3540
cctttctcaa	aagatatccc	ctaagagtcc	tttctgcttt	cttcacagat	tgattttatg	3600
taaaatgcag	agttggacta	cacgatttct	tcccactcca	caatctgtca	tcctagtata	3660
gatcatgggtg	gtttccctca	agtttatgtt	ctcatgccct	caatctgtaa	atttttgtct	3720
ccagaaaaac	cctcccaggc	atcccatacc	agcaccgttc	ctcatcactg	tccatgcacc	3780
atgcagccat	atggggggcc	gtgcacaccc	caaaccctga	gcttcacact	taaactcatg	3840
gggagggccc	ttcagagcag	agtccacagg	cgggtgggtg	tacatacaca	agcttagtgt	3900
acgagtgtaa	gatacacttt	aagccagaca	cctaattctt	cagttcactg	cccatgtgat	3960
actgattgcc	acattaaggt	tgaacagcat	ggctcagagt	ctagagaaaag	tgatcaccaa	4020
gctgtctcat	caccaaatag	gtagtcaagg	cagcctcatc	tcccaggtg	aggggcgggt	4080
ccccacttta	ggacaagagg	cagcttgctt	tccaccagac	gccagcctcg	gccttccttc	4140
ccgactcact	gtgggtaccc	ttctacactg	accagcaagc	taggccgctg	gaggaaaggg	4200

```

aactcaccca actctaaatt gtgccgctta gacttagctg tcagtgtgac ttcctttccc 4260
accaccccc agaaaaacag aaagagcatc tggggagcga gtgaaaattc cttaggtgat 4320
tcctaagatt tccttgggta tctgggtttt gttttcatat ttgagtgtgt gcatgtgtgc 4380
atgactttta tgactttttt aatgggggtg gaggtggctg gggtgctggg gttgaaggaa 4440
gtttgggttg atttttgttg tgttttgtt aatagagaat ttttttttc ctgttcccct 4500
gtcagctggt ctgacagatt taagaactct cattcttaaa agactttgga cttaaattct 4560
agcatttttag actaggactg ttctactgtg aagaaagttc tgtctccttt agcccgtttt 4620
gtttctccct gctcaggctc agaatcccaa gcagtgttct tttctgggtga acactgtgag 4680
ccgcagatgt gacttttttt ttaaagtcac ctcttcagca atccagaggt tccttgacct 4740
cattatttgt cctatctctc ccttatagtc ctaagccaag acatttgacc tttgacattt 4800
gacctttgca gtgtcatgtg agggcgtcag tatagaggcc tttgcatctg ggctggcac 4860
ccgctctctg cctctggagg ctaaaccctg tctggatttc tcttgggatc taacgtggga 4920
tcttctggac agacaaccgt gacatcagca gtgctggtgc tgctgtgtgt ggactgaaca 4980
cctgcacttt gcagaggaca cgctgcatgg gcccgccttg cggttcattc aggctgctg 5040
caggagctct gagaacaaga aagagtggac acccgttccc ctgcatcatc tgtcttgctg 5100
gctatttcag agtggggaag tgataaacta tttgccttct ggagctcttt gtgaaaaatt 5160
aaaaaaaaac ttagctcaaa ga 5182

```

```

<210> 33
<211> 2325
<212> DNA
<213> Homo sapiens

```

```

<400> 33
ttttcgtttt tttgttctat gtatgcctag atttagcttt aataatctgt cagcgttaca 60
gaattttcct gtttgctttc atatcaaatg tggatttcat tcctcatttt cttgttattt 120
cctgtaggtg gattacagtg ttccattctg ctctccagaa tgggaattcc ttgcctccct 180
tttgatcctt tcatgccttt tttgttcatt ccaggccatg agtttgcttt ttcttcagag 240
ggaaaaaatc aatttcctct gggctgaaga atagccgagt gtttttatta gtccccaatg 300
ctgtgtttta cttttttaat aaaggagcat ttttttaggtc tatagacata cctgaaacaa 360
ccacttattt aattgcagtg tcaaactcag catcagacac agttcagggt ctttctcctc 420
gcttgtcact cagcagtatg ttttctgatt gttggctttg tccctctctt ggatcctcag 480
gcatccagat gtacctctgc aacagagagc actatggcta cctgcccac cccctgaagc 540
cccatcagac actgcaggaa gacatcgaga acctcatcca tgtgcagatt gaagcaatga 600

```

ttgaccgtcc	tccaatggaa	ccctcccagt	atgtctcagt	tgtccctaaa	tatccagaca	660
agatgggatt	tgatgagatt	ttcatgataa	acctcaaacg	cagaaaggac	aggcgggacc	720
ggatgctgcg	cacactgtat	gaacaggaga	ttgaggtcaa	gattgtcgag	gctgtggatg	780
gaaaggcact	caacacaagc	cagctgaagg	cactgaatat	tgaaatgctg	cctggctatc	840
gagatcccta	ttcctccagg	cctctaacaa	ggggtgaaat	cggctgcttt	ctcagccact	900
actcagtctg	gaaagaggta	attgatcgag	agctagagaa	gactcttgta	attgaagacg	960
atgtgcgttt	tgagcatcag	tttaagaaga	agctgatgaa	gctgatggat	aacattgacc	1020
aggctcagct	ggactgggaa	ctgatttata	ttggtaggaa	gaggatgcaa	gtaaaggagc	1080
cagagaaagc	agtgcccaat	gtggcaaacc	tggtcgaagc	cgactattcc	tactggaccc	1140
tgggctacgt	catctctctg	gaaggagcac	agaagctggt	tggagccaat	ccttttgga	1200
agatgctgcc	agtggatgag	tttctgccag	tcatgtacaa	caagcatccc	gtagccgagt	1260
acaaggagta	ttatgaatcc	agggacctga	aagccttctc	tgagaaccc	ttgctcatct	1320
accctacgca	ctacacaggc	cagccggggg	acctgagtga	cacggagacc	tccaccatct	1380
gggacaatga	gacagtggcc	accgactggg	ataggacaca	tgcttgggaag	tcccgggaagc	1440
aaagccgcat	ctacagcaat	gccaagaaca	cagaggccct	gccaccgcca	acctccctgg	1500
acactgtgcc	ttcaagggat	gagctatgaa	ggctccctgg	gagtgtggcc	cacatcagtt	1560
caacatcctc	tgggtttttct	aaagggtat	tcattctgttt	gctccagttt	tctgttttgt	1620
tttgtttctta	gtggtcacag	tcattctaacc	aaagtgatct	agtgtgatag	atcgaaatta	1680
acatatTTTT	gaccatggaa	ggaaaataag	aaattcaacc	caaatttccc	aagacggctg	1740
aaagacaggt	TTTTTggaaa	ctgttaagat	aaactgtaat	ccagacacct	aattcttcag	1800
ttcactactc	atgtgatact	gattcccaca	ttaaggttga	acaacatggc	tcagagtctt	1860
gttcaagaga	aagtgatcac	cgagctgtca	catcagcaaa	tatgtagtca	aggcagccag	1920
gccaactaga	ccacacttat	tgggtctagt	tgtccgtttt	atatgacatt	gaaaacttgt	1980
gtgtgcaact	tttggggggac	aggaatcact	taaaatcata	tttatttggc	tttttattta	2040
aaggattctg	tcacaagtct	tattgaaaag	tagatttttt	aaaaaaaaaa	aatcttagtc	2100
cctgttatcc	agtaggggtg	ggatatttgg	tccgactgag	acttggcctg	tgaccatcat	2160
ggcagttgga	gttctcatat	agaggtgacc	agtttgccat	gtggatataa	tttagtagat	2220
atttgacagt	ttgtgtaggt	atttgaggga	aaaaactcaa	tgtttggctt	ttttattatg	2280
gccactcgag	tcaggatgct	ctattttataa	agataaatgt	aatat		2325

<210> 34
 <211> 4723
 <212> DNA

<213> Homo sapiens

<400> 34

```

ttttctattc ttttactttc aacctatttt tgtcttttaa tctaaaggct gcctcttata      60
gataccacat ggttgtatta atttttaaaa ctactatgc caaattcttc cttcattgca      120
gtgttttatt catttgcctt cactacattt ttttccagat ccttaaggct agccagaggt      180
gagagactag ggacttctca agtttttcct gggcgtgtgg acagccctga atatgcctgg      240
ggccttctag attctcaggg atatttttga gcaaatacaa ctccctatgg acctcttatt      300
ccttggtttt tccttttaag ttttttggtg ggcttcttgt tagcatcagc tgataatgct      360
tctcaaacag ctgtaatgtt aaacagttgt tgctcatggg ttttgacaaa tgacctgcag      420
atagtgtgtg tcacagaaaa tgaactctga gtcagggtcaa atcaagacaa gctctgagaa      480
tgtagctttt caaggagcta ctagacaggt tgaatagaga ttattttctg ggggcaggct      540
tttaaggagg tctcagtcca ttttgtccct gccagtggct tctggggttg tggggtttgc      600
cgctctctta gttgtgaggc tactggtttt caaggctttt gtagggcttg ggtgaacagg      660
ttaggattag ggcagctgtg aacttcacaa agctcactgt gttaacagag attcagcagt      720
aggtcttgat caaacactcc ttggattatt gcagtacttt aactaatttc cataggagtg      780
tacttattaa atcttgtcaa aaaactgatg atgcttagaa ctatgttggg cactatgagg      840
gatacacaaa aatatgatac cctcttgtct tcccagacct cataatacta gtgtgacaca      900
ttagcctgga ggaacttcta aggaataaag ggaagcctct ctgtctttgt ctgtgtgggg      960
gaggggtggt tgcagaacta actctctctt tctctggcct ttgtgggtgg gacctttgac     1020
ttgttaatct ccagacgtgt tttatgtgat gcagggcact caacacaagc cagctgaagg     1080
cactgaatat tgaaatgctg cctggctatc gagatcccta ttcctccagg cctctaacaa     1140
ggggtgaaat cggctgcttt ctcagccact actcagtctg gaaagaggta attgatcgag     1200
agctagagaa gactcttgta attgaagacg atgtgcgttt tgagcatcag tttaagaaga     1260
agctgatgaa gctgatggat aacattgacc aggtcagct ggactgggaa ctgatttata     1320
ttggtaggaa gaggatgcaa gtaaaggagc cagagaaagc agtgcccaat gtggcaaacc     1380
tggtcgaagc cgactattcc tactggacct tgggctacgt catctctctg gaaggagcac     1440
agaagctggg tggagccaat ctttttggga agatgctgcc agtggatgag tttctgccag     1500
tcatgtacaa caagcatccc gtagccgagt acaaggagta ttatgaatcc agggacctga     1560
aagccttctc tgcagaacct ttgctcatct accctacgca ctacacaggc cagccggggg     1620
acctgagtga cacggagacc tccaccatct gggacaatga gacagtggcc accgactggg     1680
ataggacaca tgcctggaag tcccggaagc aaagccgcat ctacagcaat gccagaaca     1740
cagaggccct gccaccgcca acctccctgg aactgtgcc ttcaagggat gagctatgaa     1800

```

ggctccctgg	gagtgtggcc	cacatcagtt	caacatcctc	tggtttttct	aaagggctat	1860
tcatctgttt	gctccagttt	tctgttttgt	tttgttctta	gtggtcacag	tcatctaacc	1920
aaagtgatct	agtgtgatag	atcgaaatta	acatattttt	gaccatggaa	ggaaataagg	1980
aaattcaacc	caaatttccc	aagacggctg	aaagacaggt	tttttgaaa	ctgttaagat	2040
aaactgtaat	ccagacacct	aattcttcag	ttcactactc	atgtgatact	gattcccaca	2100
ttaaggttga	acaacatggc	tcagagtctt	gttcaagaga	aagtgatcac	cgagctgtca	2160
catcagcaaa	tatgtagtca	aggcagccag	gccaaactaga	ccacacttat	tgggtctagtt	2220
tgtccgtttt	atatgacatt	gaaaacttgt	gtgtgcaact	tttgggggac	aggaatcact	2280
taaaatcata	tttatttggc	tttttattta	aaggattctg	tcacaagtct	tattgaaaag	2340
tagatttttt	aaaaaaaaaa	aatcttagtc	cctgttatcc	agtaggggtg	ggtatttggg	2400
tccgactgag	acttggcctg	tgaccatcat	ggcagttgga	gttctcatat	agaggtgacc	2460
agtttgccat	gtggatataa	tttagtagat	atttgacagt	ttgtgtaggt	atttgaggga	2520
aaaaactcaa	tgtttggctt	ttttattatg	gccactcgag	tcaggatgct	ctattttataa	2580
agataaatgt	aatatataaa	gggtgaggac	tggctgtgca	tcctgccttg	tcccgggttt	2640
gcgcgctgct	acagagcttc	acgctctccg	ctccaccctt	tagcctggga	accacccgca	2700
ggtgtgagtt	ctgtgagtca	ctgctaagag	acagagcaca	ttttcaggcc	agcaactatc	2760
cttgccagag	ttttttcatt	atattttgaa	ttattttatt	tacaaaatgg	gcgaagatat	2820
tgtcttttagg	ataaggcaga	gaaacagatg	ttgcagactt	ccacggcacc	cgggggagtg	2880
gtgggtgtgg	acacattggg	tcggcaatct	gattctcctg	aatttcccag	ccaggctctt	2940
gtggggaggc	ctgtggatgg	ggggatttga	actatttggg	aacaaatgat	tctctatctc	3000
aggtgagaaa	cctggtcaga	aacaaagggc	tggtcacctg	atttaggcca	gcaaccaggg	3060
aagctcttag	aatcccaggc	ggacaccctt	tctcaaaaaga	tatcccctaa	gagtcctttc	3120
tgctttcttc	acagattgat	tttatgtaaa	atgcagagtt	ggactacacg	atttcttccc	3180
actccacaat	ctgtcatcct	agtatagatc	atgggtggtt	ccctcaagtt	tatgtttctca	3240
tgccctcaat	ctgtaaatth	ttgtctccag	aaaaaccctc	ccaggcatcc	cataccagca	3300
ccgttcctca	tactgtcca	tgcaccatgc	agccatatgg	ggggccgtgc	acaccccaaa	3360
ccctgagctt	cacacttaaa	ctcatgggga	gggcccttca	gagcagagtc	cacaggcggg	3420
tggtgctaca	tacacaagct	tagtgtacga	gtgtaagata	cactttaagc	cagacaccta	3480
attcttcagt	tactgcca	tgtgatactg	attgccacat	taaggttgaa	cagcatggct	3540
cagagtctag	agaaagtgat	caccaagctg	tctcatcacc	aaataggtag	tcaaggcagc	3600
ctcatctccc	caggtgaggg	gcgggtcccc	actttaggac	aagaggcagc	ttgccttcca	3660

```

ccagacgccca gcctcggcct tccttcccga ctactgtgg gtacccttct aactgacca 3720
gcaagctagg ccgctggagg aaagggaact cacccaactc taaattgtgc cgcttagact 3780
tagctgtcag tgtgacttcc tttcccaccc acccccagaa aaacagaaaag agcatctggg 3840
gagcgagtga aaattcctta ggtgattcct aagatttcct tgggtatctg gtttttgttt 3900
tcataatttga gtgtgtgcat gtgtgcatga cttaaatgac ttttttaatg ggggtgggagg 3960
tggctgggggt gctgggggtg aaggaagttt gggttgattt ttgtggtgtt ttgtttaata 4020
gagaatTTTT tttttcctgt tcccctgtca gctggtctga cagatttaag aactctcatt 4080
cttaaaagac tttggactta aattctagca ttttagacta ggactgttct actgtgaaga 4140
aagtctctgtc tccttttagcc cggtttgttt ctccctgctc aggtctagaa tccaagcag 4200
tgttcttttgc tgggtgaacac tgtgagccgc agatgtgact ttttttttaa agtcatctct 4260
tcagcaatcc agaggttcct tgacctcatt atttgtccta tctctccctt atagtcctaa 4320
gccaagacat ttgaccttg acatttgacc tttgcagtgt catgtgaggg cgtcagtata 4380
gaggcctttg catctgggcc tggcaccgcc tctctgcctc tggaggctaa accctgtctg 4440
gatttctctt gggatctaac gtgggatctt ctggacagac aaccgtgaca tcagcagtgc 4500
tggtgctgct gtgtgtggac tgaacacctg cactttgcag aggacacgct gcatgggccc 4560
cgcttgccgt tcattcaggc ctgctgcagg agctctgaga acaagaaaga gtggacaccc 4620
gttccccctgc atcatctgtc ttgcgtgcta tttcagagtg gggaagtgat aaactatttg 4680
ccttctggag ctctttgtga aaaattaaaa aaaaacttag ctc 4723

```

```

<210> 35
<211> 542
<212> PRT
<213> Homo sapiens

```

```
<400> 35
```

```

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

```

```

Ala Ile Leu Gln Val Leu Tyr Arg Asp Gln Ala Val Gln Asn Thr Glu
20           25           30

```

```

Glu Glu Arg Thr Arg Lys Leu Lys Thr His Leu Gln His Leu Arg Trp
35           40           45

```

```

Lys Gly Ala Lys Asn Thr Asp Trp Glu His Lys Glu Lys Cys Cys Ala
50           55           60

```

```

Arg Cys Gln Gln Val Leu Gly Phe Leu Leu His Arg Gly Ala Val Cys

```


Thr Arg Gln Leu Gln Val Ser Val Trp His Leu Gly Thr Leu Ala Arg
 325 330 335

Arg Val Phe Leu Gly Glu Val Ile Ile Pro Leu Ala Thr Trp Asp Phe
 340 345 350

Glu Asp Ser Thr Thr Gln Ser Phe Arg Trp His Pro Leu Arg Ala Lys
 355 360 365

Ala Glu Lys Tyr Glu Asp Ser Val Pro Gln Ser Asn Gly Glu Leu Thr
 370 375 380

Val Arg Ala Lys Leu Val Leu Pro Ser Arg Pro Arg Lys Leu Gln Glu
 385 390 395 400

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

Val Val Leu Gly Ala Lys Asn Leu Pro Val Arg Pro Asp Gly Thr Leu
 420 425 430

Asn Ser Phe Val Lys Gly Cys Leu Thr Leu Pro Asp Gln Gln Lys Leu
 435 440 445

Arg Leu Lys Ser Pro Val Leu Arg Lys Gln Ala Cys Pro Gln Trp Lys
 450 455 460

His Ser Phe Val Phe Ser Gly Val Thr Pro Ala Gln Leu Arg Gln Ser
 465 470 475 480

Ser Leu Glu Leu Thr Val Trp Asp Gln Ala Leu Phe Gly Met Asn Asp
 485 490 495

Arg Leu Leu Gly Gly Thr Arg Leu Gly Ser Lys Gly Asp Thr Ala Val
 500 505 510

Gly Gly Asp Ala Cys Ser Leu Ser Lys Leu Gln Trp Gln Lys Val Leu
 515 520 525

Ser Ser Pro Asn Leu Trp Thr Asp Met Thr Leu Val Leu His
 530 535 540

<210> 36
 <211> 610
 <212> PRT
 <213> Homo sapiens

<400> 36

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

Ala Ile Leu Gln Val Leu Tyr Arg Asp Gln Ala Val Gln Asn Thr Glu
 20 25 30

Glu Glu Arg Thr Arg Lys Leu Lys Thr His Leu Gln His Leu Arg Trp
 35 40 45

Lys Gly Ala Lys Asn Thr Asp Trp Glu His Lys Glu Lys Cys Cys Ala
 50 55 60

Arg Cys Gln Gln Val Leu Gly Phe Leu Leu His Arg Gly Ala Val Cys
 65 70 75 80

Arg Gly Cys Ser His Arg Val Cys Ala Gln Cys Arg Val Phe Leu Arg
 85 90 95

Gly Thr His Ala Trp Lys Cys Thr Val Cys Phe Glu Asp Arg Asn Val
 100 105 110

Lys Ile Lys Thr Gly Glu Trp Phe Tyr Glu Glu Arg Ala Lys Lys Phe
 115 120 125

Pro Thr Gly Gly Lys His Glu Thr Val Gly Gly Gln Leu Leu Gln Ser
 130 135 140

Tyr Gln Lys Leu Ser Lys Ile Ser Val Val Pro Pro Thr Pro Pro Pro
 145 150 155 160

Val Ser Glu Ser Gln Cys Ser Arg Ser Pro Gly Arg Leu Gln Glu Phe
 165 170 175

Gly Gln Phe Arg Gly Phe Asn Lys Ser Val Glu Asn Leu Phe Leu Ser
 180 185 190

Leu Ala Thr His Val Lys Lys Leu Ser Lys Ser Gln Asn Asp Met Thr
 195 200 205

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

Thr Glu Arg Arg Ser Gln Ser Asp Thr Ala Val Asn Val Thr Thr Arg
 225 230 235 240

Lys Val Ser Ala Pro Asp Ile Leu Lys Pro Leu Asn Gln Glu Asp Pro
245 250 255

Lys Cys Ser Thr Asn Pro Ile Leu Lys Gln Gln Asn Leu Pro Ser Ser
260 265 270

Pro Ala Pro Ser Thr Ile Phe Ser Gly Gly Phe Arg His Gly Ser Leu
275 280 285

Ile Ser Ile Asp Ser Thr Cys Thr Glu Met Gly Asn Phe Asp Asn Ala
290 295 300

Asn Val Thr Gly Glu Ile Glu Phe Ala Ile His Tyr Cys Phe Lys Thr
305 310 315 320

His Ser Leu Glu Ile Cys Ile Lys Ala Cys Lys Asn Leu Ala Tyr Gly
325 330 335

Glu Glu Lys Lys Lys Lys Cys Asn Pro Tyr Val Lys Thr Tyr Leu Leu
340 345 350

Pro Asp Arg Ser Ser Gln Gly Lys Arg Lys Thr Gly Val Gln Arg Asn
355 360 365

Thr Val Asp Pro Thr Phe Gln Glu Thr Leu Lys Tyr Gln Val Ala Pro
370 375 380

Ala Gln Leu Val Thr Arg Gln Leu Gln Val Ser Val Trp His Leu Gly
385 390 395 400

Thr Leu Ala Arg Arg Val Phe Leu Gly Glu Val Ile Ile Pro Leu Ala
405 410 415

Thr Trp Asp Phe Glu Asp Ser Thr Thr Gln Ser Phe Arg Trp His Pro
420 425 430

Leu Arg Ala Lys Ala Glu Lys Tyr Glu Asp Ser Val Pro Gln Ser Asn
435 440 445

Gly Glu Leu Thr Val Arg Ala Lys Leu Val Leu Pro Ser Arg Pro Arg
450 455 460

Lys Leu Gln Glu Ala Gln Glu Gly Thr Asp Gln Pro Ser Leu His Gly
465 470 475 480

Gln Leu Cys Leu Val Val Leu Gly Ala Lys Asn Leu Pro Val Arg Pro
485 490 495

Asp Gly Thr Leu Asn Ser Phe Val Lys Gly Cys Leu Thr Leu Pro Asp
 500 505 510

Gln Gln Lys Leu Arg Leu Lys Ser Pro Val Leu Arg Lys Gln Ala Cys
 515 520 525

Pro Gln Trp Lys His Ser Phe Val Phe Ser Gly Val Thr Pro Ala Gln
 530 535 540

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

Gly Met Asn Asp Arg Leu Leu Gly Gly Thr Arg Leu Gly Ser Lys Gly
 565 570 575

Asp Thr Ala Val Gly Gly Asp Ala Cys Ser Leu Ser Lys Leu Gln Trp
 580 585 590

Gln Lys Val Leu Ser Ser Pro Asn Leu Trp Thr Asp Met Thr Leu Val
 595 600 605

Leu His
 610

<210> 37
 <211> 542
 <212> PRT
 <213> Homo sapiens

<400> 37

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

Ala Ile Leu Gln Val Leu Tyr Arg Asp Gln Ala Val Gln Asn Thr Glu
 20 25 30

Glu Glu Arg Thr Arg Lys Leu Lys Thr His Leu Gln His Leu Arg Trp
 35 40 45

Lys Gly Ala Lys Asn Thr Asp Trp Glu His Lys Glu Lys Cys Cys Ala
 50 55 60

Arg Cys Gln Gln Val Leu Gly Phe Leu Leu His Arg Gly Ala Val Cys
 65 70 75 80

Arg Gly Cys Ser His Arg Val Cys Ala Gln Cys Arg Val Phe Leu Arg

Gly Thr His Ala Trp Lys Cys Thr Val Cys Phe Glu Asp Arg Asn Val
 100 105 110

Lys Ile Lys Thr Gly Glu Trp Phe Tyr Glu Glu Arg Ala Lys Lys Phe
 115 120 125

Pro Thr Gly Gly Lys His Glu Thr Val Gly Gly Gln Leu Leu Gln Ser
 130 135 140

Tyr Gln Lys Leu Ser Lys Ile Ser Val Val Pro Pro Thr Pro Pro Pro
 145 150 155 160

Val Ser Glu Ser Gln Cys Ser Arg Ser Pro Gly Arg Lys Val Ser Ala
 165 170 175

Pro Asp Ile Leu Lys Pro Leu Asn Gln Glu Asp Pro Lys Cys Ser Thr
 180 185 190

Asn Pro Ile Leu Lys Gln Gln Asn Leu Pro Ser Ser Pro Ala Pro Ser
 195 200 205

Thr Ile Phe Ser Gly Gly Phe Arg His Gly Ser Leu Ile Ser Ile Asp
 210 215 220

Ser Thr Cys Thr Glu Met Gly Asn Phe Asp Asn Ala Asn Val Thr Gly
 225 230 235 240

Glu Ile Glu Phe Ala Ile His Tyr Cys Phe Lys Thr His Ser Leu Glu
 245 250 255

Ile Cys Ile Lys Ala Cys Lys Asn Leu Ala Tyr Gly Glu Glu Lys Lys
 260 265 270

Lys Lys Cys Asn Pro Tyr Val Lys Thr Tyr Leu Leu Pro Asp Arg Ser
 275 280 285

Ser Gln Gly Lys Arg Lys Thr Gly Val Gln Arg Asn Thr Val Asp Pro
 290 295 300

Thr Phe Gln Glu Thr Leu Lys Tyr Gln Val Ala Pro Ala Gln Leu Val
 305 310 315 320

Thr Arg Gln Leu Gln Val Ser Val Trp His Leu Gly Thr Leu Ala Arg
 325 330 335

Arg Val Phe Leu Gly Glu Val Ile Ile Pro Leu Ala Thr Trp Asp Phe
 340 345 350

Glu Asp Ser Thr Thr Gln Ser Phe Arg Trp His Pro Leu Arg Ala Lys
 355 360 365

Ala Glu Lys Tyr Glu Asp Ser Val Pro Gln Ser Asn Gly Glu Leu Thr
 370 375 380

Val Arg Ala Lys Leu Val Leu Pro Ser Arg Pro Arg Lys Leu Gln Glu
 385 390 395 400

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

Val Val Leu Gly Ala Lys Asn Leu Pro Val Arg Pro Asp Gly Thr Leu
 420 425 430

Asn Ser Phe Val Lys Gly Cys Leu Thr Leu Pro Asp Gln Gln Lys Leu
 435 440 445

Arg Leu Lys Ser Pro Val Leu Arg Lys Gln Ala Cys Pro Gln Trp Lys
 450 455 460

His Ser Phe Val Phe Ser Gly Val Thr Pro Ala Gln Leu Arg Gln Ser
 465 470 475 480

Ser Leu Glu Leu Thr Val Trp Asp Gln Ala Leu Phe Gly Met Asn Asp
 485 490 495

Arg Leu Leu Gly Gly Thr Arg Leu Gly Ser Lys Gly Asp Thr Ala Val
 500 505 510

Gly Gly Asp Ala Cys Ser Leu Ser Lys Leu Gln Trp Gln Lys Val Leu
 515 520 525

Ser Ser Pro Asn Leu Trp Thr Asp Met Thr Leu Val Leu His
 530 535 540

<210> 38

<211> 2277

<212> DNA

<213> Homo sapiens

<400> 38

aagaagaatt gacttccttc tctgcagagc cggctctggc ctcttctctt gaagcagatg 60

cgaaggctcc ccgaatgaga aagaatactc ggaatcagcg gtgaattgca gtgatctttc 120

agagaaagcg cctgttcaac tttgtcctct ctgagagact cagagccttg gggcactgag	180
ggatgccagt tctgcctgtt catctggaac ctggatctaa ggagggaaga ggcgttgccc	240
ctgctggcat agtcaggtat tgaacgggct gagcttttca tgatggttcc tgctgacctg	300
gaaacatctt aaatggaagg gcgtgagcgc ttggtccatg cagtgaagct cttccaacct	360
gggtcaacga aaacggagaa gaaatggccc aagaaataga tctgagtgtc ctcaaggagt	420
tagaacgcga ggccattctc caggtcctgt accgagacca ggcggttcaa aacacagagg	480
aggagaggac acggaaactg aaaacacacc tgcagcatct ccggtggaag ggagcgaaga	540
acacggactg ggagcacaaa gagaagtgtc gtgcgcgctg ccagcagggtg ctgggggttcc	600
tgctgcaccg gggcgccgtg tgccgggggt gcagccaccg cgtgtgtgcc cagtgccgag	660
tgttcctgag ggggacccat gcctggaagt gcacggtgtg cttcgaggac aggaatgtca	720
aaataaaaac tggagaatgg ttctatgagg aacgagccaa gaaatttcca actggaggca	780
aacatgagac agttggaggg cagctcttgc aatcttatca gaagctgagc aaaatttctg	840
tggttcctcc tactccacct cctgtcagcg agagccagtg cagccgcagt cctggcagga	900
aggtcagtgc accagatatt ctgaaacctc tcaatcaaga ggatcccaa tgctctacta	960
accctatttt gaagcaacag aatctcccat ccagtccggc acccagtacc atattctctg	1020
gaggtttttag acacggaagt ttaattagca ttgacagcac ctgtacagag atgggcaatt	1080
ttgacaatgc taatgtcact ggagaaatag aatttgccat tcattattgc ttcaaaaccc	1140
attcttttaga aatatgcac aaggcctgta agaaccttgc ctatggagaa gaaaagaaga	1200
aaaagtgcaa tccgtatgtg aagacctacc tgttgcccga cagatcctcc cagggaaagc	1260
gcaagactgg agtccaaagg aacaccgtgg acccgacctt tcaggagacc ttgaagtatc	1320
agggtggcccc tgcccagctg gtgacctggc agctgcaggt ctcggtgtgg catctgggca	1380
cgctggcccc gagagtgttt cttggagaag tgatcattcc tctggccacg tgggactttg	1440
aagacagcac aacacagtcc ttccgctggc atccgctccg ggccaaggcg gagaaatacg	1500
aagacagcgt tcctcagagt aatggagagc tcacagtccg ggctaagctg gttctccctt	1560
cacggcccag aaaactccaa gaggctcaag aaggacaga tcagccatca cttcatggtc	1620
aactttgttt ggtagtgcta ggagccaaga atttacctgt gcggccagat ggcaccttga	1680
actcatttgt taagggctgt ctactctgc cagaccaaca aaaactgaga ctgaagtcgc	1740
cagtcctgag gaagcaggct tgccccagt ggaaacactc atttgtcttc agtggcgtaa	1800
ccccagctca gctgaggcag tcaagcttgg agttaactgt ctgggatcag gccctctttg	1860
gaatgaacga ccgcttgctt ggaggaacca gacttggttc aaaggagac acagctgttg	1920
gcgggggatgc atgctcacta tcgaagctcc agtggcagaa agtcctttcc agccccaatc	1980

tatggacaga	catgactctt	gtcctgcact	gacatgaagg	cctcaagggt	ccaggttgca	2040
gcaggcgtga	ggcactgtgc	gtctgcagag	gggctacgaa	ccaggtgcag	gggtcccagct	2100
ggagacccct	ttgaccttga	gcagtctcca	tctgcggccc	tgtcccatgg	cttaaccgcc	2160
tattgggtatc	tgtgtatatatt	tacgttaaac	acaattatgt	tacctaagcc	tctgggtgggt	2220
tatctcctct	ttgagatgta	gaaaatggcc	agattttaat	aaacgttggt	acccatg	2277

<210> 39
 <211> 2131
 <212> DNA
 <213> Homo sapiens

<400> 39	
aggaggggaag	aggcgttgcc cctgctggca tagtcaggta ccagcccagc caggtattga 60
acgggctgag	cttttcatga tggttcctgc tgacctggaa acatcttaaa tggaagggcg 120
tgagcgcttg	gtccatgcag tgaagctctt ccaacctggg tcaacgaaaa cggagaagaa 180
atggcccaag	aaatagatct gagtgctctc aaggagttag aacgcgaggc cattctccag 240
gtcctgtacc	gagaccaggc ggttcaaaac acagaggagg agaggacacg gaaactgaaa 300
acacacctgc	agcatctccg gtggaaagga gcgaagaaca cggactggga gcacaaagag 360
aagtgtgtg	cgcgctgcca gcaggtgctg gggttcctgc tgcaccgggg cgccgtgtgc 420
cggggctgca	gccaccgcgt gtgtgcccag tgccgagtgt tcctgagggg gacccatgcc 480
tggaagtgca	cgggtgtgctt cgaggacagg aatgtcaaaa taaaaactgg agaatggttc 540
tatgaggaac	gagccaagaa atttccaact ggaggcaaac atgagacagt tggagggcag 600
ctcttgcaat	cttatcagaa gctgagcaaa atttctgtgg ttctctctac tccacctct 660
gtcagcgaga	gccagtgcag ccgcagtcct ggcaggttac aggaatttgg tcagtttaga 720
ggattttaata	agtccgtgga aaatttgttt ctgtctcttg ctaccacagt gaaaaagctc 780
tccaaatccc	agaatgatata gacttctgag aagcatcttc tcgccacggg cccaggcag 840
tgtgtgggac	agacagagag acggagccag tctgacactg cgggtcaacgt caccaccagg 900
aaggtcagt	caccagatat tctgaaacct ctcaatcaag aggatcccaa atgctctact 960
aaccctat	ttt tgaagcaaca gaatctcca tccagtccgg caccagtag catattctct 1020
ggagggtttta	gacacggaag tttaattagc attgacagca cctgtacaga gatgggcaat 1080
tttgacaatg	ctaattgtcac tggagaaaata gaatttgcca ttcattattg cttcaaaacc 1140
cattcttttag	aaatatgcat caaggcctgt aagaaccttg cctatggaga agaaaagaag 1200
aaaaagtgc	atccgtatgt gaagacctac ctgttgccc acagatcctc ccagggaag 1260
cgcaagactg	gagtccaaag gaacaccgtg gacccgacct ttcaggagac cttgaagtat 1320

caggtggccc ctgcccagct ggtgacccgg cagctgcagg tctcgggtgtg gcatctgggc 1380
 acgctggccc ggagagtgtt tcttgagaaa gtgatcattc ctctggccac gtgggacttt 1440
 gaagacagca caacacagtc cttccgctgg catccgctcc gggccaaggc ggagaaatac 1500
 gaagacagcg ttcctcagag taatggagag ctcacagtcc gggctaagct ggttctccct 1560
 tcacggccca gaaaactcca agaggctcaa gaagggacag atcagccatc acttcatggt 1620
 caactttgtt tggtagtgct aggagccaag aatttacctg tgcggccaga tggcaccttg 1680
 aactcatttg ttaagggctg tctcactctg ccagaccaac aaaaactgag actgaagtcg 1740
 ccagtctga ggaagcaggc ttgccccag tggaaacact catttgctt cagtggcgta 1800
 accccagctc agctgaggca gtcaagcttg gagttaactg tctgggatca ggccctcttt 1860
 ggaatgaacg accgcttgct tggaggaacc agacttggtt caaagggaga cacagctgtt 1920
 ggcggggatg catgctcact atcgaagctc cagtggcaga aagtcctttc cagccccaat 1980
 ctatggacag acatgactct tgtcctgcac tgacatgaag gcctcaaggt tccaggttgc 2040
 agcaggcgtg aggcaactgtg cgtctgcaga ggggctacga accaggtgca gggctccagc 2100
 tggagacccc tttgaccttg agcagtctcc a 2131

<210> 40

<211> 1927

<212> DNA

<213> Homo sapiens

<400> 40

aggagggaag aggcgttgcc cctgctggca tagtcaggta ccagcccagc caggatttga 60
 acgggctgag cttttcatga tggttcctgc tgacctgaa acatcttaaa tggaagggcg 120
 tgagcgcttg gtccatgcag tgaagctctt ccaacctggg tcaacgaaaa cggagaagaa 180
 atggcccaag aaatagatct gagtgctctc aaggagttag aacgcgaggc cattctccag 240
 gtctgtgacc gagaccaggc ggttcaaaac acagaggagg agaggacacg gaaactgaaa 300
 acacacctgc agcatctccg gtggaaaagga gcgaagaaca cggactggga gcacaaagag 360
 aagtgtgtg cgcgctgcca gcagggtgtg gggttcctgc tgcaccgggg cgccgtgtgc 420
 cggggctgca gccaccgctg gtgtgcccag tgccgagtgt tcctgagggg gacctatgcc 480
 tggaagtgca cgggtgtgctt cgaggacagg aatgtcaaaa taaaaactgg agaatggttc 540
 tatgaggaac gagccaagaa atttccaact ggaggcaaac atgagacagt tggagggcag 600
 ctcttgcaat cttatcagaa gctgagcaaa atttctgtgg ttctctctac tccacctctt 660
 gtcagcgaga gccagtgcag ccgcagtcct ggcaggaagg tcagtgcacc agatattctg 720
 aaacctctca atcaagagga tcccaaatgc tctactaacc ctattttgaa gcaacagaat 780
 ctcccatcca gtccggcacc cagtaccata ttctctggag gttttagaca cggaagttta 840

```

attagcattg acagcacctg tacagagatg ggcaattttg acaatgctaa tgtcactgga      900
gaaatagaat ttgccattca ttattgcttc aaaacccatt ctttagaaat atgcatcaag      960
gcctgtaaga accttgccta tggagaagaa aagaagaaaa agtgcaatcc gtatgtgaag    1020
acctacctgt tgcccgacag atcctcccag ggaaagcgca agactggagt ccaaaggaac    1080
accgtggacc cgacctttca ggagaccttg aagtatcagg tggcccctgc ccagctggtg    1140
acccggcagc tgcaggtctc ggtgtggcat ctgggcacgc tggcccgag agtgtttctt    1200
ggagaagtga tcattcctct ggccacgtgg gactttgaag acagcacaac acagtccttc    1260
cgctggcatc cgctccgggc caaggcggag aaatacgaag acagcgttcc tcagagtaat    1320
ggagagctca cagtccgggc taagctgggt ctcccttcac ggcccagaaa actccaagag    1380
gctcaagaag ggacagatca gccatcactt catggtcaac tttgtttggt agtgctagga    1440
gccaagaatt tacctgtgcg gccagatggc accttgaact catttgtaa gggctgtctc    1500
actctgccag accaacaaaa actgagactg aagtcgccag tcctgaggaa gcaggcttgc    1560
ccccagtgga aacactcatt tgtcttcagt ggcgtaacct cagctcagct gaggcagtca    1620
agcttggagt taactgtctg ggatcaggcc ctctttggaa tgaacgaccg cttgcttgga    1680
ggaaccagac ttggttcaaa gggagacaca gctgttggcg gggatgcatg ctactatcg    1740
aagctccagt ggcagaaagt cttttccagc cccaatctat ggacagacat gactcttgtc    1800
ctgcactgac atgaaggcct caaggttcca ggttgacgca ggcgtgaggc actgtgcgtc    1860
tgcagagggg ctacgaacca ggtgcagggc cccagctgga gaccctttg accttgagca    1920
gtctcca                                           1927

```

```

<210> 41
<211> 406
<212> PRT
<213> Homo sapiens

```

```
<400> 41
```

```

Met Asp Cys Arg Thr Lys Ala Asn Pro Asp Arg Thr Phe Asp Leu Val
1           5           10           15

```

```

Leu Lys Val Lys Cys His Ala Ser Glu Asn Glu Asp Pro Val Val Leu
20           25           30

```

```

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

```

```

Pro Lys Phe Cys Phe Pro Phe Asp Val Glu Arg Val Ser Gln Asn Gln
50           55           60

```

Val Gly Gln His Phe Thr Phe Val Leu Thr Asp Ile Glu Ser Lys Gln
65 70 75 80

Arg Phe Gly Phe Cys Arg Leu Thr Ser Gly Gly Thr Ile Cys Leu Cys
85 90 95

Ile Leu Ser Tyr Leu Pro Trp Phe Glu Val Tyr Tyr Lys Leu Leu Asn
100 105 110

Thr Leu Ala Asp Tyr Leu Ala Lys Glu Leu Glu Asn Asp Leu Asn Glu
115 120 125

Thr Leu Arg Ser Leu Tyr Asn His Pro Val Pro Lys Ala Asn Thr Pro
130 135 140

Val Asn Leu Ser Val His Ser Tyr Phe Ile Ala Pro Asp Val Thr Gly
145 150 155 160

Leu Pro Thr Ile Pro Glu Ser Arg Asn Leu Thr Glu Tyr Phe Val Ala
165 170 175

Val Asp Val Asn Asn Met Leu Gln Leu Tyr Ala Ser Met Leu His Glu
180 185 190

Arg Arg Ile Val Ile Ile Ser Ser Lys Leu Ser Thr Leu Thr Ala Cys
195 200 205

Ile His Gly Ser Ala Ala Leu Leu Tyr Pro Met Tyr Trp Gln His Ile
210 215 220

Tyr Ile Pro Val Leu Pro Pro His Leu Leu Asp Tyr Cys Cys Ala Pro
225 230 235 240

Met Pro Tyr Leu Ile Gly Ile His Ser Ser Leu Ile Glu Arg Val Lys
245 250 255

Asn Lys Ser Leu Glu Asp Val Val Met Leu Asn Val Asp Thr Asn Thr
260 265 270

Leu Glu Ser Pro Phe Ser Asp Leu Asn Asn Leu Pro Ser Asp Val Val
275 280 285

Ser Ala Leu Lys Asn Lys Leu Lys Lys Gln Ser Thr Ala Thr Gly Asp
290 295 300

Gly Val Ala Arg Ala Phe Leu Arg Ala Gln Ala Ala Leu Phe Gly Ser

305						310						315						320
Tyr	Arg	Asp	Ala	Leu	Arg	Tyr	Lys	Pro	Gly	Glu	Pro	Ile	Thr	Phe	Cys			
				325					330						335			
Glu	Glu	Ser	Phe	Val	Lys	His	Arg	Ser	Ser	Val	Met	Lys	Gln	Phe	Leu			
				340					345						350			
Glu	Thr	Ala	Ile	Asn	Leu	Gln	Leu	Phe	Lys	Gln	Phe	Ile	Asp	Gly	Arg			
				355					360						365			
Leu	Ala	Lys	Leu	Asn	Ala	Gly	Arg	Gly	Phe	Ser	Asp	Val	Phe	Glu	Glu			
				370					375						380			
Glu	Ile	Thr	Ser	Gly	Gly	Phe	Cys	Gly	Gly	Lys	Asp	Lys	Leu	Gln	Tyr			
385				390				395				400						
Asp	Tyr	Pro	Phe	Ser	Gln													
				405														
<210>		42																
<211>		426																
<212>		PRT																
<213>		Homo sapiens																
<400>		42																
Met	Asp	Cys	Arg	Thr	Lys	Ala	Asn	Pro	Asp	Arg	Thr	Phe	Asp	Leu	Val			
				5					10						15			
Leu	Lys	Val	Lys	Cys	His	Ala	Ser	Glu	Asn	Glu	Asp	Pro	Val	Val	Leu			
				20					25						30			
Trp	Lys	Phe	Pro	Glu	Asp	Phe	Gly	Asp	Gln	Glu	Ile	Leu	Gln	Ser	Val			
				35					40						45			
Pro	Lys	Phe	Cys	Phe	Pro	Phe	Asp	Val	Glu	Arg	Val	Ser	Gln	Asn	Gln			
50				55				60										
Val	Gly	Gln	His	Phe	Thr	Phe	Val	Leu	Thr	Asp	Ile	Glu	Ser	Lys	Gln			
65				70				75				80						
Arg	Phe	Gly	Phe	Cys	Arg	Leu	Thr	Ser	Gly	Gly	Thr	Ile	Cys	Leu	Cys			
				85					90						95			
Ile	Leu	Ser	Tyr	Leu	Pro	Trp	Phe	Glu	Val	Tyr	Tyr	Lys	Leu	Leu	Asn			
				100					105						110			

101

Thr Leu Ala Asp Tyr Leu Ala Lys Glu Leu Glu Asn Asp Leu Asn Glu
 115 120 125

Thr Leu Arg Ser Leu Tyr Asn His Pro Val Pro Lys Ala Asn Thr Pro
 130 135 140

Val Asn Leu Ser Val Asn Gln Glu Ile Phe Ile Ala Cys Glu Gln Val
 145 150 155 160

Leu Lys Asp Gln Pro Ala Leu Val Pro His Ser Tyr Phe Ile Ala Pro
 165 170 175

Asp Val Thr Gly Leu Pro Thr Ile Pro Glu Ser Arg Asn Leu Thr Glu
 180 185 190

Tyr Phe Val Ala Val Asp Val Asn Asn Met Leu Gln Leu Tyr Ala Ser
 195 200 205

Met Leu His Glu Arg Arg Ile Val Ile Ile Ser Ser Lys Leu Ser Thr
 210 215 220

Leu Thr Ala Cys Ile His Gly Ser Ala Ala Leu Leu Tyr Pro Met Tyr
 225 230 235 240

Trp Gln His Ile Tyr Ile Pro Val Leu Pro Pro His Leu Leu Asp Tyr
 245 250 255

Cys Cys Ala Pro Met Pro Tyr Leu Ile Gly Ile His Ser Ser Leu Ile
 260 265 270

Glu Arg Val Lys Asn Lys Ser Leu Glu Asp Val Val Met Leu Asn Val
 275 280 285

Asp Thr Asn Thr Leu Glu Ser Pro Phe Ser Asp Leu Asn Asn Leu Pro
 290 295 300

Ser Asp Val Val Ser Ala Leu Lys Asn Lys Leu Lys Lys Gln Ser Thr
 305 310 315 320

Ala Thr Gly Asp Gly Val Ala Arg Ala Phe Leu Arg Ala Gln Ala Ala
 325 330 335

Leu Phe Gly Ser Tyr Arg Asp Ala Leu Arg Tyr Lys Pro Gly Glu Pro
 340 345 350

Ile Thr Phe Cys Glu Glu Ser Phe Val Lys His Arg Ser Ser Val Met
 355 360 365

Lys Gln Phe Leu Glu Thr Ala Ile Asn Leu Gln Leu Phe Lys Gln Phe
 370 375 380

Ile Asp Gly Arg Leu Ala Lys Leu Asn Ala Gly Arg Gly Phe Ser Asp
 385 390 395 400

Val Phe Glu Glu Glu Ile Thr Ser Gly Gly Phe Cys Gly Gly Lys Asp
 405 410 415

Lys Leu Gln Tyr Asp Tyr Pro Phe Ser Gln
 420 425

<210> 43
 <211> 426
 <212> PRT
 <213> Homo sapiens

<400> 43

Ile Glu Thr Lys Thr Arg Ala Asn Pro Asp Arg Thr Phe Asp Leu Val
 1 5 10 15

Leu Lys Val Lys Cys His Ala Ser Glu Asn Glu Asp Pro Val Val Leu
 20 25 30

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

Pro Lys Phe Cys Phe Pro Phe Asp Val Glu Arg Val Ser Gln Asn Gln
 50 55 60

Val Gly Gln His Phe Thr Phe Val Leu Thr Asp Ile Glu Ser Lys Gln
 65 70 75 80

Arg Phe Gly Phe Cys Arg Leu Thr Ser Gly Gly Thr Ile Cys Leu Cys
 85 90 95

Ile Leu Ser Tyr Leu Pro Trp Phe Glu Val Tyr Tyr Lys Leu Leu Asn
 100 105 110

Thr Leu Ala Asp Tyr Leu Ala Lys Glu Leu Glu Asn Asp Leu Asn Glu
 115 120 125

Thr Leu Arg Ser Leu Tyr Asn His Pro Val Pro Lys Ala Asn Thr Pro
 130 135 140

Val Asn Leu Ser Val Asn Gln Glu Ile Phe Ile Ala Cys Glu Gln Val

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

Val Phe Glu Glu Glu Ile Thr Ser Gly Gly Phe Cys Gly Gly Lys Asp
 405 410 415

Lys Leu Gln Tyr Asp Tyr Pro Phe Ser Gln
 420 425

<210> 44
 <211> 396
 <212> PRT
 <213> Homo sapiens

<400> 44

Met Ala Ala Ala Pro Arg Glu Glu Lys Arg Trp Pro Gln Pro Val Phe
 1 5 10 15

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

Glu Ile Leu Gln Ser Val Pro Lys Phe Cys Phe Pro Phe Asp Val Glu
 35 40 45

Arg Val Ser Gln Asn Gln Val Gly Gln His Phe Thr Phe Val Leu Thr
 50 55 60

Asp Ile Glu Ser Lys Gln Arg Phe Gly Phe Cys Arg Leu Thr Ser Gly
 65 70 75 80

Gly Thr Ile Cys Leu Cys Ile Leu Ser Tyr Leu Pro Trp Phe Glu Val
 85 90 95

Tyr Tyr Lys Leu Leu Asn Thr Leu Ala Asp Tyr Leu Ala Lys Glu Leu
 100 105 110

Glu Asn Asp Leu Asn Glu Thr Leu Arg Ser Leu Tyr Asn His Pro Val
 115 120 125

Pro Lys Ala Asn Thr Pro Val Asn Leu Ser Val His Ser Tyr Phe Ile
 130 135 140

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

Thr Glu Tyr Phe Val Ala Val Asp Val Asn Asn Met Leu Gln Leu Tyr
 165 170 175

Ala Ser Met Leu His Glu Arg Arg Ile Val Ile Ile Ser Ser Lys Leu
 180 185 190

Ser Thr Leu Thr Ala Cys Ile His Gly Ser Ala Ala Leu Leu Tyr Pro
 195 200 205

Met Tyr Trp Gln His Ile Tyr Ile Pro Val Leu Pro Pro His Leu Leu
 210 215 220

Asp Tyr Cys Cys Ala Pro Met Pro Tyr Leu Ile Gly Ile His Ser Ser
 225 230 235 240

Leu Ile Glu Arg Val Lys Asn Lys Ser Leu Glu Asp Val Val Met Leu
 245 250 255

Asn Val Asp Thr Asn Thr Leu Glu Ser Pro Phe Ser Asp Leu Asn Asn
 260 265 270

Leu Pro Ser Asp Val Val Ser Ala Leu Lys Asn Lys Leu Lys Lys Gln
 275 280 285

Ser Thr Ala Thr Gly Asp Gly Val Ala Arg Ala Phe Leu Arg Ala Gln
 290 295 300

Ala Ala Leu Phe Gly Ser Tyr Arg Asp Ala Leu Arg Tyr Lys Pro Gly
 305 310 315 320

Glu Pro Ile Thr Phe Cys Glu Glu Ser Phe Val Lys His Arg Ser Ser
 325 330 335

Val Met Lys Gln Phe Leu Glu Thr Ala Ile Asn Leu Gln Leu Phe Lys
 340 345 350

Gln Phe Ile Asp Gly Arg Leu Ala Lys Leu Asn Ala Gly Arg Gly Phe
 355 360 365

Ser Asp Val Phe Glu Glu Glu Ile Thr Ser Gly Gly Phe Cys Gly Gly
 370 375 380

Lys Asp Lys Leu Gln Tyr Asp Tyr Pro Phe Ser Gln
 385 390 395

<210> 45

<211> 2117

<212> DNA

<213> Homo sapiens

<400> 45

gccgggggacg cagccgacat gggcccgccg ccacggctgc tgtgagcagc ctctttccct

gtgtggccgc	cggcgtgggc	ggggacggcg	cgaccctcgc	gcggccgggc	tgcgggcttc	120
cagggcagcg	cgcgggggcc	ggacggacag	ccccacaccg	acatgtaacc	atggactgca	180
ggaccaaggc	aaatccagac	agaacctttg	acttgggtgt	gaaagtgaag	tgcatgcct	240
ctgaaaatga	agatcctgtg	gtattgtgga	aattcccaga	ggactttgga	gaccaggaaa	300
tactacagag	tgtgccaaag	ttctgttttc	cctttgacgt	tgaaaggggtg	tctcagaatc	360
aagtgtgaca	gcactttacc	tttgtactga	cagacattga	aagtaaagag	agattttgat	420
tctgcagact	gacgtcagga	ggcacaattt	gtttatgcat	ccttagttac	cttcctgtgt	480
ttgaagtgtg	ttacaagctt	ctaaatactc	ttgcagatta	cttggctaag	gaactggaaa	540
atgatttgaa	tgaaactctc	agatcactgt	ataaccaccc	agtaccaaag	gcaaatactc	600
ctgtaaaattt	gagtgtgcat	tcctacttca	ttgccctga	tgtaactgga	ctcccaacaa	660
taccgagag	tagaaatctt	acagaatatt	ttgttgccgt	ggatgtgaac	aacatgctgc	720
agctgtatgc	cagtatgctg	catgaaaggc	gcacgtgat	tatctcgagc	aaattaagca	780
ctttaactgc	ctgtatccat	ggatcagctg	ctcttctata	cccaatgtat	tggcaacaca	840
tatacatccc	agtgttccct	ccacacctgc	tggactactg	ctgtgcccc	atgccatacc	900
tgattggaat	acactccagc	ctcatagaga	gagtgaagaa	caaactattg	gaagatgttg	960
ttatgttaaa	tggtgataca	aacacattag	aatcaccatt	tagtgacttg	aacaacctac	1020
caagtgatgt	ggctctcgcc	ttgaaaaata	aactgaagaa	gcagtctaca	gctacgggtg	1080
atggagtagc	tagggccttt	cttagagcac	aggctgcttt	gtttggatcc	tacagagatg	1140
cactgagata	caaacctggg	gagcccatca	ctttctgtga	ggagagtgtt	gtaaagcacc	1200
gctcaagcgt	gatgaaacag	ttcctggaaa	ctgccattaa	cctccagctt	tttaagcagt	1260
ttatcgatgg	tcgactggca	aaactaaatg	caggaagggg	tttctctgat	gtatttgaag	1320
aagagatcac	ttcaggtggc	ttttgtggag	gtaaagacaa	gttacaatat	gattatccat	1380
tttctcaata	acaattttct	tggtctttgc	acttgtgtct	gataaacct	atttcataaa	1440
caactaatga	tttcctccta	aatatgtaat	gtcttaaata	catttttcat	cttataaaag	1500
ctatggaatt	agcttatttt	gcctgatacc	tgttactcaa	ggcattaagt	tggcctcctg	1560
aattggcagc	tggtggcctc	gataatctct	taatattgct	ggaaattagt	aatacagaaa	1620
tccaatcaac	tcatatcttc	ctgtctttcc	ttctgaatag	tagtattctc	tgctagaaaa	1680
ctactagtga	tggttattac	tgagtatgaa	tttaagaact	gagggttatga	ttggtaatac	1740
aatccaaaaa	gaaggggtctg	aacacaaaaa	ttctttatac	atatttaagt	aactgtatta	1800
ttattataca	gatgtcttta	cctttttgac	tttatagatc	actgcagcat	taagaaagtt	1860
tccagtttac	cattccataa	gtacaattaa	tccttctagt	gtaaatgttc	aaatactgtt	1920

ataattatct aggcaattaa taattttacaa actgatattt ttgcacgatt gtagtggtgt 1980
 atagtcttga cttgcagagc attttgcttg agtccttgaa atgtcgtgtt cattcattat 2040
 ttgctgagtg cttacaatgt attaggcact gttctaaata ttaagtgtac taaataaaca 2100
 aaaatccttg tattctg 2117

<210> 46
 <211> 2177
 <212> DNA
 <213> Homo sapiens

<400> 46
 gccgggggcg cagccgacat gggcccgccg ccacggctgc tgtgagcagc ctctttccct 60
 gtgtggccgc cggcgtgggc ggggacggcg cgaccctcgc gcggccgggc tgccggcttc 120
 caggccagcg cgcggggggc ggacggacag cccacaccg acatgtaacc atggactgca 180
 ggaccaaggc aaatccagac agaacctttg acttggtgtt gaaagtgaaa tgtcatgcct 240
 ctgaaaatga agatcctgtg gtattgtgga aattcccaga ggactttgga gaccaggaaa 300
 tactacagag tgtgccaaag ttctgttttc cctttgacgt tgaaaggggtg tctcagaatc 360
 aagttggaca gcactttacc tttgtactga cagacattga aagtaaacag agatttggat 420
 tctgcagact gacgtcagga ggcacaattt gtttatgcat ccttagttac cttccctggt 480
 ttgaagtgtg ttacaagctt ctaaatactc ttgcagatta cttggctaag gaactggaaa 540
 atgatttgaa tgaaactctc agatcactgt ataaccaccc agtaccaaag gcaaatactc 600
 ctgtaaatth gagtgtgaac caagagatat ttattgcctg tgagcaagtt ctgaaagatc 660
 agcctgctct agtaccgcat tcctacttca ttgcccctga tgtaactgga ctcccaacaa 720
 taccgcagag tagaaatctt acagaatatt ttgttgccgt ggatgtgaac aacatgctgc 780
 agctgtatgc cagtatgctg catgaaaggc gcatcgtgat tatctcgagc aaattaagca 840
 ctttaactgc ctgtatccat ggatcagctg ctcttctata cccaatgtat tggcaacaca 900
 tatacatccc agtgcttcct ccacacctgc tggactactg ctgtgcccc aatgccatacc 960
 tgattggaat aactccagc ctcatagaga gaggtaaaaa caaatcattg gaagatgttg 1020
 ttatgttaaa tgttgataga aacacattag aatcaccatt tagtgacttg aacaacctac 1080
 caagtgatgt ggtctcggcc ttgaaaaata aactgaagaa gcagtctaca gctacgggtg 1140
 atggagtagc tagggccttt cttagagcac aggctgcttt gtttggatcc tacagagatg 1200
 cactgagata caaacctggt gagcccatca ctttctgtga ggagagtttt gtaaagcacc 1260
 gctcaagcgt gatgaaacag ttccctggaaa ctgccattaa cctccagctt tttaagcagt 1320
 ttatcgatgg tcgactggca aaactaaatg caggaagggg tttctctgat gtatttgaag 1380
 aagagatcac ttcagggtggc ttttgtggag gtaaagacaa gttacaatat gattatccat 1440

```

tttctcaata acaatTTTTct tggTctttTgc acttTgtgtct gataaaacct atttcataaa 1500
caactaatga tttcctccta aatatgtaat gtcttaaata catttttcat cttataaaag 1560
ctatggaatt agcttattttt gcctgatacc tgttactcaa ggcattaagt tggcctcctg 1620
aattggcagc tgttggcctc gataatctct taatattgct ggaaattagt aatacagaaa 1680
tccaatcaac tcatatcttc ctgtctttcc ttctgaatag tagtattctc tgctagaaaa 1740
ctactagtga tggttattac tgagtatgaa ttttaagaact gaggttatga ttggtaatac 1800
aatccaaaaa gaagggTctg aacacaaaaa ttctttatac atattttaagt aactgtatta 1860
ttattataca gatgtcttta cctttttgac tttatagatc actgcagcat taagaaagtt 1920
tccagtttac cattccataa gtacaattaa tccttctagt gtaaagtgtc aaatactgtt 1980
ataattatct aggcaattaa taatttacia actgatattt ttgcacgatt gtagtgggtg 2040
atagtcttga cttgcagagc attttgcttg agtccttgaa atgtcgtgtt cattcattat 2100
ttgctgagtg cttacaatgt attaggcact gttctaaata ttaagtgtac taaataaaca 2160
aaaatccttg tattctg 2177

```

```

<210> 47
<211> 2007
<212> DNA
<213> Homo sapiens

```

```

<400> 47
attgagacaa aaacaagggc aaatccagac agaacctttg acttggtgtt gaaagtgaaa 60
tgtcatgcct ctgaaaatga agatcctgtg gtattgtgga aattcccaga ggactttgga 120
gaccaggaaa tactacagag tgtgccaaag ttctgttttc cctttgacgt tgaaagggTg 180
tctcagaatc aagttggaca gcactttacc tttgtactga cagacattga aagtaaacag 240
agatttggat tctgcagact gacgtcagga ggcacaattt gtttatgcat ccttagttac 300
cttccctggT ttgaagtgta ttacaagctt ctaaatactc ttgcagatta cttggctaag 360
gaactggaaa atgatttgaa tgaaactctc agatcactgt ataaccaccc agtaccaaag 420
gcaaatactc ctgtaaattt gagtgtgaac caagagatat ttattgcctg tgagcaagtt 480
ctgaaagatc agcctgctct agtaccgcat tcctacttca ttgcccctga tgtaactgga 540
ctcccaacaa tacccgagag tagaaatctt acagaatatt ttgttgccgt ggatgtgaac 600
aacatgctgc agctgtatgc cagtatgctg catgaaaggc gcatcgtgat tatctcgagc 660
aaattaagca ctttaactgc ctgtatccat ggatcagctg ctcttctata cccaatgtat 720
tggcaacaca tatacatccc agtgcttcct ccacacctgc tggactactg ctgtgcccc 780
atgccatacc tgattggaat aactccagc ctcatagaga gagtgaaaaa caaatcattg 840

```

```

gaagatggtg ttatgttaaa tgttgataca aacacattag aatcaccatt tagtgacttg      900
aacaacctac caagtgatgt ggtctcggcc ttgaaaaata aactgaagaa gcagtctaca      960
gctacgggtg atggagtagc tagggccttt cttagagcac aggctgcttt gtttgatcc      1020
tacagagatg cactgagata caaacctggt gagcccatca ctttctgtga ggagagtttt      1080
gtaaagcacc gctcaagcgt gatgaaacag ttcctggaaa ctgccattaa cctccagctt      1140
tttaagcagt ttatcgatgg tcgactggca aaactaaatg caggaagggg tttctctgat      1200
gtatttgaag aagagatcac ttcaggtggc ttttgtggag gtaaagacaa gttacaatat      1260
gattatccat tttctcaata acaattttct tggcttttgc acttgtgtct gataaacct      1320
atttcataaa caactaatga tttcctccta aatatgtaat gtcttaaata catttttcat      1380
cttataaaag ctatggaatt agcttatttt gcctgatacc tgttactcaa ggcattaagt      1440
tggcctcctg aattggcagc tgttggcctc gataatctct taatattgct ggaaattagt      1500
aatacagaaa tccaatcaac tcatatcttc ctgtctttcc ttctgaatag tagtattctc      1560
tgctagaaaa ctactagtga tggttattac tgagtatgaa tttaagaact gaggttatga      1620
ttggttaatac aatccaaaaa gaagggtctg aacacaaaaa ttctttatac atatttaagt      1680
aactgtatta ttattataca gatgtcttta cttttttgac tttatagatc actgcagcat      1740
taagaaagtt tccagtttac cattccataa gtacaattaa tccttctagt gtaaatgttc      1800
aaatactgtt ataattatct aggcaattaa taatttacia actgatattt ttgcacgatt      1860
gtagtggtgt atagtcttga cttgcagagc attttgcttg agtccttgaa atgtcgtgtt      1920
cattcattat ttgctgagtg cttacaatgt attaggcact gttctaaata ttaagtgtac      1980
taaataaaca aaaatccttg tattctg      2007

```

```

<210> 48
<211> 2197
<212> DNA
<213> Homo sapiens

```

```

<400> 48
gcggggggccg gacggacagc cccacaccga catgtaacca tggactgcag gaccaaggca      60
aatccagaca gaacctttga cttggtgttg aaagtgaat gtcatgcctc tgaaaatgaa      120
gaggacagtc cagcttatct gccgaggatt ccccttgaa aagtacgccg attcgcattt      180
tgcattaaga aactggaaaa ctttcctgtc ggtcctggcg tagcgctcc cgtgtccggg      240
gtagaccttg taccggctga aaccgcatag ctcgaccttc atggcggcag ctccacggga      300
ggagaaaaga tggccccaac ctgtattttc gaatcctgtg gtattgtgga aattcccaga      360
ggactttgga gaccaggaaa tactacagag tgtgccaag ttctgttttc ctttgacgt      420
tgaaaggggtg tctcagaatc aagttggaca gcactttacc tttgtactga cagacattga      480

```

aagtaaacag agatttggat tctgcagact gacgtcagga ggcacaattt gtttatgcat 540
ccttagttac cttccctggt ttgaagtgtt ttacaagctt ctaaatactc ttgcagatta 600
cttggctaag gaactggaaa atgattttgaa tgaaactctc agatcactgt ataaccaccc 660
agtaccaaag gcaaatactc ctgtaaaattt gagtgtgcat tcctacttca ttgcccctga 720
tgtaactgga ctccaacaa tacccgagag tagaaatctt acagaatatt ttgttgccgt 780
ggatgtgaac aacatgctgc agctgtatgc cagtatgctg catgaaaggc gcatcgtgat 840
tatctcgagc aaattaagca ctttaactgc ctgtatccat ggatcagctg ctcttctata 900
cccaatgtat tggcaacaca tatacatccc agtgcttctt ccacacctgc tggactactg 960
ctgtgccccca atgccatacc tgattggaat aactccagc ctcatagaga gagtgaaaaa 1020
caaatcattg gaagatgttg ttatgttaaa tgttgataca aacacattag aatcaccatt 1080
tagtgacttg aacaacctac caagtgatgt ggtctcggcc ttgaaaaata aactgaagaa 1140
gcagtctaca gctacgggtg atggagtagc tagggccttt ctagagcac aggctgcttt 1200
gtttggatcc tacagagatg cactgagata caaacctggt gagcccatca ctttctgtga 1260
ggagagtttt gtaaagcacc gctcaagcgt gatgaaacag ttcttgaaa ctgccattaa 1320
cctccagctt tttaagcagt ttatcgatgg tcgactggca aaactaaatg caggaagggg 1380
tttctctgat gtatttgaag aagagatcac ttcaggtggc ttttgtggag gtaaagacaa 1440
gttacaatat gattatccat tttctcaata acaattttct tggcttttgc acttgtgtct 1500
gataaaacct atttcataaa caactaatga tttcctccta aatatgtaat gtcttaaata 1560
catttttcat cttataaaaag ctatggaatt agcttatttt gcctgatacc tgttactcaa 1620
ggcattaagt tggcctcctg aattggcagc tgttggcctc gataatctct taatattgct 1680
ggaaattagt aatacagaaa tccaatcaac tcatatcttc ctgtctttcc ttctgaatag 1740
tagtattctc tgctagaaaa ctactagtga tggttattac tgagtatgaa tttaagaact 1800
gaggttatga ttggtaatac aatccaaaaa gaagggctctg aacacaaaaa ttctttatac 1860
atatttaagt aactgtatta ttattataca gatgtcttta cctttttgac tttatagatc 1920
actgcagcat taagaaagtt tccagtttac cattccataa gtacaattaa tccttctagt 1980
gtaaatgttc aaatactggt ataattatct aggcaattaa taatttacia actgatattt 2040
ttgcacgatt gtagtggtgt atagtcttga cttgcagagc attttgcttg agtccttgaa 2100
atgtcgtggt cattcattat ttgctgagtg cttacaatgt attaggcact gttctaaata 2160
ttaagtgtac taaataaaca aaaatccttg tattctg 2197

<210> 49

<211> 131

<212> PRT
 <213> Homo sapiens

<400> 49

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

Ser Ser Trp Ser Glu Gly Glu Asp Arg Gly Gln Ser Pro Glu Gly Val
 20 25 30

Leu Leu Thr Trp Val Phe Gly Thr Lys Cys Val Met His Pro Cys Glu
 35 40 45

Glu Thr Thr Lys Gln Ala Leu Cys Glu Gln Gln Gly Cys Leu Phe His
 50 55 60

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

Ser Phe Lys Trp Glu Asn Ser Ile Tyr Leu His Ala Thr Leu Phe Leu
 85 90 95

Ile Gly Glu Tyr Leu His Leu Ala Phe Tyr Tyr Phe Leu Leu Val Leu
 100 105 110

Tyr Ile Leu Cys Ser Phe Leu Ser Tyr Cys Leu Leu Leu Trp Leu Gly
 115 120 125

Ser Phe Leu
 130

<210> 50
 <211> 2950
 <212> DNA
 <213> Homo sapiens

<400> 50

attatctagg tctcggagga tggagaaatc aaaagtgcc ttttctggcc atttagaacc 60
 attgtcgagt ttgtattggg gccaagcagt gttgcagaag aaaataagac atttagattt 120
 tagttcaggt gatagttgaa gaaattttta gttcttgaga acacaggcta agggagaaga 180
 aggaggaatg gaggggtggaa gtttgcccat agtgaaggag gcaagtttaa agagaaaggt 240
 agagacatgg agaaaggggt ggggagcagc cctgggctgc aatgtgggtg agcagccaaa 300
 gcaggcatcc ccgcaattga cttgccacca agggaatgtg gttgaatgac caaggcaggc 360
 atccctgaag atatcagacg ccaatggaat gtgggtgaat aatcaggcag gcatccccgg 420
 aatgattaaa cactaaggga aggctgcctt cctgagtaca tgaccagcac cagagttttg 480

gggccatgga	taaaatgtgt	ctcctttgtc	tctactagaa	aatgaaagga	attgaaatta	540
agagaagaga	gggagtgaag	gggtggcacca	agaatgaaag	gagaaagagg	ttgagggata	600
gtgagaaagg	ttggagaaga	gagtaaaaag	aggccactta	cccgatttaa	aatttgtgag	660
atgttccttg	ggctggtttg	tctgaggacc	aaaggtcgta	ggtggtatctc	ttcatggagt	720
gagggtgagg	acaggggaca	gtctcctgaa	ggagtcctgc	tgacctgggt	ctttggcacc	780
aaatgtgtca	tgcatccatg	tgaagagacc	accaaacagg	ctttgtgtga	gcaacagggc	840
tgtttgtttc	acctgggtgc	agacgagttg	agtccaaaaa	gagagtcagc	ccagtctata	900
tcttttaaat	gggaaaattc	aatctattta	catgcaacgt	tattcttgat	aggtgagtac	960
ttacatctag	cattctatta	ttttctgctt	gttttgtata	tcctttgttc	cttcctctct	1020
tactgtttac	ttttgtggtt	gggcagtttt	ctgtagggat	aagatttgag	tcttatctct	1080
ttctccctat	gtgttagctt	taccagttag	tttttatagt	ttcacatatt	tttatgatgc	1140
tggttatcat	cttctctgtg	gggaacaggc	ccccaaaaac	ctggccataa	actggcccca	1200
aaactggcca	taaacaaaat	ctctgcagca	ctgtgacatg	tacatgatgg	tcttaacgcc	1260
cacgctggaa	ggttgtgggt	ttaccagaat	gagggcaagg	aacacctggc	ccaccagggt	1320
tggaaaaccg	cttaaaggca	ttcttaaacc	acaaacaata	gcatgagtga	tctgtgcctt	1380
aaggccatgc	tcctgctgca	gatagctagt	ccaaccatc	cctttatttc	agcccatctc	1440
ttcatttccc	ataaggaata	attttagtta	atctaataatc	tatagaaaga	atgctaataa	1500
ctagcttgct	gttaataaat	acatgggtaa	acctctgttg	gaggctctca	gctctgaagg	1560
ctgtgagacc	cttgatttcc	tacttcactc	ctctatatatt	ctgtgtcttt	aattcctcta	1620
gtgccactgg	gttagagtct	ccccgaccaa	gctggtctca	gcaagtggtc	tccatcatgg	1680
gggctcgaat	ccagggtgaa	gggtcaccag	agtgatgggt	ggagaacatg	gaactagctg	1740
gaggacacct	gagtactctt	aaagcaaacc	ccgtgggtgag	taagaagggg	agctcagaag	1800
catcagggta	acaatgggac	aagtgtgggg	tctggttcgt	tccatcttgg	aactttttca	1860
cactgatgat	gaggaagaag	gagagtataa	tgaagtaaca	gaagagggtta	tagagcaggt	1920
ttatttgcca	gctaaagcta	aagtggcaaa	ggaggggagag	gttcatccct	acccttctgc	1980
acccctcat	tattattttg	aagaaaaaga	gtggcctgac	cctccagatc	tttcttttcc	2040
agaggacagt	gggcaaaaat	tagttgcccc	agtgactgtt	caagcagcac	ctcgagcgac	2100
tgctcttagt	tctattcagt	caggaattca	gcaagctaga	tgagaagggtg	attaagaggc	2160
ttggcagttc	cctgttagac	tacactgccc	agaccaacag	ggaaatattg	tagctacatt	2220
tgagcctttt	tgttttaaat	tactcaaaga	atttaaacia	gctattaatc	agtatggacc	2280
aggttctcct	tttgtaatgg	gactattaaa	gaacattgct	gtttccagtc	agatgattcc	2340


```

tactgactgg gacgctctta ctcaagcttg tctaactcct gcttagttct tacaatttaa 2400
aacttggtgg gcagatgaag cttccattca ggcttctcac aacacgcagg accaacctca 2460
aattaatata actgcagacc aacttttggg ggttggcagt tgggctgggt tagatgcaca 2520
aatggtcattg caggatgatg ccatagaaca gcttagagga gcgtgcatta gagcttgggg 2580
aaaaaaaaatc acttcaagtg gagaacaata ccctttcttt agtgctataa aacagggacc 2640
agaagaatca tatgtggatt ttatagctca gttacaggag tctcttaaaa agatgactgc 2700
agatttggct gctcaggata tagtgttgca attattagct ttcaacaatg ctaatcctga 2760
ttgccaggct gctctgtgac ctatcagagg gaaagcacat ttagttgatt atatcaaggc 2820
ctgtgggtgg atcagaggta atctgcatca ggccacctgc tagcacgggc aatggcagga 2880
ctgagagtgg atacagaaaag tactccattt cctggagctt gttttaactg tgggaagcat 2940
ggtcatactg 2950

```

```

<210> 51
<211> 132
<212> PRT
<213> Homo sapiens

```

```

<400> 51

```

```

Met Ser Gln Gly Arg His Leu Leu Glu Phe Leu Pro Leu Tyr Ile Ala
1          5          10          15

```

```

Phe Met Leu Arg Gly Val Cys Arg Ile Asp Ala Gly Ser Leu Asn Pro
          20          25          30

```

```

Glu Leu Phe Leu Pro Met Leu His Glu Glu Asp Trp Cys Trp Glu Ile
          35          40          45

```

```

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

```

```

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

```

```

Tyr Asp Ser Val Phe Gln Leu Ser Leu Asp Arg Met Arg His Thr Arg
          85          90          95

```

```

Ser Met Ala Arg Val Glu Arg Leu Arg His Arg Lys Ala Ile Gln Lys
          100          105          110

```

```

Lys Thr Gln Leu Val His His Leu Leu Phe Lys Gly Trp Ala Ser Asp
          115          120          125

```

Glu Thr Glu Ile
130

<210> 52
<211> 399
<212> DNA
<213> Homo sapiens

<400> 52
atgtcacaag gcaggcatct tcttgagttt cttccattgt acatagcttt catgttacgt 60
ggggtttgta ggatagacgc tggaagcctt aatccagaac tgtttttgcc aatgttacat 120
gaagaggatt ggtggtggga gatagctggc catgtggact cccaagagtt attcggttgg 180
ttgttttcta gtacctctac tgggcatgca gagctggaca aaaagggttaa tggactttat 240
tatgactctg tattccagtt gtctctggac cgtatgcgtc atacaaggag tatggctaga 300
gtagagaggc tgagacacag gaaagcgatc cagaaaaaga ctcagttagt ccatcatctg 360
ctatttaaag gatgggcttc tgatgaaact gaaatttag 399

<210> 53
<211> 431
<212> PRT
<213> Homo sapiens

<400> 53

Met Arg Arg Leu Arg Arg Leu Ala His Leu Val Leu Phe Cys Pro Phe
1 5 10 15

Ser Lys Arg Leu Gln Gly Arg Leu Pro Gly Leu Arg Val Arg Cys Ile
20 25 30

Phe Leu Ala Trp Leu Gly Val Phe Ala Gly Ser Trp Leu Val Tyr Val
35 40 45

His Tyr Ser Ser Tyr Ser Glu Arg Cys Arg Gly His Val Cys Gln Val
50 55 60

Val Ile Cys Asp Gln Tyr Arg Lys Gly Ile Ile Ser Gly Ser Val Cys
65 70 75 80

Gln Asp Leu Cys Glu Leu His Met Val Glu Trp Arg Thr Cys Leu Ser
85 90 95

Val Ala Pro Gly Gln Gln Val Tyr Ser Gly Leu Trp Arg Asp Lys Asp
100 105 110

Val Thr Ile Lys Cys Gly Ile Glu Glu Thr Leu Asp Ser Lys Ala Arg

115

120

125

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

Arg Gly Thr Ser Ile Lys Glu Phe Arg Glu Met Thr Leu Ser Phe Leu
 145 150 155 160

Lys Ala Asn Leu Gly Asp Leu Pro Ser Leu Pro Ala Leu Val Gly Gln
 165 170 175

Val Leu Leu Met Ala Asp Phe Asn Lys Asp Asn Arg Val Ser Leu Ala
 180 185 190

Glu Ala Lys Ser Val Trp Ala Leu Leu Gln Arg Asn Glu Phe Leu Leu
 195 200 205

Leu Leu Ser Leu Gln Glu Lys Glu His Ala Ser Arg Leu Leu Gly Tyr
 210 215 220

Cys Gly Asp Leu Tyr Leu Thr Glu Gly Val Pro His Gly Ala Trp His
 225 230 235 240

Ala Ala Ala Leu Pro Pro Leu Leu Arg Pro Leu Leu Pro Pro Ala Leu
 245 250 255

Gln Gly Ala Leu Gln Gln Trp Leu Gly Pro Ala Trp Pro Trp Arg Ala
 260 265 270

Lys Ile Ala Ile Gly Leu Leu Glu Phe Val Glu Glu Leu Phe His Gly
 275 280 285

Ser Tyr Gly Thr Phe Tyr Met Cys Glu Thr Thr Leu Ala Asn Val Gly
 290 295 300

Tyr Thr Ala Thr Tyr Asp Phe Lys Met Ala Asp Leu Gln Gln Val Ala
 305 310 315 320

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

Ser Thr Asp Cys Thr Tyr Gly Arg Asp Cys Arg Ala Pro Cys Asp Arg
 340 345 350

Leu Met Arg Gln Cys Lys Gly Asp Leu Ile Gln Pro Asn Leu Ala Lys
 355 360 365

Val Cys Ala Leu Leu Arg Gly Tyr Leu Leu Pro Gly Ala Pro Ala Asp
 370 375 380

Leu Arg Glu Glu Leu Gly Thr Gln Leu Arg Thr Cys Thr Thr Leu Ser
 385 390 395 400

Gly Leu Ala Ser Gln Val Glu Ala His His Ser Leu Val Leu Ser His
 405 410 415

Leu Lys Thr Leu Leu Trp Lys Lys Ile Ser Asn Thr Lys Tyr Ser
 420 425 430

<210> 54

<211> 344

<212> PRT

<213> Homo sapiens

<400> 54

Met Val Glu Trp Arg Thr Cys Leu Ser Val Ala Pro Gly Gln Gln Val
 1 5 10 15

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

Glu Glu Thr Leu Asp Ser Lys Ala Arg Ser Asp Ala Ala Pro Arg Arg
 35 40 45

Glu Leu Val Leu Phe Asp Lys Pro Thr Arg Gly Thr Ser Ile Lys Glu
 50 55 60

Phe Arg Glu Met Thr Leu Ser Phe Leu Lys Ala Asn Leu Gly Asp Leu
 65 70 75 80

Pro Ser Leu Pro Ala Leu Val Gly Gln Val Leu Leu Met Ala Asp Phe
 85 90 95

Asn Lys Asp Asn Arg Val Ser Leu Ala Glu Ala Lys Ser Val Trp Ala
 100 105 110

Leu Leu Gln Arg Asn Glu Phe Leu Leu Leu Leu Ser Leu Gln Glu Lys
 115 120 125

Glu His Ala Ser Arg Leu Leu Gly Tyr Cys Gly Asp Leu Tyr Leu Thr
 130 135 140

Glu Gly Val Pro His Gly Ala Trp His Ala Ala Ala Leu Pro Pro Leu
 145 150 155 160

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

Leu Gly Pro Ala Trp Pro Trp Arg Ala Lys Ile Ala Ile Gly Leu Leu
 180 185 190

Glu Phe Val Glu Glu Leu Phe His Gly Ser Tyr Gly Thr Phe Tyr Met
 195 200 205

Cys Glu Thr Thr Leu Ala Asn Val Gly Tyr Thr Ala Thr Tyr Asp Phe
 210 215 220

Lys Met Ala Asp Leu Gln Gln Val Ala Pro Glu Ala Thr Val Arg Arg
 225 230 235 240

Phe Leu Gln Gly Arg Arg Cys Glu His Ser Thr Asp Cys Thr Tyr Gly
 245 250 255

Arg Asp Cys Arg Ala Pro Cys Asp Arg Leu Met Arg Gln Cys Lys Gly
 260 265 270

Asp Leu Ile Gln Pro Asn Leu Ala Lys Val Cys Ala Leu Leu Arg Gly
 275 280 285

Tyr Leu Leu Pro Gly Ala Pro Ala Asp Leu Arg Glu Glu Leu Gly Thr
 290 295 300

Gln Leu Arg Thr Cys Thr Thr Leu Ser Gly Leu Ala Ser Gln Val Glu
 305 310 315 320

Ala His His Ser Leu Val Leu Ser His Leu Lys Thr Leu Leu Trp Lys
 325 330 335

Lys Ile Ser Asn Thr Lys Tyr Ser
 340

<210> 55

<211> 1645

<212> DNA

<213> Homo sapiens

<400> 55

agggagcggc ggccgctgcg ggccgggccg ggccggggct gaggccgagc gagccgcggg 60

gcccgcgcag ccccggcccg agcccacat gcggcggtg cggcgcctgg cgcacctggt 120

gctctttctgc ccctttctcca agcgcctgca gggccggctc ccaggcctca gggctccgctg 180

```

catcttcctg gcctggctgg gcgtctttgc aggcagctgg ctggtgtacg tgcactactc      240
gtcctactcg gagcgtgtgc gcggccatgt ctgccaggtg gtcattttgtg accagtaccg      300
caaggggatc atctcgggct ccgtctgcca ggacctgtgt gagctgcata tgggtggagtg      360
gaggacctgc ctctcgggtg ccccgggcca gcaggtgtac agcgggctct ggcgggacaa      420
ggatgtaacc atcaagtgtg gcattgagga gaccctcgac tccaaggccc ggtcggatgc      480
ggcccccccg cgggagctgg tactgtttga caagcccacc cggggcacct ccatcaagga      540
attccgggag atgaccctca gcttcctcaa ggcgaaacctg ggagacctgc ctccctgcc      600
ggcgctgggtt ggccaggtcc tgctcatggc tgacttcaac aaggacaacc ggggtgtccct      660
ggcggaagcc aagtccgtgt gggccctgct gcagcgtaac gagttcctgc tgctgctgtc      720
cctgcaggag aaggagcacg cctccagact gctgggctac tgtggggacc tctacctcac      780
cgagggcgctg ccgcatggcg cctggcacgc ggccgccctt ccacccctgt tgcgccact      840
gctgccgcct gccctgcagg gtgctctcca gcagtggctg gggcctgcgt ggccttggcg      900
ggccaagatc gccatcggcc tgctggagtt cgtggaggag ctcttcacg gctcttacgg      960
gactttctac atgtgtgaga ccacactggc caacgtgggc tacacagcca cctacgactt     1020
caagatggcc gacctgcagc aggtggcacc cgaggccacc gtgcgccgct tcctgcaggg     1080
ccgccgctgc gagcacagca ccgactgcac ctacgggcgc gactgcaggg ccccggtgtga     1140
caggctcatg aggcagtgca agggcgacct catccagccc aacctggcca aggtgtgcgc     1200
actgctacgg ggctacctgc tgccctggcg gcgcgccgac ctccgcgagg agctgggcac     1260
acagctgcgc acctgtacca cgctgagcgg gctggccagc caggtggagg cccatcactc     1320
gctggtgctc agccacctca agactctgct ctggaagaag atctccaaca ccaagtactc     1380
ttgatggggc agtgaggggc ctggccaccc ttcttgagc tggccaggtg ccagggtcca     1440
accctccctc aaggaatcct gtcagaagat gtgaaatgca actgtgttgc aaaatcactc     1500
ccctaccgtc agggctcttg attccagcac cacagacatg agaccccagc tcggagcaaa     1560
ggcggacatg gacatcccgg caggagagtc ctccaagggg gtttgttact ctgaagaacg     1620
taatgtcaat aaacagcttt tatgt                                           1645

```

<210> 56

<211> 2410

<212> DNA

<213> Homo sapiens

<400> 56

```

ggccgcagcc tgtcctcctg cctcagcctg gggaaggctg ggccgggcca aagagggagg      60
ccaagtcctt gggacaggag gagaccaca cctgagatta gtggaaacct agccagaagc      120
tgccatgcag gtgtggctct gggcatcagg atctgtcgtg agagcccca tgagtgccca      180

```

gtgcagaatg gctggcagcc cgccctgacg gggagcagag gggctggacg cggcgcctt	240
cacgggatga caccagctg tttgccctgt gtccaggggg ttgcttctct gacagaggcc	300
ctatggctcg tgtctgactc ctgtccaggt tctgccagcc tgaccatcca tcgctctggc	360
accaagagcc cacccttttg ttcttcctgg cgtcccaggg aaagccctgc ctgggtgggg	420
cagctcctgg cccttcagat ggaagacgca gtccagtcag caccatcata ggaaacaagt	480
tcagaaatgt ctcaattact attccgggca gggagggcgc catgagtcag ggggtgcatc	540
ctccctcctg gcgtcaccgc aggcaggaat gaagagtcag gcagagagcg cgcgtgtggc	600
agctgggtgg gtagatatta gggactagtg tgaattctag ttcaccggcc aatgcctgga	660
tggtccagag ctgggtcggc tgggcggaga gctgcctcca ggttcctgcc tctggccctg	720
gcgtggggtc gacactgggt gtggtgtgtg tctcatgtcc aggcagtggc ctttgcctgt	780
ccgtcctgtt acaggagcca ggatgggtgg gacgggaccg gaccggaggg ttggcggggc	840
tgccctcgca gccgacagcc ccctcctgca gccaccaatg gcatgacca gggccccggc	900
actgcctgtg tgaggggctg gcagctttcc aactgcagca agtggaggcc cctgccagct	960
tcgggcctgt gggcaggggc tcagtggggc aggggtgtgg ctgccccgcc cggcacgcct	1020
gcacctgtct cctcagtgtg accagtaccg caaggggatc atctcgggct ccgtctgcca	1080
ggacctgtgt gagctgcata tgggtggagt gaggacctgc ctctcgggtg ccccgggcca	1140
gcaggtgtac agcgggctct ggcgggacaa ggatgtaacc atcaagtgtg gcattgagga	1200
gacctcgac tccaaggccc ggtcggatgc ggccccccgg cgggagctgg tactgtttga	1260
caagcccacc cggggcacct ccatacaagga attccgggag atgaccctca gcttcctcaa	1320
ggcgaacctg ggagacctgc cttccctgcc ggcgctggtt ggccaggtcc tgctcatggc	1380
tgacttcaac aaggacaacc ggggtgtcct ggcggaagcc aagtccgtgt gggccctgct	1440
gcagcgtaac gagttcctgc tgctgctgtc cctgcaggag aaggagcacg cctccagact	1500
gctgggctac tgtggggacc tctacctcac cgagggcgtg ccgcatggcg cctggcacgc	1560
ggccgccctt ccaccctgt tgcccccact gctgccgcct gccctgcagg gtgctctcca	1620
gcagtggctg gggcctgcgt ggccttggcg ggccaagatc gccatcggcc tgctggagtt	1680
cgtggaggag ctcttcacgc gctcttacgc gactttctac atgtgtgaga ccacactggc	1740
caacgtgggc tacacagcca cctacgactt caagatggcc gacctgcagc aggtggcacc	1800
cgaggccacc gtgcgccgt tcctgcaggg ccgccgctgc gagcacagca ccgactgcac	1860
ctacgggcgc gactgcaggg ccccggtgta caggctcatg aggcagtgc agggcgacct	1920
catccagccc aacctggcca aggtgtgctc actgctacgg ggctacctgc tgccctggcg	1980
gcccccgac ctccgcgagg agctgggcac acagctgcgc acctgtacca cgctgagcgg	2040

```

gctggccagc caggtggagg cccatcactc gctggtgctc agccacctca agactctgct 2100
ctggaagaag atctccaaca ccaagtactc ttgatggggc agtgaggggc ctggccaccc 2160
ttcctggagc tggccagggtg ccagggtcca accctccctc aaggaatcct gtcagaagat 2220
gtgaaatgca actgtgttgc aaaatcactc ccctaccgtc agggctctgg attccagcac 2280
cacagacatg agaccccagc tcggagcaaa ggcggacatg gacatcccgg caggagagtc 2340
ctccaagggg gtttggttact ctgaagaacg taatgtcaat aaacagcttt tatgtaatgc 2400
ccagggtga 2410

```

```

<210> 57
<211> 423
<212> PRT
<213> Homo sapiens

```

```

<400> 57

```

```

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

```

```

Pro Gly Gly Gly Ala Ala Trp Ser Ile Gly Ala Ala Pro Phe Ser Gly
          20          25          30

```

```

Arg Arg Asn Trp Cys Ser Tyr Val Val Thr Arg Thr Ile Ser Cys His
          35          40          45

```

```

Val Gln Asn Gly Thr Tyr Leu Gln Arg Val Leu Gln Asn Cys Pro Trp
          50          55          60

```

```

Pro Met Ser Cys Pro Gly Ser Arg Thr Val Val Arg Pro Thr Tyr Lys
65          70          75          80

```

```

Val Met Tyr Lys Ile Val Thr Ala Pro Ser Ser Ala Ser Leu Glu Pro
          85          90          95

```

```

Met Trp Ser Gly Ser Thr Met Arg Arg Met Ala Leu Arg Pro Thr Ala
          100          105          110

```

```

Phe Ser Gly Cys Leu Asn Cys Ser Lys Val Ser Glu Leu Thr Glu Arg
          115          120          125

```

```

Leu Lys Val Leu Glu Ala Lys Met Thr Met Leu Thr Val Ile Glu Gln
          130          135          140

```

```

Pro Val Pro Pro Thr Pro Ala Thr Pro Glu Asp Pro Ala Pro Leu Trp
145          150          155          160

```


Gly Pro Pro Pro Ala Gln Gly Ser Pro Gly Asp Gly Gly Leu Gln Asp
 165 170 175

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

Ala Gly Ser Arg Gly Pro Met Gly Met Arg Gly Pro Pro Gly Pro Gln
 195 200 205

Gly Pro Pro Gly Ser Pro Gly Arg Ala Gly Ala Val Gly Thr Pro Gly
 210 215 220

Glu Arg Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro
 225 230 235 240

Pro Ala Pro Val Gly Pro Pro His Ala Arg Ile Ser Gln His Gly Asp
 245 250 255

Pro Leu Leu Ser Asn Thr Phe Thr Glu Thr Asn Asn His Trp Pro Gln
 260 265 270

Gly Pro Thr Gly Pro Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly
 275 280 285

Pro Pro Gly Pro Thr Gly Val Pro Gly Ser Pro Gly His Ile Gly Pro
 290 295 300

Pro Gly Pro Thr Gly Pro Lys Gly Ile Ser Gly His Pro Gly Glu Lys
 305 310 315 320

Gly Glu Arg Gly Leu Arg Gly Glu Pro Gly Pro Gln Gly Ser Ala Gly
 325 330 335

Gln Arg Gly Glu Pro Gly Pro Lys Gly Asp Pro Gly Glu Lys Ser His
 340 345 350

Trp Gly Glu Gly Leu His Gln Leu Arg Glu Ala Leu Lys Ile Leu Ala
 355 360 365

Glu Arg Val Leu Ile Leu Glu Thr Met Ile Gly Leu Tyr Glu Pro Glu
 370 375 380

Leu Gly Ser Gly Ala Gly Pro Ala Gly Thr Gly Thr Pro Ser Leu Leu
 385 390 395 400

Arg Gly Lys Arg Gly Gly His Ala Thr Asn Tyr Arg Ile Val Ala Pro

405

410

415

Arg Ser Arg Asp Glu Arg Gly
420

<210> 58
<211> 212
<212> PRT
<213> Homo sapiens

<400> 58

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

Pro Gly Gly Gly Ala Ala Trp Ser Ile Gly Ala Ala Pro Phe Ser Gly
20 25 30

Arg Arg Asn Trp Cys Ser Tyr Val Val Thr Arg Thr Ile Ser Cys His
35 40 45

Val Gln Asn Gly Thr Tyr Leu Gln Arg Val Leu Gln Asn Cys Pro Trp
50 55 60

Pro Met Ser Cys Pro Gly Ser Ser Tyr Arg Thr Val Val Arg Pro Thr
65 70 75 80

Tyr Lys Val Met Tyr Lys Ile Val Thr Ala Arg Glu Trp Arg Cys Cys
85 90 95

Pro Gly His Ser Gly Val Ser Cys Glu Glu Val Ala Ala Ser Ser Ala
100 105 110

Ser Leu Glu Pro Met Trp Ser Gly Ser Thr Met Arg Arg Met Ala Leu
115 120 125

Arg Pro Thr Ala Phe Ser Gly Cys Leu Asn Cys Ser Lys Val Ser Glu
130 135 140

Leu Thr Glu Arg Leu Lys Val Leu Glu Ala Lys Met Thr Met Leu Thr
145 150 155 160

Val Ile Glu Gln Pro Val Pro Pro Thr Pro Ala Thr Pro Glu Asp Pro
165 170 175

Ala Pro Leu Trp Gly Pro Pro Pro Ala Gln Gly Ser Pro Gly Asp Gly
180 185 190

123

Gly Leu Gln Gly Asp Pro Leu Leu Ser Asn Thr Phe Thr Glu Thr Asn
 195 200 205

Asn His Trp Pro
 210

<210> 59
 <211> 175
 <212> PRT
 <213> Homo sapiens

<400> 59

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

Pro Gly Gly Gly Ala Ala Trp Ser Ile Gly Ala Ala Pro Phe Ser Gly
 20 25 30

Arg Arg Asn Trp Cys Ser Tyr Val Val Thr Arg Thr Ile Ser Cys His
 35 40 45

Val Gln Asn Gly Thr Tyr Leu Gln Arg Val Leu Gln Asn Cys Pro Trp
 50 55 60

Pro Met Ser Cys Pro Gly Ser Ser Tyr Arg Thr Val Val Arg Pro Thr
 65 70 75 80

Tyr Lys Val Met Tyr Lys Ile Val Thr Ala Arg Glu Trp Arg Cys Cys
 85 90 95

Pro Gly His Ser Gly Val Ser Cys Glu Glu Gly Cys Leu Asn Cys Ser
 100 105 110

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

Thr Met Leu Thr Val Ile Glu Gln Pro Val Pro Pro Thr Pro Ala Thr
 130 135 140

Pro Glu Asp Pro Ala Pro Leu Trp Gly Pro Pro Pro Ala Gln Gly Ser
 145 150 155 160

Pro Gly Asp Gly Gly Leu Gln Asp Gln Val Gly Ala Trp Gly Leu
 165 170 175

<210> 60
 <211> 34
 <212> PRT

<213> Homo sapiens

<400> 60

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

Pro Gly Gly Gly Ala Ala Trp Ser Ile Gly Ala Ala Pro Phe Ser Gly
 20 25 30

Arg Arg

<210> 61

<211> 445

<212> PRT

<213> Homo sapiens

<400> 61

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

Pro Gly Gly Gly Ala Ala Trp Ser Ile Gly Ala Ala Pro Phe Ser Gly
 20 25 30

Arg Arg Asn Trp Cys Ser Tyr Val Val Thr Arg Thr Ile Ser Cys His
 35 40 45

Val Gln Asn Gly Thr Tyr Leu Gln Arg Val Leu Gln Asn Cys Pro Trp
 50 55 60

Pro Met Ser Cys Pro Gly Ser Ser Tyr Arg Thr Val Val Arg Pro Thr
 65 70 75 80

Tyr Lys Val Met Tyr Lys Ile Val Thr Ala Arg Glu Trp Arg Cys Cys
 85 90 95

Pro Gly His Ser Gly Val Ser Cys Glu Glu Val Ala Ala Ser Ser Ala
 100 105 110

Ser Leu Glu Pro Met Trp Ser Gly Ser Thr Met Arg Arg Met Ala Leu
 115 120 125

Arg Pro Thr Ala Phe Ser Gly Cys Leu Asn Cys Ser Lys Val Ser Glu
 130 135 140

Leu Thr Glu Arg Leu Lys Val Leu Glu Ala Lys Met Thr Met Leu Thr
 145 150 155 160

Val Ile Glu Gln Pro Val Pro Pro Thr Pro Ala Thr Pro Glu Asp Pro
 165 170 175

Ala Pro Leu Trp Gly Pro Pro Pro Ala Gln Gly Ser Pro Gly Asp Gly
 180 185 190

Gly Leu Gln Asp Gln Val Gly Ala Trp Gly Leu Pro Gly Pro Thr Gly
 195 200 205

Pro Lys Gly Asp Ala Gly Ser Arg Gly Pro Met Gly Met Arg Gly Pro
 210 215 220

Pro Gly Pro Gln Gly Pro Pro Gly Ser Pro Gly Arg Ala Gly Ala Val
 225 230 235 240

Gly Thr Pro Gly Glu Arg Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly
 245 250 255

Pro Pro Gly Pro Pro Ala Pro Val Gly Pro Pro His Ala Arg Ile Ser
 260 265 270

Gln His Gly Asp Pro Leu Leu Ser Asn Thr Phe Thr Glu Thr Asn Asn
 275 280 285

His Trp Pro Gln Gly Pro Thr Gly Pro Pro Gly Pro Pro Gly Pro Met
 290 295 300

Gly Pro Pro Gly Pro Pro Gly Pro Thr Gly Val Pro Gly Ser Pro Gly
 305 310 315 320

His Ile Gly Pro Pro Gly Pro Thr Gly Pro Lys Gly Ile Ser Gly His
 325 330 335

Pro Gly Glu Lys Gly Glu Arg Gly Leu Arg Gly Glu Pro Gly Pro Gln
 340 345 350

Gly Ser Ala Gly Gln Arg Gly Glu Pro Gly Pro Lys Gly Asp Pro Gly
 355 360 365

Glu Lys Ser His Trp Ala Pro Ser Leu Gln Ser Phe Leu Gln Gln Gln
 370 375 380

Ala Gln Leu Glu Leu Leu Ala Arg Arg Val Thr Leu Leu Glu Ala Ile
 385 390 395 400

Ile Trp Pro Glu Pro Glu Leu Gly Ser Gly Ala Gly Pro Ala Gly Thr

405

410

415

Gly Thr Pro Ser Leu Leu Arg Gly Lys Arg Gly Gly His Ala Thr Asn
 420 425 430

Tyr Arg Ile Val Ala Pro Arg Ser Arg Asp Glu Arg Gly
 435 440 445

<210> 62

<211> 443

<212> PRT

<213> Homo sapiens

<400> 62

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

Pro Gly Gly Gly Ala Ala Trp Ser Ile Gly Ala Ala Pro Phe Ser Gly
 20 25 30

Arg Arg Asn Trp Cys Ser Tyr Val Val Thr Arg Thr Ile Ser Cys His
 35 40 45

Val Gln Asn Gly Thr Tyr Leu Gln Arg Val Leu Gln Asn Cys Pro Trp
 50 55 60

Pro Met Ser Cys Pro Gly Ser Ser Tyr Arg Thr Val Val Arg Pro Thr
 65 70 75 80

Tyr Lys Val Met Tyr Lys Ile Val Thr Ala Arg Glu Trp Arg Cys Cys
 85 90 95

Pro Gly His Ser Gly Val Ser Cys Glu Glu Val Ala Ala Ser Ser Ala
 100 105 110

Ser Leu Glu Pro Met Trp Ser Gly Ser Thr Met Arg Arg Met Ala Leu
 115 120 125

Arg Pro Thr Ala Phe Ser Gly Cys Leu Asn Cys Ser Lys Val Ser Glu
 130 135 140

Leu Thr Glu Arg Leu Lys Val Leu Glu Ala Lys Met Thr Met Leu Thr
 145 150 155 160

Val Ile Glu Gln Pro Val Pro Pro Thr Pro Ala Thr Pro Glu Asp Pro
 165 170 175

Ala Pro Leu Trp Gly Pro Pro Pro Ala Gln Gly Ser Pro Gly Asp Gly
180 185 190

Gly Leu Gln Asp Gln Val Gly Ala Trp Gly Leu Pro Gly Pro Thr Gly
195 200 205

Pro Lys Gly Asp Ala Gly Ser Arg Gly Pro Met Gly Met Arg Gly Pro
210 215 220

Pro Gly Pro Gln Gly Pro Pro Gly Ser Pro Gly Arg Ala Gly Ala Val
225 230 235 240

Gly Thr Pro Gly Glu Arg Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly
245 250 255

Pro Pro Gly Pro Pro Ala Pro Val Gly Pro Pro His Ala Arg Ile Ser
260 265 270

Gln His Gly Asp Pro Leu Leu Ser Asn Thr Phe Thr Glu Thr Asn Asn
275 280 285

His Trp Pro Gln Gly Pro Thr Gly Pro Pro Gly Pro Pro Gly Pro Met
290 295 300

Gly Pro Pro Gly Pro Pro Gly Pro Thr Gly Val Pro Gly Ser Pro Gly
305 310 315 320

His Ile Gly Pro Pro Gly Pro Thr Gly Pro Lys Gly Ile Ser Gly His
325 330 335

Pro Gly Glu Lys Gly Glu Arg Gly Leu Arg Gly Glu Pro Gly Pro Gln
340 345 350

Gly Ser Ala Gly Gln Arg Gly Glu Pro Gly Pro Lys Gly Asp Pro Gly
355 360 365

Glu Lys Ser His Trp Gly Glu Gly Leu His Gln Leu Arg Glu Ala Leu
370 375 380

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

Tyr Glu Pro Glu Leu Gly Ser Gly Ala Gly Pro Ala Gly Thr Gly Thr
405 410 415

Pro Ser Leu Leu Arg Gly Lys Arg Gly Gly His Ala Thr Asn Tyr Arg
420 425 430

Ile Val Ala Pro Arg Ser Arg Asp Glu Arg Gly
 435 440

<210> 63
 <211> 441
 <212> PRT
 <213> Homo sapiens

<400> 63

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

Pro Gly Gly Gly Ala Ala Trp Ser Ile Gly Ala Ala Pro Phe Ser Gly
 20 25 30

Arg Arg Asn Trp Cys Ser Tyr Val Val Thr Arg Thr Ile Ser Cys His
 35 40 45

Val Gln Asn Gly Thr Tyr Leu Gln Arg Val Leu Gln Asn Cys Pro Trp
 50 55 60

Pro Met Ser Cys Pro Gly Ser Ser Tyr Arg Thr Val Val Arg Pro Thr
 65 70 75 80

Tyr Lys Val Met Tyr Lys Ile Val Thr Ala Arg Glu Trp Arg Cys Cys
 85 90 95

Pro Gly His Ser Gly Val Ser Cys Glu Glu Ala Ser Ser Ala Ser Leu
 100 105 110

Glu Pro Met Trp Ser Gly Ser Thr Met Arg Arg Met Ala Leu Arg Pro
 115 120 125

Thr Ala Phe Ser Gly Cys Leu Asn Cys Ser Lys Val Ser Glu Leu Thr
 130 135 140

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

Glu Gln Pro Val Pro Pro Thr Pro Ala Thr Pro Glu Asp Pro Ala Pro
 165 170 175

Leu Trp Gly Pro Pro Pro Ala Gln Gly Ser Pro Gly Asp Gly Gly Leu
 180 185 190

Gln Asp Gln Val Gly Ala Trp Gly Leu Pro Gly Pro Thr Gly Pro Lys

195

200

205

Gly Asp Ala Gly Ser Arg Gly Pro Met Gly Met Arg Gly Pro Pro Gly
 210 215 220

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

Pro Gly Glu Arg Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro
 245 250 255

Gly Pro Pro Ala Pro Val Gly Pro Pro His Ala Arg Ile Ser Gln His
 260 265 270

Gly Asp Pro Leu Leu Ser Asn Thr Phe Thr Glu Thr Asn Asn His Trp
 275 280 285

Pro Gln Gly Pro Thr Gly Pro Pro Gly Pro Pro Gly Pro Met Gly Pro
 290 295 300

Pro Gly Pro Pro Gly Pro Thr Gly Val Pro Gly Ser Pro Gly His Ile
 305 310 315 320

Gly Pro Pro Gly Pro Thr Gly Pro Lys Gly Ile Ser Gly His Pro Gly
 325 330 335

Glu Lys Gly Glu Arg Gly Leu Arg Gly Glu Pro Gly Pro Gln Gly Ser
 340 345 350

Ala Gly Gln Arg Gly Glu Pro Gly Pro Lys Gly Asp Pro Gly Glu Lys
 355 360 365

Ser His Trp Gly Glu Gly Leu His Gln Leu Arg Glu Ala Leu Lys Ile
 370 375 380

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

Pro Glu Leu Gly Ser Gly Ala Gly Pro Ala Gly Thr Gly Thr Pro Ser
 405 410 415

Leu Leu Arg Gly Lys Arg Gly Gly His Ala Thr Asn Tyr Arg Ile Val
 420 425 430

Ala Pro Arg Ser Arg Asp Glu Arg Gly
 435 440

<210> 64
 <211> 439
 <212> PRT
 <213> Homo sapiens

<400> 64

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

Pro Gly Gly Gly Ala Ala Trp Ser Ile Gly Ala Ala Pro Phe Ser Gly
 20 25 30

Arg Arg Asn Trp Cys Ser Tyr Val Val Thr Arg Thr Ile Ser Cys His
 35 40 45

Val Gln Asn Gly Thr Tyr Leu Gln Arg Val Leu Gln Asn Cys Pro Trp
 50 55 60

Pro Met Ser Cys Pro Gly Ser Arg Thr Val Val Arg Pro Thr Tyr Lys
 65 70 75 80

Val Met Tyr Lys Ile Val Thr Ala Arg Glu Trp Arg Cys Cys Pro Gly
 85 90 95

His Ser Gly Val Ser Cys Glu Glu Ala Ser Ser Ala Ser Leu Glu Pro
 100 105 110

Met Trp Ser Gly Ser Thr Met Arg Arg Met Ala Leu Arg Pro Thr Ala
 115 120 125

Phe Ser Gly Cys Leu Asn Cys Ser Lys Val Ser Glu Leu Thr Glu Arg
 130 135 140

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

Pro Val Pro Pro Thr Pro Ala Thr Pro Glu Asp Pro Ala Pro Leu Trp
 165 170 175

Gly Pro Pro Pro Ala Gln Gly Ser Pro Gly Asp Gly Gly Leu Gln Asp
 180 185 190

Gln Val Gly Ala Trp Gly Leu Pro Gly Pro Thr Gly Pro Lys Gly Asp
 195 200 205

Ala Gly Ser Arg Gly Pro Met Gly Met Arg Gly Pro Pro Gly Pro Gln
 210 215 220

Gly Pro Pro Gly Ser Pro Gly Arg Ala Gly Ala Val Gly Thr Pro Gly
225 230 235 240

Glu Arg Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro
245 250 255

Pro Ala Pro Val Gly Pro Pro His Ala Arg Ile Ser Gln His Gly Asp
260 265 270

Pro Leu Leu Ser Asn Thr Phe Thr Glu Thr Asn Asn His Trp Pro Gln
275 280 285

Gly Pro Thr Gly Pro Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly
290 295 300

Pro Pro Gly Pro Thr Gly Val Pro Gly Ser Pro Gly His Ile Gly Pro
305 310 315 320

Pro Gly Pro Thr Gly Pro Lys Gly Ile Ser Gly His Pro Gly Glu Lys
325 330 335

Gly Glu Arg Gly Leu Arg Gly Glu Pro Gly Pro Gln Gly Ser Ala Gly
340 345 350

Gln Arg Gly Glu Pro Gly Pro Lys Gly Asp Pro Gly Glu Lys Ser His
355 360 365

Trp Gly Glu Gly Leu His Gln Leu Arg Glu Ala Leu Lys Ile Leu Ala
370 375 380

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

Leu Gly Ser Gly Ala Gly Pro Ala Gly Thr Gly Thr Pro Ser Leu Leu
405 410 415

Arg Gly Lys Arg Gly Gly His Ala Thr Asn Tyr Arg Ile Val Ala Pro
420 425 430

Arg Ser Arg Asp Glu Arg Gly
435

<210> 65
<211> 422
<212> PRT
<213> Homo sapiens

<400> 65

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

Pro Gly Gly Gly Ala Ala Trp Ser Ile Gly Ala Ala Pro Phe Ser Gly
 20 25 30

Arg Arg Asn Trp Cys Ser Tyr Val Val Thr Arg Thr Ile Ser Cys His
 35 40 45

Val Gln Asn Gly Thr Tyr Leu Gln Arg Val Leu Gln Asn Cys Pro Trp
 50 55 60

Pro Met Ser Cys Pro Gly Ser Ser Tyr Arg Thr Val Val Arg Pro Thr
 65 70 75 80

Tyr Lys Val Met Tyr Lys Ile Val Thr Ala Arg Glu Trp Arg Cys Cys
 85 90 95

Pro Gly His Ser Gly Val Ser Cys Glu Glu Val Ala Ala Ser Ser Ala
 100 105 110

Ser Leu Glu Pro Met Trp Ser Gly Ser Thr Met Arg Arg Met Ala Leu
 115 120 125

Arg Pro Thr Ala Phe Ser Gly Cys Leu Asn Cys Ser Lys Val Ser Glu
 130 135 140

Leu Thr Glu Arg Leu Lys Val Leu Glu Ala Lys Met Thr Met Leu Thr
 145 150 155 160

Val Ile Glu Gln Pro Val Pro Pro Thr Pro Ala Thr Pro Glu Asp Pro
 165 170 175

Ala Pro Leu Trp Gly Pro Pro Pro Ala Gln Gly Ser Pro Gly Asp Gly
 180 185 190

Gly Leu Gln Asp Gln Val Gly Ala Trp Gly Leu Pro Gly Pro Thr Gly
 195 200 205

Pro Lys Gly Asp Ala Gly Ser Arg Gly Pro Met Gly Met Arg Gly Pro
 210 215 220

Pro Gly Pro Gln Gly Pro Pro Gly Ser Pro Gly Arg Ala Gly Ala Val
 225 230 235 240

Gly Thr Pro Gly Glu Arg Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly
245 250 255

Pro Pro Gly Pro Pro Ala Pro Val Gly Pro Pro His Ala Arg Ile Ser
260 265 270

Gln His Gly Asp Pro Leu Leu Ser Asn Thr Phe Thr Glu Thr Asn Asn
275 280 285

His Trp Pro Gln Gly Pro Thr Gly Pro Pro Gly Pro Pro Gly Pro Met
290 295 300

Gly Pro Pro Gly Pro Pro Gly Pro Thr Gly Val Pro Gly Ser Pro Gly
305 310 315 320

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

Arg Gly Glu Pro Gly Pro Lys Gly Asp Pro Gly Glu Lys Ser His Trp
340 345 350

Gly Glu Gly Leu His Gln Leu Arg Glu Ala Leu Lys Ile Leu Ala Glu
355 360 365

Arg Val Leu Ile Leu Glu Thr Met Ile Gly Leu Tyr Glu Pro Glu Leu
370 375 380

Gly Ser Gly Ala Gly Pro Ala Gly Thr Gly Thr Pro Ser Leu Leu Arg
385 390 395 400

Gly Lys Arg Gly Gly His Ala Thr Asn Tyr Arg Ile Val Ala Pro Arg
405 410 415

Ser Arg Asp Glu Arg Gly
420

<210> 66

<211> 212

<212> PRT

<213> Homo sapiens

<400> 66

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

Pro Gly Gly Gly Ala Ala Trp Ser Ile Gly Ala Ala Pro Phe Ser Gly
20 25 30

Arg Arg Asn Trp Cys Ser Tyr Val Val Thr Arg Thr Ile Ser Cys His
 35 40 45

Val Gln Asn Gly Thr Tyr Leu Gln Arg Val Leu Gln Asn Cys Pro Trp
 50 55 60

Pro Met Ser Cys Pro Gly Ser Ser Tyr Arg Thr Val Val Arg Pro Thr
 65 70 75 80

Tyr Lys Val Met Tyr Lys Ile Val Thr Ala Arg Glu Trp Arg Cys Cys
 85 90 95

Pro Gly His Ser Gly Val Ser Cys Glu Glu Val Ala Ala Ser Ser Ala
 100 105 110

Ser Leu Glu Pro Met Trp Ser Gly Ser Thr Met Arg Arg Met Ala Leu
 115 120 125

Arg Pro Thr Ala Phe Ser Gly Cys Leu Asn Cys Ser Lys Val Ser Glu
 130 135 140

Leu Thr Glu Arg Leu Lys Val Leu Glu Ala Lys Met Thr Met Leu Thr
 145 150 155 160

Val Ile Glu Gln Pro Val Pro Pro Thr Pro Ala Thr Pro Glu Asp Pro
 165 170 175

Ala Pro Leu Trp Gly Pro Pro Pro Ala Gln Gly Ser Pro Gly Asp Gly
 180 185 190

Gly Leu Gln Gly Asp Pro Leu Leu Ser Asn Thr Phe Thr Glu Thr Asn
 195 200 205

Asn His Trp Pro
 210

<210> 67

<211> 175

<212> PRT

<213> Homo sapiens

<400> 67

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

Pro Gly Gly Gly Ala Ala Trp Ser Ile Gly Ala Ala Pro Phe Ser Gly

Gly Ser Pro Gly Asp Gly Gly Leu Gln Gly Leu Pro Gly Ala Ile Glu
35 40 45

Ser Val Arg Val Pro Leu Leu Pro Arg Asn Asp Gln Val Gly Ala Trp
 50 55 60

Gly Leu Pro Gly Pro Thr Gly Pro Lys Gly Asp Ala Gly Ser Arg Gly
 65 70 75 80

Pro Met Gly Met Arg Gly Pro Pro Gly Pro Gln Gly Pro Pro Gly Ser
 85 90 95

Pro Gly Arg Ala Gly Ala Val Gly Thr Pro Gly Glu Arg Gly Pro Pro
 100 105 110

Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Ala Pro Val Gly
 115 120 125

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

Thr Phe Thr Glu Thr Asn Asn His Trp Pro Gln Gly Pro Thr Gly Pro
 145 150 155 160

Pro Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Pro Pro Gly Pro Thr
 165 170 175

Gly Val Pro Gly Ser Pro Gly His Ile Gly Pro Pro Gly Pro Thr Gly
 180 185 190

Pro Lys Gly Ile Ser Gly His Pro Gly Glu Lys Gly Glu Arg Gly Leu
 195 200 205

Arg Gly Glu Pro Gly Pro Gln Gly Ser Ala Gly Gln Arg Gly Glu Pro
 210 215 220

Gly Pro Lys Gly Asp Pro Gly Glu Lys Ser His Trp
 225 230 235

<210> 69

<211> 305

<212> PRT

<213> Homo sapiens

<400> 69

Met Thr Met Leu Thr Val Ile Glu Gln Pro Val Pro Pro Thr Pro Ala
 1 5 10 15

Thr Pro Glu Asp Pro Ala Pro Leu Trp Gly Pro Pro Pro Ala Gln Gly

20

25

30

Ser Pro Gly Asp Gly Gly Leu Gln Gly Leu Pro Gly Ala Ile Glu Ser
 35 40 45

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

Leu Pro Gly Pro Thr Gly Pro Lys Gly Asp Ala Gly Ser Arg Gly Pro
 65 70 75 80

Met Gly Met Arg Gly Pro Pro Gly Pro Gln Gly Pro Pro Gly Ser Pro
 85 90 95

Gly Arg Ala Gly Ala Val Gly Thr Pro Gly Glu Arg Gly Pro Pro Gly
 100 105 110

Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Ala Pro Val Gly Pro
 115 120 125

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

Phe Thr Glu Thr Asn Asn His Trp Pro Gln Gly Pro Thr Gly Pro Pro
 145 150 155 160

Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Pro Pro Gly Pro Thr Gly
 165 170 175

Val Pro Gly Ser Pro Gly His Ile Gly Pro Pro Gly Pro Thr Gly Pro
 180 185 190

Lys Gly Ile Ser Gly His Pro Gly Glu Lys Gly Glu Arg Gly Leu Arg
 195 200 205

Gly Glu Pro Gly Pro Gln Gly Ser Ala Gly Gln Arg Gly Glu Pro Gly
 210 215 220

Pro Lys Gly Asp Pro Gly Glu Lys Ser His Trp Gly Glu Gly Leu His
 225 230 235 240

Gln Leu Arg Glu Ala Leu Lys Ile Leu Ala Glu Arg Val Leu Ile Leu
 245 250 255

Glu Thr Met Ile Gly Leu Tyr Glu Pro Glu Leu Gly Ser Gly Ala Gly
 260 265 270

Pro Ala Gly Thr Gly Thr Pro Ser Leu Leu Arg Gly Lys Arg Gly Gly
 275 280 285

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

Gly
 305

<210> 70
 <211> 226
 <212> PRT
 <213> Homo sapiens

<400> 70

Met Lys Ser Ser Leu Met Phe Thr Asp Pro His Ser Leu Gly Thr Tyr
 1 5 10 15

Thr Tyr Gln Ala Leu Ser Trp Ala Leu Gly Gly Val Arg His Val Pro
 20 25 30

Ala Leu Leu Glu Leu Pro Cys Cys Trp Glu Gln Gly Trp Ala Glu Glu
 35 40 45

Lys Gln Gln Cys Leu Pro His Val Thr Arg Val Ser Met Arg Gly Phe
 50 55 60

Gly Gly Leu Gly Ala Pro Arg Lys Glu Asp Ser Ala Trp Thr Arg Trp
 65 70 75 80

Arg Thr Arg Cys Cys Ala His Pro Pro Val Arg Leu Pro Gly Ser Leu
 85 90 95

Gly Leu Trp Thr Pro Gly Pro Ser Leu Met Pro Thr Ala Pro Gly Cys
 100 105 110

Leu Val Leu Ser Leu Lys Ala Thr Leu Gly Leu Leu Ala Ser Cys Ile
 115 120 125

Pro Thr Asn Pro Cys Asp Ser Ile Ala Gly Pro Gln Gly Pro Pro Gly
 130 135 140

Ser Pro Gly Arg Ala Gly Ala Val Gly Thr Pro Gly Glu Arg Gly Pro
 145 150 155 160

Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Ala Pro Val
 165 170 175

Gly Pro Pro His Ala Arg Ile Ser Gln His Gly Glu Ser Pro Trp Asp
 180 185 190

Pro Ser Arg Trp Arg Trp Gly Trp Ser Ser His Gln His Ser Ala Arg
 195 200 205

Tyr His Leu Pro Arg Ala Phe Cys Val Pro Ala Leu Leu Thr Ile Gly
 210 215 220

His Met
 225

<210> 71
 <211> 2031
 <212> DNA
 <213> Homo sapiens

<400> 71
 gggctccgcg cgtccggggc ggctggcggc gcgggcaggc aggcggggag gacaggctgg 60
 gggcgggcgac cgcgaggggc cgcgcgcgga gggcgcctgg tgcagcatgg gcggcccgcg 120
 ggcttggggc ctgctctgcc tcgggctcct gctcccggga ggcggcgctg cgtggagcat 180
 cggggcagct ccgttctccg gacgcaggaa ctggtgctcc tatgtggtga cccgcacat 240
 ctcatgccat gtgcagaatg gcacctacct tcagcgagtg ctgcagaact gcccctggcc 300
 catgagctgt ccggggagca gaactgtggt gagaccaca tacaaggta tgtacaagat 360
 agtgaccgcc ccttcctctg cctccttgga gcccatgtgg tcgggcagta ccatgcggcg 420
 gatggcgctt cggcccacag ccttctcagg ttgtctcaac tgcagcaaag tgtcagagct 480
 gacagagcgg ctgaagggtg tggaggccaa gatgaccatg ctgactgtca tagagcagcc 540
 agtacctcca acaccagcta cccctgagga ccctgccccg ctctggggtc cccctcctgc 600
 ccagggcagc cccggagatg gaggcctcca ggaccaagtc ggtgcttggg ggcttcccgg 660
 gccaccggc cccaaggag atgccggcag tcggggccca atggggatga gaggcccacc 720
 aggtccacag ggccccccag ggagccctgg ccgggctgga gctgtgggca cccctggaga 780
 gaggggacct cctgggccac cagggcctcc tggccccctt gggccccag cccctgttgg 840
 gccaccccat gcccggatct cccagcatgg agaccattg ctgtccaaca ctttactga 900
 gaccaacaac cactggcccc agggaccac tgggcctcca ggccctccag ggcccatggg 960
 tccccctggg cctcctggcc ccacaggtgt ccctgggagt cctggtcaca taggaccccc 1020
 agggcccact ggacccaaag gaatctctgg ccaccagga gagaagggcg agagaggact 1080
 gcgtggggag cctggcccc caggctctgc tgggcagcgg ggggaacctg gccctaaggg 1140

agaccctggt gagaagagcc actgggggga ggggttgac cagctacgc aggctttgaa 1200
 gatttttagct gagagggttt taatcttgga aacaatgatt gggctctatg aaccagagct 1260
 ggggtctggg gcgggccctg ccggcacagg cccccccagc ctcttcggg gcaagagggg 1320
 cggacatgca accaactacc ggatcgtggc cccagaggc cgggacgaga gaggtgagg 1380
 gtggtggcgg cccctgaggc agaccaggcc aggcttcccc tcctacctgg actcggccag 1440
 ctgcctccag ggaccgccc tccataattta ttaatgtcct cagggtccct tctgccatct 1500
 aggccctagg ggtaagcagg tctcagtcct ggcacatgc acatgtctga ggctgagcaa 1560
 gggctgagag gagaggcttg ggcctcagtt tccctctgtg aagtgggggg aggcaggcct 1620
 tcaaggaggg atagaggtag aaggcttcgt ctcatctgct gtctgagcat ccaggcccaa 1680
 aggcaactgag ggagtcagga gctggggctc ggcacatgca gagatgacag ggcagggggc 1740
 agtcttcctc cccctccccg accaaacctc ggggagccct cctgtgcccc tcctccttg 1800
 ttgtccagt ctgggctccc cccccgagg tcaggctgcc caatcctctg actggatcac 1860
 cgggggcttc ttgcctcagt tcttcctct gagccccag gccctccgc atctcaggtt 1920
 ggggatgggg acatggagag gaaggggccc cctactcctg caaatgcttg tgacagatgc 1980
 caggaggtag atgtgtgctg gccaaataaag gccctacct gattccccgc a 2031

<210> 72

<211> 769

<212> DNA

<213> Homo sapiens

<400> 72

cgccctccgg ccgcggagct ggaaaccggg ctccgcgcgt ccggggcggc tggcggcgcg 60
 ggcaggcagg cggggaggac aggctggggg cggcgaccgc gaggggccgc gcgcggaggg 120
 cgcttggtgc agcatgggcg gccgcgggc ttgggcgctg ctctgcctcg ggctcctgct 180
 cccgggaggc ggcgctgcgt ggagcatcgg ggcagctccg ttctccggac gcaggaactg 240
 gtgctcctat gtggtgacct gcaccatctc atgccatgtg cagaatggca cctaccttca 300
 gcgagtgtg cagaactgcc cctggcccat gagctgtccg gggagcagct acagaactgt 360
 ggtgagacct acatacaagg tgatgtacaa gatagtgacc gcccgtagt ggaggtgctg 420
 ccctgggcac tcaggagtga gctgcgagga agttgcagct tcctctgcct ccttgagacc 480
 catgtggtcg ggcagtacca tgcggcggat ggcgcttcgg ccacagcct tctcaggttg 540
 tctcaactgc agcaaagtgt cagagctgac agagcggctg aaggtgctgg aggccaagat 600
 gaccatgctg actgtcatag agcagccagt acctccaaca ccagctacct ctgaggacct 660
 tgccccgctc tgggggtccc ctctgcca gggcagcccc ggagatggag gcctccaggg 720
 agaccattg ctgtccaaca ctttactga gaccaacaac cactggccc 769

<210> 73
 <211> 641
 <212> DNA
 <213> Homo sapiens

<400> 73
 gctggaaacc gggctccgcg cgtccggggc ggctggcggc gcgggcaggc aggcggggag 60
 gacaggctgg gggcgggcgac cgcgaggggc cgcgcgcgga gggcgcttgg tgcagcatgg 120
 gcggccccgcg ggcttggggc ctgctctgcc tcgggctcct gctccccgga ggcggcgctg 180
 cgtggagcat cggggcagct ccgttctccg gacgcaggaa ctggtgctcc tatgtggtga 240
 cccgcacccat ctcatgccat gtgcagaatg gcacctacct tcagcgagtg ctgcagaact 300
 gcccttggcc catgagctgt ccgggggagca gctacagaac tgtggtgaga cccacataca 360
 aggtgatgta caagatagtg accgcccgtg agtggaggtg ctgccctggg cactcaggag 420
 tgagctgcga ggaaggttgt ctcaactgca gcaaagtgtc agagctgaca gagcggctga 480
 aggtgctgga ggccaagatg accatgctga ctgtcataga gcagccagta cctccaacac 540
 cagctacccc tgaggaccct gccccgtctt ggggtcccc tcctgcccag ggcagccccg 600
 gagatggagg cctccaggac caagtcggtg cttgggggct t 641

<210> 74
 <211> 482
 <212> DNA
 <213> Homo sapiens

<400> 74
 cggcgcgggc aggcaggcgg ggaggacagg ctggggggcg cgaccgcgag gggccgcgcg 60
 cggagggcgc ctggtgcagc atgggcggcc cgcgggcttg ggcgctgctc tgcctcgggc 120
 tcctgctccc gggaggcggc gctgcgtgga gcatcggggc agtccggtc tccggacgca 180
 gatgaccatg ctgactgtca tagagcagcc agtacctcca acaccagcta cccctgagga 240
 ccctgccccg ctctggggtc cccctcctgc ccagggcagc cccggagatg gaggcctcca 300
 ggaccaagtc ggtgcttggg ggcttcccgg gccaccggc cccaaggag atgccggcag 360
 tcggggccca atggggatga gagggccacc aggtccacag ggccccccag ggagccctgg 420
 ccgggctgga gctgtgggca cccctggaga gaggggacct cctggggcac cagggcctcc 480
 tg 482

<210> 75
 <211> 2066
 <212> DNA
 <213> Homo sapiens

<400> 75

cgggcaggca	ggcggggagg	acaggctggg	ggcggcgacc	gcgagggggc	gcgcgcggag	60
ggcgcttggg	gcagcatggg	cggcccgagg	gcttggggcg	tgctctgcct	cggtctcttg	120
ctcccgagg	gcggcgctgc	gtggagcatc	ggggcagctc	cggtctccgg	acgcaggaac	180
tggtgctcct	atgtggtgac	ccgcaccatc	tcatgccatg	tgagaaatgg	cacctacctt	240
cagcgagtgc	tgagaaactg	cccctggccc	atgagctgtc	cggggagcag	ctacagaaact	300
gtggtgagac	ccacatacaa	ggtgatgtac	aagatagtga	ccggccgtga	gtggaggtgc	360
tgccctgggc	actcaggagt	gagctgcgag	gaagttgcag	cttcctctgc	ctccttggag	420
cccatgtggg	cgggcagtag	catgcggcgg	atggcgcttc	ggccacagc	cttctcaggt	480
tgtctcaact	gcagcaaagt	gtcagagctg	acagagcggc	tgaaggtgct	ggaggccaag	540
atgaccatgc	tgactgtcat	agagcagcca	gtacctccaa	caccagctac	ccctgaggac	600
cctgccccgc	tctgggggtc	ccctcctgcc	cagggcagcc	ccggagatgg	aggcctccag	660
gaccaagtcg	gtgcttgggg	gcttccccgg	cccaccggcc	ccaagggaga	tgccggcagt	720
cgggggccaa	tgggggatgag	aggcccacca	ggtccacagg	gccccccagg	gagccctggc	780
cgggctggag	ctgtgggcac	ccctggagag	aggggacctc	ctggggccacc	agggcctcct	840
ggccccctg	ggcccccagc	ccctgttggg	ccaccccatg	cccggatctc	ccagcatgga	900
gacccattgc	tgtccaacac	cttcactgag	accaacaacc	actggcccca	gggaccactt	960
gggcctccag	gccctccagg	gcccattggg	cccctggggc	ctcctggccc	cacaggtgtc	1020
cctgggagtc	ctggtcacat	aggaccccca	ggccccactg	gacccaaagg	aatctctggc	1080
caccagggag	agaaggggcg	gagaggactg	cgtaggggag	ctggccccca	aggctctgct	1140
gggcagcggg	gggaacctgg	ccctaaggga	gaccctgggt	agaagagcca	ctgggctcct	1200
agcttacaga	gcttcttgca	gcagcaggct	cagctggagc	tcctggccag	acgggtcacc	1260
ctcctggaag	ccatcatctg	gccagaacca	gagctggggg	ctggggcggg	ccctgccggc	1320
acaggcacc	ccagcctcct	tcggggcaag	aggggcggac	atgcaaccaa	ctaccggatc	1380
gtggccccca	ggagccggga	cgagagaggc	tgagggtggg	ggcggcccct	gaggcagacc	1440
aggccaggct	ccccctccta	cctggactcg	gccagctgcc	tccagggacc	gcccgcccat	1500
atttattaat	gtcctcaggg	tcccttctgc	catctaggcc	ttaggggtaa	gcaggtctca	1560
gtcctggcac	catgcacatg	tctgaggctg	agcaagggct	gagaggagag	gcttgggcct	1620
cagtttccct	ctgtgaagtg	gggggaggca	ggccttcaag	gagggataga	ggtacaaggc	1680
ttcgtctcat	ctgctgtctg	agcatccagg	cccaaaggca	ctgagggagt	caggagctgg	1740
ggctcggcac	atgcagagat	gacagggcag	ggggcagtct	tcctccccct	ccccgaccaa	1800
acctcgggga	gccctcctgt	gccctccctt	ccttggtgtc	cagtgtgggg	ctccccaccc	1860

cgaggtcagg ctgcccgaatc ctctgactgg atcaccgggg gcttcttgcc tcagttcttc 1920
 cctctgagcc cccaggccct cccgcatctc aggttgggga tggggacatg gagaggaagg 1980
 ggccgcctac tcctgcaaata gcttgtgaca gatgccagga ggtagatgtg tgctggccaa 2040
 taaaggcccc tacctgattc cccgca 2066

<210> 76
 <211> 2060
 <212> DNA
 <213> Homo sapiens

<400> 76
 cgggcaggca ggcggggagg acaggctggg ggcggcgacc gcgaggggccc gcgcgcggag 60
 ggcgcctggg gcagcatggg cggcccgcgg gcttggggcg tgctctgcct cgggctcctg 120
 ctcccgggag gcggcgctgc gtggagcatc ggggcagctc cgttctccgg acgcaggaac 180
 tgggtgctcct atgtggtgac ccgcaccatc tcatgccatg tgcagaatgg cacctacctt 240
 cagcgagtgc tgcagaactg cccctggccc atgagctgtc cggggagcag ctacagaact 300
 gtggtgagac ccacatacaa ggtgatgtac aagatagtga ccgcccgtga gtggaggtgc 360
 tgccctgggc actcaggagt gagctgcgag gaagttgcag cttcctctgc ctcttggag 420
 cccatgtggg cgggcagtag catgcggcgg atggcgcttc ggcccacagc cttctcaggt 480
 tgtctcaact gcagcaaagt gtcagagctg acagagcggc tgaaggtgct ggaggccaag 540
 atgaccatgc tgactgtcat agagcagcca gtacctcaa caccagctac ccctgaggac 600
 cctgccccgc tctgggggtcc cctcctgcc cagggcagcc ccggagatgg aggctccag 660
 gaccaagtgc gtgcttgggg gcttcccggg cccaccggcc ccaagggaga tgccggcagt 720
 cggggcccaa tggggatgag aggccacca ggtccacagg gccccccagg gagccctggc 780
 cgggctggag ctgtgggcac ccctggagag aggggacctc ctggggccacc agggcctcct 840
 ggccccctg ggccccagc cctgttggg ccaccccatg cccggatctc ccagcatgga 900
 gaccattgc tgtccaacac cttactgag accaacaacc actggcccca gggaccact 960
 gggcctccag gccctccagg gcccatgggt cccctgggc ctcttgccc cacaggtgtc 1020
 cctgggagtc ctggtcacat aggaccccca ggccccactg gacccaaagg aatctctggc 1080
 caccaggag agaagggcga gagaggactg cgtggggagc ctggcccca aggctctgct 1140
 gggcagcggg gggaacctg ccctaaggga gaccctggg agaagagcca ctggggggag 1200
 gggttgcacc agctacgcga ggctttgaag attttagctg agagggtttt aatcttggaa 1260
 acaatgattg ggctctatga accagagctg gggctctggg cgggccctgc cggcacaggc 1320
 acccccagcc tccttcgggg caagaggggc ggacatgcaa ccaactaccg gatcgtggcc 1380
 cccaggagcc gggacgagag aggctgaggg tgggtggcggc ccctgaggca gaccaggcca 1440

```

ggcttccccct cctacctgga ctcggccagc tgcctccagg gaccgcccgt ccatatztat 1500
taatgtcctc aggggtccctt ctgccatcta ggccttaggg gtaagcaggt ctcagtcctg 1560
gcaccatgca catgtctgag gctgagcaag ggctgagagg agaggcttgg gcctcagttt 1620
ccctctgtga agtgggggga ggcaggcctt caaggaggga tagaggtaga aggcttcgtc 1680
tcatctgctg tctgagcatc caggcccaaa ggcactgagg gagtcaggag ctggggctcg 1740
gcacatgcag agatgacagg gcagggggca gtcttcctcc ccctccccga ccaaacctcg 1800
gggagccctc ctgtgccctt ccctccttgt tgtccagtgc tgggctcccc accccgaggt 1860
caggctgccc aatcctctga ctggatcacc gggggcttct tgcctcagtt cttccctctg 1920
agcccccagg ccctcccga tctcaggttg gggatgggga catggagagg aaggggccgc 1980
ctactcctgc aaatgcttgt gacagatgcc aggaggtaga tgtgtgctgg ccaataaagg 2040
cccctacctg attccccgca 2060

```

```

<210> 77
<211> 2054
<212> DNA
<213> Homo sapiens

```

```

<400> 77
cgggcaggca ggcggggagg acaggctggg ggcggcgacc gcgagggggc gcgcgcggag 60
ggcgcctggt gcagcatggg cggcccgcgg gcttggggcg tgctctgcct cgggctcctg 120
ctcccgggag gcggcgctgc gtggagcatc ggggcagctc cgttctccgg acgcaggaac 180
tggtgctcct atgtggtgac ccgcaccatc tcatgccatg tgcagaatgg cacctacctt 240
cagcgagtgc tgcagaactg cccctggccc atgagctgtc cggggagcag ctacagaact 300
gtggtgagac ccacatacaa ggtgatgtac aagatagtga ccgcccgtga gtggaggtgc 360
tgccctgggc actcaggagt gagctgcgag gaagcttctt ctgcctcctt ggagcccatg 420
tggtcgggca gtaccatgcg gcggatggcg cttcggccca cagccttctc aggttgtctc 480
aactgcagca aagtgtcaga gctgacagag cggctgaagg tgctggaggc caagatgacc 540
atgctgactg tcatagagca gccagtacct ccaacaccag ctaccctga ggacctgcc 600
ccgctctggg gtccccctcc tgcccagggc agccccggag atggaggcct ccaggaccaa 660
gtcggtgctt gggggcttcc cgggcccacc ggcccgaagg gagatgccgg cagtcggggc 720
ccaatgggga tgagaggccc accagggtcca caggggcccc cagggagccc tggccgggct 780
ggagctgtgg gcacccttgg agagagggga cctcctgggc caccagggcc tcttggcccc 840
cctgggcccc cagcccctgt tgggccacc catgcccga tctcccagca tggagacca 900
ttgctgtcca acaccttcac tgagaccaac aaccactggc cccagggacc cactgggcct 960

```


ccaggccctc cagggcccat gggccccctt gggcctcctg gccccacagg tgtccctggg 1020
 agtcctgggtc acataggacc cccaggcccc actggaccca aaggaatctc tggccacca 1080
 ggagagaagg gcgagagagg actgctggg gagcctggcc cccaaggctc tgctgggcag 1140
 cggggggaac ctggccctaa gggagaccct ggtgagaaga gccactgggg ggaggggttg 1200
 caccagctac gcgaggcttt gaagatttta gctgagaggg ttttaatctt ggaaacaatg 1260
 attgggctct atgaaccaga gctgggggtct ggggcgggcc ctgccggcac aggcaccccc 1320
 agcctccttc ggggcaagag gggcgacat gcaaccaact accggatcgt ggcccccagg 1380
 agccgggacg agagaggctg aggggtggtg cggcccctga ggagaccag gccaggcttc 1440
 cctcctacc tggactcggc cagctgcctc cagggaccgc ccgtccatat ttattaatgt 1500
 cctcagggtc cttctgccca tctaggcctt aggggtaagc aggtctcagt cctggcacca 1560
 tgcacatgtc tgaggctgag caagggtga gaggagaggc ttgggcctca gtttcctct 1620
 gtgaagtggg gggaggcagg cttcaagga gggatagagg tacaaggctt cgtctcatct 1680
 gctgtctgag catccaggcc caaaggcact gaggagtgca ggagctgggg ctcggcacat 1740
 gcagagatga cagggcaggg ggcagtcttc ctccccctcc ccgaccaaac ctcggggagc 1800
 cctcctgtgc cctccctcc ttgttgcca gtgctgggct cccaccccg aggtcaggct 1860
 gcccaatcct ctgactggat caccgggggc ttcttgctc agttcttccc tctgagcccc 1920
 caggccctcc cgcactcag gttggggatg gggacatga gaggaagggg ccgcctactc 1980
 ctgcaaatgc ttgtgacaga tgccaggagg tagatgtgtg ctggccaata aaggccccta 2040
 cctgattccc cgca 2054

<210> 78
 <211> 2048
 <212> DNA
 <213> Homo sapiens

<400> 78
 cgggcaggca ggcggggagg acaggctggg ggcggcgacc gcgagggggc ggcgcgggag 60
 ggcgcctggt gcagcatggg cggcccgcg gcttgggcgc tgctctgcct cgggtcctg 120
 ctcccgggag ggcgcgctgc gtggagcatc ggggcagctc cgttctccg acgcaggaac 180
 tggtgctcct atgtggtgac ccgcaccatc tcatgccatg tgcagaatgg cacctacctt 240
 cagcgagtgc tgcagaactg cccctggccc atgagctgtc cggggagcag aactgtgggtg 300
 agaccacat acaaggatg gtacaagata gtgaccgccc gtgagtggag gtgctgcct 360
 gggcactcag gagtgagctg cgaggaagct tcctctgcct ccttgagacc catgtggtcg 420
 ggcagtacca tgcggcgat ggcgcttcg cccacagcct tctcagggtg tctcaactgc 480
 agcaaagtgt cagagctgac agagcggctg aagggtgctg agccaagat gaccatgctg 540

```

actgtcatag agcagccagt acctccaaca ccagctaccc ctgaggaccc tgccccgctc      600
tggggtcccc ctctgcca gggcagcccc ggagatggag gcctccagga ccaagtcggt      660
gcttgggggc ttccccgggc caccggcccc aaggagatg ccggcagtcg gggcccaatg      720
gggatgagag gcccaccagg tccacagggc ccccaggga gccctggccg ggctggagct      780
gtgggcaccc ctggagagag gggacctcct gggccaccag ggctcctgg cccccctggg      840
ccccagccc ctgttgggcc accccatgcc cggatctccc agcatggaga cccattgctg      900
tccaacacct tcaactgagac caacaaccac tggccccagg gacctactgg gcctccaggc      960
cctccagggc ccatgggtcc ccctgggcct cctggcccca caggtgtccc tgggagtcct     1020
ggtcacatag gacccccagg cccactgga cccaaaggaa tctctggcca ccaggagag      1080
aagggcgaga gaggactgcg tggggagcct ggcccccaag gctctgctgg gcagcggggg      1140
gaacctggcc ctaagggaga ccctggtgag aagagccact ggggggaggg gttgcaccag      1200
ctacgcgagg ctttgaagat tttagctgag agggttttaa tcttgaaaac aatgattggg      1260
ctctatgaac cagagctggg gtctggggcg ggccctgccg gcacaggcac cccagcctc      1320
cttcggggca agaggggcgg acatgcaacc aactaccgga tcgtggcccc caggagccgg      1380
gacgagagag gctgaggggtg gtggcggccc ctgaggcaga ccaggccagg cttccctcc      1440
tacctggact cggccagctg cctccaggga ccgcccgtcc atatttatta atgtcctcag      1500
ggtccttct gccatctagg ccttaggggt aagcaggctc cagtcctggc accatgcaca      1560
tgtctgaggc tgagcaaggg ctgagaggag aggcttgggc ctcagtttcc ctctgtgaag      1620
tggggggagg caggccttca aggagggata gaggtacaag gcttcgtctc atctgctgtc      1680
tgagcatcca ggcccaaagg cactgaggga gtcaggagct ggggctcggc acatgcagag      1740
atgacagggc agggggcagt cttcctcccc ctccccgacc aaacctcggg gagccctcct      1800
gtgccccctc ctcttgttg tccagtgtg ggctccccac cccgaggta ggctgcccac      1860
tcctctgact ggatcacccg gggcttcttg cctcagttct tccctctgag ccccaggcc      1920
ctccgcac tcaggttggg gatggggaca tggagaggaa ggggccgcct actcctgcaa      1980
atgcttgtga cagatgccag gaggtagatg tgtgctggcc aataaaggcc cctacctgat      2040
tccccgca                                         2048

```

<210> 79

<211> 1997

<212> DNA

<213> Homo sapiens

<400> 79

```

cgggcaggca ggcggggagg acaggctggg ggcggcgacc gcgaggggcc gcgcgcggag      60

```

ggcgccctggg	gcagcatggg	cgccccgcgg	gcttggggcg	tgctctgcct	cggtctcctg	120
ctccccgggag	gcggcgctgc	gtggagcatc	ggggcagctc	cgttctccgg	acgcaggaac	180
tggtgctcct	atgtggtgac	ccgcaccatc	tcatgccatg	tgcagaatgg	cacctacctt	240
cagcgagtgc	tgcagaactg	cccctggccc	atgagctgtc	cggggagcag	ctacagaact	300
gtggtgagac	ccacatacaa	ggtgatgtac	aagatagtga	ccgcccgtga	gtggaggtgc	360
tgccctgggc	actcaggagt	gagctgcgag	gaagttgcag	cttcctctgc	ctccttggag	420
cccatgtggt	cgggcagtac	catgcggcgg	atggcgcttc	ggcccacagc	cttctcaggt	480
tgtctcaact	gcagcaaagt	gtcagagctg	acagagcggc	tgaaggtgct	ggaggccaag	540
atgaccatgc	tgactgtcat	agagcagcca	gtacctcaa	caccagctac	ccctgaggac	600
cctgccccgc	tctgggggtcc	ccctcctgcc	cagggcagcc	ccggagatgg	aggcctccag	660
gaccaagtgc	gtgcttgggg	gcttccccgg	cccaccggcc	ccaagggaga	tgccggcagt	720
cggggcccga	tggggatgag	aggcccacca	gtccacagg	gccccccagg	gagccctggc	780
cgggctggag	ctgtgggcac	ccctggagag	aggggacctc	ctggggcacc	agggcctcct	840
ggccccccctg	ggcccccagc	ccctgttggg	ccaccccatg	cccggatctc	ccagcatgga	900
gacccattgc	tgtccaacac	cttcactgag	accaacaacc	actggcccca	gggaccact	960
gggcctccag	gccctccagg	gcccattggg	ccccctgggc	ctcctggccc	cacaggtgtc	1020
cctgggagtc	ctggtcacat	aggactgcgt	ggggagcctg	gcccccaagg	ctctgctggg	1080
cagcgggggg	aacctggccc	taaggagagc	cctggtgaga	agagccactg	gggggagggg	1140
ttgcaccagc	tacgcgaggc	tttgaagatt	ttagctgaga	gggttttaat	cttggaacaa	1200
atgattgggc	tctatgaacc	agagctgggg	tctggggcgg	gccctgccgg	cacaggcacc	1260
cccagcctcc	ttcggggcaa	gaggggcgga	catgcaacca	actaccgat	cgtggccccc	1320
aggagccggg	acgagagagg	ctgaggggtg	tggcggcccc	tgaggcagac	caggccaggc	1380
ttccccctcct	acctggactc	ggccagctgc	ctccaggggc	cgcccgcca	tatttattaa	1440
tgtcctcagg	gtcccttctg	ccatctaggc	cttaggggta	agcaggtctc	agtcttgga	1500
ccatgcacat	gtctgaggct	gagcaagggc	tgagaggaga	ggcttggggc	tcagtttccc	1560
tctgtgaagt	ggggggaggc	aggccttcaa	ggagggatag	aggtacaagg	cttcgtctca	1620
tctgtgtgt	gagcatccag	gccccaaagg	actgaggggg	tcaggagctg	gggctcggca	1680
catgcagaga	tgacagggca	gggggcagtc	ttcctcccc	tccccgacca	aacctcgggg	1740
agccctcctg	tgccctccc	tccttgttgt	ccagtgtctg	gctccccacc	ccgaggtcag	1800
gctgcccgaat	cctctgactg	gatcaccggg	ggcttcttgc	ctcagttctt	ccctctgagc	1860
ccccaggccc	tcccgcattct	caggttgggg	atggggacat	ggagagggaag	gggccgccta	1920

ctcctgcaaa tgcttgtgac agatgccagg aggtagatgt gtgctggcca ataaaggccc 1980
ctacctgatt ccccgca 1997

<210> 80
<211> 1823
<212> DNA
<213> Homo sapiens

<400> 80
cgggcaggca ggcggggagg acaggctggg ggcggcgacc gcgagggggcc gcgcgcggag 60
ggcgccctggg gcagcatggg cggcccgcg gcttggggcg tgctctgcct cgggctcctg 120
ctcccgggag gcggcgctgc gtggagcatc ggggcagctc cgttctccgg acgcaggaac 180
tggtgctcct atgtggtgac ccgcaccatc tcatgccatg tgcagaatgg cacctacctt 240
cagcgagtgc tgcagaactg cccctggccc atgagctgtc cggggagcag ctacagaact 300
gtggtgagac ccacatacaa ggtgatgtac aagatagtga ccgcccgtga gtggaggtgc 360
tgccctgggc actcaggagt gagctgcgag gaagttgcag cttcctctgc ctccttgag 420
cccatgtggg cgggcagtag catgcggcgg atggcgcttc ggcccacagc cttctcaggt 480
tgtctcaact gcagcaaagt gtcagagctg acagagcggc tgaagggtgct ggaggccaag 540
atgaccatgc tgactgtcat agagcagcca gtacctcaa caccagctac ccctgaggac 600
cctgccccgc tctgggggtcc ccctcctgcc cagggcagcc ccggagatgg aggctccag 660
ggagacccat tgctgtccaa caccttact gagaccaaca accactggcc ccagggaccc 720
actgggcctc caggccctcc agggcccatg ggtccccctg ggccctcctg cccacaggt 780
gtccctggga gtcctgggtca cataggaccc ccaggcccca ctggacccaa aggaatctct 840
ggccacccag gagagaaggg cgagagagga ctgcgtgggg agcctggccc ccaaggctct 900
gctgggcagc ggggggaacc tggccctaag ggagaccctg gtgagaagag cactggggg 960
gaggggttgc accagctacg cgaggctttg aagattttag ctgagagggt tttaatcttg 1020
gaaacaatga ttgggtctta tgaaccagag ctgggggtctg gggcgggccc tgccggcaca 1080
ggcaccacca gcctccttcg gggcaagagg ggcggacatg caaccaacta ccggatcgtg 1140
gccccaggga gccgggacga gagaggctga ggggtggtggc ggcccctgag gcagaccagg 1200
ccaggcttcc cctcctacct ggactcggcc agctgcctcc agggaccgcc cgtccatatt 1260
tattaatgtc ctcagggtcc cttctgccat ctaggcctta ggggtaagca ggtctcagtc 1320
ctggcaccat gcacatgtct gaggtgagc aagggtgag aggagaggct tgggcctcag 1380
tttccctctg tgaagtgggg ggaggcaggc cttcaaggag ggatagaggt acaaggcttc 1440
gtctcatctg ctgtctgagc atccaggccc aaaggcactg agggagtcag gagctggggc 1500
tcggcacatg cagagatgac agggcagggg gcagtcttcc tccccctccc cgaccaaacc 1560

tcggggagacc ctctgtgcc cctccctcct tgttgtccag tgctgggctc cccaccccga 1620
 ggtcaggctg cccaatcctc tgactggatc accggggggt tcttgccctca gttcttcctt 1680
 ctgagcccc aggcctctcc gcattctcagg ttggggatgg ggacatggag aggaaggggc 1740
 cgctactcc tgcaaatgct tgtgacagat gccaggaggt agatgtgtgc tggccaataa 1800
 aggcccctac ctgattcccc gca 1823

<210> 81
 <211> 1976
 <212> DNA
 <213> Homo sapiens

<400> 81
 cgggcaggca ggcggggagg acaggctggg ggcggcgacc gcgaggggcc gcgcgcggag 60
 ggcgcctggt gcagcatggg cggcccgcgg gcttggggcg tgctctgcct cgggctcctg 120
 ctcccgaggag gcggcgctgc gtggagcatc ggggcagctc cgttctccgg acgcaggaac 180
 tgggtgctcct atgtggtgac ccgcaccatc tcatgccatg tgcagaatgg cacctacctt 240
 cagcgagtgc tgcagaactg cccctggccc atgagctgtc cggggagcag ctacagaact 300
 gtggtgagac ccacatacaa ggtgatgtac aagatagtga ccgcccgtga gtggaggtgc 360
 tgccctgggc actcaggagt gagctgcgag gaaggttgtc tcaactgcag caaagtgtca 420
 gagctgacag agcggctgaa ggtgctggag gccaagatga ccatgctgac tgtcatagag 480
 cagccagtac ctccaacacc agctaccctt gaggaccctg ccccgctctg ggggtccccct 540
 cctgcccagg gcagccccgg agatggaggc ctccaggacc aagtcgggtgc ttggggggctt 600
 cccgggcccc ccggcccaa gggagatgcc ggcagtcggg gcccaatggg gatgagaggc 660
 ccaccaggtc cacagggccc cccagggagc cctggccggg ctggagctgt gggcaccctt 720
 ggagagaggg gacctcctgg gccaccaggg cctcctggcc cccctggggc cccagcccct 780
 gttggggccac cccatgcccg gatctcccag catggagacc cattgctgtc caacaccttc 840
 actgagacca acaaccactg gccccaggga cccactgggc ctccaggccc tccaggggccc 900
 atgggtcccc ctgggcctcc tggccccaca ggtgtccctg ggagtccctg tcacatagga 960
 cccccaggcc cactggacc caaaggaatc tctggccacc caggagagaa gggcgagaga 1020
 ggactgcgtg gggagcctgg cccccaaggc tctgctgggc agcgggggga acctggccct 1080
 aaggagagacc ctggtgagaa gagccactgg ggggaggggt tgcaccagct acgcgaggct 1140
 ttgaagattt tagctgagag ggttttaatc ttgaaacaa tgattgggct ctatgaacca 1200
 gagctgggggt ctggggcggg ccctgccggc acaggcacc ccagcctcct tcggggcaag 1260
 aggggcggac atgcaaccaa ctaccggatc gtggcccccga ggagccggga cgagagaggc 1320

tgaggggtggt	ggcgggccct	gaggcagacc	aggccaggct	tcccctccta	cctggactcg	1380
gccagctgcc	tccagggacc	gcccgtccat	atttattaat	gtcctcaggg	tcccttctgc	1440
catctaggcc	ttaggggtaa	gcaggtctca	gtcctggcac	catgcacatg	tctgaggctg	1500
agcaagggct	gagaggagag	gcttgggcct	cagtttccct	ctgtgaagtg	gggggaggca	1560
ggccttcaag	gagggataga	ggtacaaggc	ttcgtctcat	ctgctgtctg	agcatccagg	1620
cccaaaggca	ctgagggagt	caggagctgg	ggctcggcac	atgcagagat	gacagggcag	1680
ggggcagtct	tcctccccct	ccccgaccaa	acctcgggga	gccctcctgt	gcccctccct	1740
ccttgttgtc	cagtgtctgg	ctccccaccc	cgaggtcagg	ctgccaatc	ctctgactgg	1800
atcacccggg	gcttcttgcc	tcagttcttc	cctctgagcc	cccaggccct	cccgcactct	1860
aggttgggga	tggggacatg	gagaggaagg	ggccgcctac	tcctgcaa	gcttgtgaca	1920
gatgccagga	ggtagatgtg	tgctggccaa	taaaggcccc	tacctgattc	cccga	1976

<210> 82
 <211> 2111
 <212> DNA
 <213> Homo sapiens

<400> 82	
cgggcaggca	ggcggggagg acaggctggg ggcggcgacc gcgagggggc gcgcgcggag 60
ggcgccctggt	gcagcatggg cggcccgcgg gcttgggcgc tgctctgcct cgggctcctg 120
ctcccggggag	gcggcgctgc gtggagcatc ggggcagctc cgttctccgg acgcaggaac 180
tggtgctcct	atgtggtgac ccgcaccatc tcatgccatg tgcagaatgg cacctacctt 240
cagcgagtgc	tgcagaactg cccctggccc atgagctgtc cggggagcag ctacagaact 300
gtggtgagac	ccacatacaa ggtgatgtac aagatagtga ccgcccgtga gtggaggtgc 360
tgccctgggc	actcaggagt gagctgcgag gaagttgcag cttcctctgc ctccttgag 420
cccatgtggt	cgggcagtac catgcggcgg atggcgcttc ggcccacagc cttctcaggt 480
tgtctcaact	gcagcaaagt gtcagagctg acagagcggc tgaagggtgct ggaggccaag 540
atgaccatgc	tgactgtcat agagcagcca gtacctcaa caccagctac ccctgaggac 600
cctgccccgc	tctgggggtcc ccctcctgcc cagggcagcc ccggagatgg aggcctccag 660
gggctgccag	gagccataga gagtgtgagg gtcccgtgc tccccgaaa tgaccaagtc 720
ggtgcttggg	ggcttcccgg gccaccggc cccaaggagg atgccggcag tcggggccca 780
atggggatga	gaggcccacc aggtccacag ggccccccag ggagccctgg ccgggctgga 840
gctgtgggca	cccctggaga gaggggacct cctgggccac cagggcctcc tggccccct 900
gggccccccag	cccctgttgg gccaccccat gcccgatct cccagcatgg agaccattg 960
ctgtccaaca	ccttcaactga gaccaacaac cactggcccc agggaccac tgggcctcca 1020

```

ggccctccag ggcccatggg tccccctggg cctcctggcc ccacaggtgt ccctgggagt 1080
cctggtcaca taggaccccc aggccccact ggacccaaag gaatctcttg ccaccagga 1140
gagaagggcg agagaggact gcgtggggag cctggccccc aaggctctgc tgggcagcgg 1200
ggggaacctg gccctaaggg agaccctggt gagaagagcc actgggggga ggggttgac 1260
cagctacgcg aggctttgaa gatttttagct gagagggttt taatcttgga aacaatgatt 1320
gggctctatg aaccagagct ggggtctggg gcgggccctg ccggcacagg ccccccagc 1380
ctccttcggg gcaagagggg cggacatgca accaactacc ggatcgtggc cccaggagc 1440
cgggacgaga gaggctgagg gtggtggcgg cccctgaggc agaccaggcc aggcttcccc 1500
tcctacctgg actcggccag ctgcctccag ggaccgcccg tccatattta ttaatgtcct 1560
caggtgccct tctgccatct aggccttagg ggtaagcagg tctcagtcct ggcacatgc 1620
acatgtctga ggctgagcaa gggctgagag gagaggcttg ggcctcagtt tccctctgtg 1680
aagtgggggg aggcaggcct tcaaggaggg atagaggtag aaggcttcgt ctcatctgct 1740
gtctgagcat ccaggcccaa aggcactgag ggagtcagga gctggggctc ggcacatgca 1800
gagatgacag ggcagggggc agtcttcctc cccctccccg accaaacctc ggggagccct 1860
cctgtgcccc tccctccttg ttgtccagtg ctgggctccc cccccgagg tcaggctgcc 1920
caatcctctg actggatcac cgggggcttc ttgcctcagt tcttccctct gagccccag 1980
gccctcccg c atctcagggtt ggggatgggg acatggagag gaagggggcg cctactcctg 2040
caaatgcttg tgacagatgc caggaggtag atgtgtgctg gccaataaag gccctacct 2100
gattccccgc a 2111

```

```

<210> 83
<211> 707
<212> DNA
<213> Homo sapiens

```

```

<400> 83
agatgaccat gctgactgtc atagagcagc cagtacctcc aacaccagct acccctgagg 60
accctgcccc gctctggggg cccctcctg cccagggcag ccccgagat ggaggcctcc 120
aggggctgcc aggagccata gagagtgtga gggctccgct gcttccccga aatgaccaag 180
tcgggtgcttg ggggcttccc gggcccaccg gccccaaggg agatgccggc agtcggggcc 240
caatggggat gagaggccca ccaggccac agggcccccc agggagccct ggccgggctg 300
gagctgtggg caccctgga gagaggggac ctctgtggcc accagggcct cctggccccc 360
ctgggcccc c agccctgtt gggccacccc atgcccggat ctcccagcat ggagacccat 420
tgctgtccaa caccttcact gagaccaaca accactggcc ccagggaccc actgggcctc 480

```

caggccctcc agggcccatg ggtccccctg ggctccttg cccacaggt gtccctggga 540
 gtccctgtca cataggaccc ccaggcccca ctggacccaa aggaatctct ggccaccag 600
 gagagaaggg cgagagagga ctgctggggg agcctggccc ccaaggctct gctgggcagc 660
 ggggggaacc tggccctaag ggagaccctg gtgagaagag ccactgg 707

<210> 84
 <211> 2034
 <212> DNA
 <213> Homo sapiens

<400> 84
 ggtgagtgcc cgcaatgctg cccacagct cctctggcca tcccctccac cagggtgggc 60
 cttccctgct cctgacatgg ccaggatgac ctgggccctt tcctctactt gcctcttcac 120
 tcagcaccac accacggagt gccctgcccc cgctggggct ccatgaagtc ctctcttatg 180
 ttcactgacc cacattccct gggcacctac acttatcagg ctctgagctg ggactgggt 240
 ggggtcagac atgtccctgc ccttctggag cttccatgct gctgggagca gggctgggca 300
 gaggagaagc agcaatgctt gccccatgtg accagggttt ctatgagggg ttttgggggt 360
 ttgggagccc caaggaagga agactcagcc tggacgaggt ggagaactag gtgctgtgct 420
 catccccctg ttagactacc aggcagccta ggctgtgga ctccggggcc ctctctcatg 480
 cccactgctc caggctgcct tgtcctgtcg ctcaaggcca ccctgggcct ccttgccctc 540
 tgtataccca caaatccgtg tgattccatt gcagggtccac agggccccc agggagccct 600
 ggccgggctg gagctgtggg caccctgga gagaggggac ctctggggcc accagggcct 660
 cctggccccc ctgggcccc agcccctgtt gggccacccc atgcccggat ctccagcat 720
 ggtgagtccc cctgggatcc cagcagggtg aggtgggggt ggagtagcca tcagcacagt 780
 gcccgctacc atctgccacg tgccttctgt gtgccagccc tgctcacgat aggccacatg 840
 tgaccagtc ctccagcagg cgccgttgtc ctctgtggt tacaggtag gaacactgag 900
 gaccagagag ggaagggtggc ttgccagggt cccacagcct gggcgtaggg gaacggcttc 960
 aaaccaggc tgcctccaga acctgtgctt agagccaccg ggcatcaggc cctcccaagc 1020
 cttggaactg gctggaatcc agttctcgga aactgggac gaaaagacc cggcggcagg 1080
 aagtgagtcc tgaactccca aggccacagg cccggcccct cctccaggcc ctgacgtgcg 1140
 tccttggtctt cttccctttg gcagcccagc ctgacctgcc catgggctgc caggggtcag 1200
 agtgtggagc gccaggtttc agcctcttct ccactgtgtt tttggtgcac aaccagcac 1260
 accattcatt cattctgcca tccagcatt cattccatct cactatccat acgatgggga 1320
 caatgacagt gccagcctcc cagagctgcy taacatccat gtacagaagc ctggcacaca 1380
 gtaggtggtg gataaatggt atcttttatt gtcattccca tttgacagg gacagtacag 1440

gctctgaaaa gtagaaagtg ttgctggatg tcaccagctg gattgcagtg gggttagaac 1500
 ccacatctcc ctgcctcctg gtcttgcggg accaacactc tccacactcc tcaccctgga 1560
 gcaggtgccc aggtggtacc agccatgctg caggctgccc catagggcag tccaagctgt 1620
 ctgggcagag gtggcaggtg aagactaacc acccactct acccagctct actcactcat 1680
 catctttgct caccaggag acccattgct gtccaacacc ttcactgaga ccaacaacca 1740
 ctggccccag ggaccactg ggcctccagg ccctccaggg cccatgggtc ccctggggcc 1800
 tcctggcccc acaggtgtcc ctgggagtcc tggtcacata gtgagtagtt ctccttgtag 1860
 tctcaccat gtgtctgtcc atctttccat ctatgcatac atccatacat ctgtccatca 1920
 tccacccttg tatccatcta tccatccatc cattcatcct tccattcatt cattcaacaa 1980
 gtatttattg agcacttaat atgcaaaacta ccttccataa atcttattca atcc 2034

<210> 85
 <211> 409
 <212> PRT
 <213> Homo sapiens

<400> 85

Met Glu Glu Ser Trp Glu Ala Ala Pro Gly Gly Gln Ala Gly Ala Glu
1 5 10 15

Leu Pro Met Glu Pro Val Gly Ser Leu Val Pro Thr Leu Glu Gln Pro
20 25 30

Gln Val Pro Ala Lys Val Arg Gln Pro Glu Gly Pro Glu Ser Ser Pro
35 40 45

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

Ser Ser Lys Lys Lys Pro Pro Ser Pro Arg Pro Gly Ser Pro Arg Val
65 70 75 80

Pro Pro Leu Ser Leu Gly Tyr Gly Val Cys Pro Glu Pro Pro Ser Pro
85 90 95

Gly Pro Ala Leu Val Lys Leu Pro Arg Asn Gly Glu Ala Pro Gly Ala
100 105 110

Glu Pro Ala Pro Ser Ala Trp Ala Pro Met Glu Leu Gln Val Asp Val
115 120 125

Arg Val Lys Pro Val Gly Ala Ala Gly Gly Ser Ser Thr Pro Ser Pro

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

Ala Leu Glu Glu Gly Thr Leu Val Ala Ala Asn Cys Ser Thr Pro Arg
 385 390 395 400

Pro Trp Val Cys Ala Lys Gly Thr Gln
 405

<210> 86
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 86

Met Glu Glu Ser Trp Glu Ala Ala Pro Gly Gly Gln Ala Gly Ala Glu
 1 5 10 15

Leu Pro Met Glu Pro Val Gly Ser Leu Val Pro Thr Leu Glu Gln Pro
 20 25 30

Gln Val Pro Ala Lys Val Arg Gln Pro Glu Gly Pro Glu Ser Ser Pro
 35 40 45

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

Ser Ser Lys Lys Lys Pro Pro Ser Pro Arg Pro Gly Ser Pro Arg Val
 65 70 75 80

Pro Pro Leu Ser Leu Gly Tyr Gly Val Cys Pro Glu Pro Pro Ser Pro
 85 90 95

Gly Pro Ala Leu Val Lys Leu Pro Arg Asn Gly Glu Ala Pro Gly Ala
 100 105 110

Glu Pro Ala Pro Ser Ala Trp Ala Pro Met Glu Leu Gln Val Asp Val
 115 120 125

Arg Val Lys Pro Val Gly Ala Ala Gly Gly Ser Ser Thr Pro Ser Pro
 130 135 140

Arg Pro Ser Thr Arg Phe Leu Lys Val Pro Val Pro Glu Ser Pro Ala
 145 150 155 160

Phe Ser Arg His Ala Asp Pro Ala His Gln Leu Leu Leu Arg Ala Pro
 165 170 175

Ser Gln Gly Gly Thr Trp Gly Arg Arg Ser Pro Leu Ala Ala Ala Arg
 180 185 190

Thr Glu Ser Gly Cys Asp Ala Glu Gly Arg Ala Ser Pro Ala Glu Gly
 195 200 205

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

Gly Leu Glu Lys Glu Asp Ala Ala Leu Leu Pro Arg Ala Gly Leu Asp
 225 230 235 240

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

Thr Ala Arg Thr Ile Trp Ile Ser Thr Val Gly Pro Trp Arg Lys Ala
 260 265 270

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

Arg Gly Pro Ser Asp Leu Gly Ser Ala Trp Ser Ser Ala Cys Gln Ala
 290 295 300

Asp Ala Ala Pro Pro Thr Gly Glu Ala Ser
 305 310

<210> 87
 <211> 1544
 <212> DNA
 <213> Homo sapiens

<400> 87
 gagagcgaag ctctcttgca ctgggccag gtgcgctcct cagcgtctcc gggtagcggg 60
 gcgcgcggga tggaggagtc ttgggaggct gcgcccggag gccaaagccg ggcagagctc 120
 ccaatggagc cctgtgggaag cctggtcccc acgctggagc agccgcaggt gccgcgaag 180
 gtgcgacaac ctgaagggtcc cgaaagcagc ccaagtccg cgggggccgt ggagaaggcg 240
 gcgggcgag gcctggagcc ctcgagcaag aaaaagccgc cttgcctcg ccccggtcc 300
 ccgcgcgtgc cgccgctcag cctgggctac ggggtctgcc ccgagccgcc gtcaccgggc 360
 cctgccttgg tcaagctgcc ccggaatggc gaggcgccc gggctgagcc tgcgccagc 420
 gcctgggagc ccatggagct gcaggtagat gtgcgcgtga agcccgtagg gcgggcccgt 480
 ggcagcagca cgccatcgcc caggccctcc acgcgcttcc tcaaggtgcc ggtgcccgag 540
 tcccctgcct tctcccgcca cgcggacccg gcgcaccagc tctgctgcg cgcaccatcc 600
 cagggcgga cgtggggccg ccgctcgcc ctggctgcag cccggacgga gagcggtgc 660

gacgcagagg gccgggccag cccgcggaa ggaagcgccg gctccccggg ctccccacg 720
 tgctgccgct gcaaggagct ggggctggag aaggaggatg cggcgctgtt gccccgcgcg 780
 gggttggacg gcgacgagaa gctgccccgg gccgtaacgc ttacggggct acccatgtac 840
 gtgaagtccc tgtactgggc cctggcgctt atggctgtgc tcctggcagt ctctgggggt 900
 gtcattgtgg tcctggcctc aagagcagga gccagatgcc agcagtgcc cccaggctgg 960
 gtgttgccg aggagcactg ttactacttc tctgcagaag cgaggcctg ggaagccagc 1020
 caggctttct gctcagccta ccacgctacc ctccccctgc taagccacac ccaggacttc 1080
 ctgggcagat acccagtctc caggcactcc tgggtggggg cctggcgagg ccccagggc 1140
 tggcactgga tcgacgaggc ccactccccg cccagctac tcctgagga cggcgaggac 1200
 aatctggata tcaactgtgg ggcctggag gaaggcacgc tgggtggctgc aaactgcagc 1260
 actccaagac cctgggtctg tgccaagggg acccagtgat ctgggctctg cctggctctc 1320
 agcctgccag gcagatgcag caccctac aggggaggcc agttgagagc ttgggcagcc 1380
 tcttcctgga cccagttatc caggtcttca tgctctgctc aagggggcca catgagcgag 1440
 cctaggagct ggacttcaac ccaggaagat gcatccgagg gaaaggagat tttctatggc 1500
 ctcaggcctg agtgccaata ttagtctcca gcttctgtgg atga 1544

<210> 88

<211> 1192

<212> DNA

<213> Homo sapiens

<400> 88

gagagcgaag ctctctgca ctgggccag gtgcgctcct cagcgtctcc ggggtggcggg 60
 gcgcgcggga tggaggagtc ttgggaggct gcgcccgag gccaagccgg ggcagagctc 120
 ccaatggagc ccgtgggaag cctggtcccc acgctggagc agccgcaggt gccgcgaag 180
 gtgcgacaac ctgaagggtcc cgaaagcagc ccaagtccgg ccggggccgt ggagaaggcg 240
 gcgggcgcag gcctggagcc ctcgagcaag aaaaagccgc cttcgctctg ccccggtcc 300
 ccgcgcgtgc cgccgctcag cctgggctac ggggtctgcc ccgagccgcc gtcaccgggc 360
 cctgccttgg tcaagctgcc ccggaatggc gaggcgccg gggctgagcc tgcgccagc 420
 gcctgggcgc ccatggagct gcaggtagat gtgcgcgtga agcccgtggg cgcggccggt 480
 ggcagcagca cgccatcgcc caggccctcc acgcgcttcc tcaagggtgcc ggtgcccgag 540
 tcccctgcct tctcccgcca cgcggaacccg gcgcaccagc tcctgctgcg cgcaccatcc 600
 cagggcgga cgtggggccg ccgctcgccg ctggctgcag cccggacgga gagcggtgc 660
 gacgcagagg gccgggccag cccgcggaa ggaagcgccg gctccccggg ctccccacg 720
 tgctgccgct gcaaggagct ggggctggag aaggaggatg cggcgctgtt gccccgcgcg 780

```

gggttgagcg gcgacgagaa gctgccccgg gccgtaacgc ttacggactc cctgaggacg      840
gcgaggacaa tctggatatc aactgtgggg ccctggagga aggcacgctg gtggctgcaa      900
actgcagcac tccaagaccc tgggtctgtg ccaaggggac ccagtgatct gggctctgcc      960
tggtcctcag cctgccaggc agatgcagca cccctacag gggaggccag ttgagagctt     1020
gggcagcctc ttcctggacc cagttatcca ggtcttcatg ctctgctcaa gggggccaca     1080
tgagcgagcc taggagctgg acttcaaccc aggaagatgc atccgaggga aaggagattt     1140
tctatggcct caggcctgag tgccaatatt agtctccagc ttctgtggat ga              1192

```

```

<210> 89
<211> 518
<212> PRT
<213> Homo sapiens

```

```

<400> 89

```

```

Met Leu Ala Ala Ala Ser Lys Tyr Arg His Gly Asn Met Val Phe Phe
1              5              10              15

```

```

Asp Val Leu Gly Leu Phe Val Ile Ala Tyr Pro Ser Arg Ile Gly Ser
                20              25              30

```

```

Ile Ile Asn Tyr Met Val Val Met Gly Val Val Leu Tyr Leu Gly Lys
35              40              45

```

```

Lys Phe Leu Gln Pro Lys His Lys Thr Gly Asn Tyr Lys Lys Asp Phe
50              55              60

```

```

Leu Cys Gly Leu Gly Ile Thr Leu Ile Ser Trp Phe Thr Ser Leu Val
65              70              75              80

```

```

Thr Val Leu Ile Ile Ala Val Phe Ile Ser Leu Ile Gly Gln Ser Leu
85              90              95

```

```

Ser Trp Tyr Asn His Phe Tyr Val Ser Val Cys Leu Tyr Gly Thr Ala
100              105              110

```

```

Thr Val Ala Lys Ile Ile Leu Ile His Thr Leu Ala Lys Arg Phe Tyr
115              120              125

```

```

Tyr Met Asn Ala Ser Ala Gln Tyr Leu Gly Glu Val Phe Phe Asp Ile
130              135              140

```

```

Ser Leu Phe Val His Cys Cys Phe Leu Val Thr Leu Thr Tyr Gln Gly
145              150              155              160

```

Leu Cys Ser Ala Phe Ile Ser Ala Val Trp Val Ala Phe Pro Leu Leu
 165 170 175

Thr Lys Leu Cys Val His Lys Asp Phe Lys Gln His Gly Ala Gln Gly
 180 185 190

Lys Phe Ile Ala Phe Tyr Leu Leu Gly Met Phe Ile Pro Tyr Leu Tyr
 195 200 205

Ala Leu Tyr Leu Ile Trp Ala Val Phe Glu Met Phe Thr Pro Ile Leu
 210 215 220

Gly Arg Ser Gly Ser Glu Ile Pro Pro Asp Val Val Leu Ala Ser Ile
 225 230 235 240

Leu Ala Gly Cys Thr Met Ile Leu Ser Ser Tyr Phe Ile Asn Phe Ile
 245 250 255

Tyr Leu Ala Lys Ser Thr Lys Lys Thr Met Leu Thr Leu Thr Leu Val
 260 265 270

Cys Ala Ile Thr Phe Leu Leu Val Cys Ser Gly Thr Phe Phe Pro Tyr
 275 280 285

Ser Ser Asn Pro Ala Asn Pro Lys Pro Lys Arg Val Phe Leu Gln His
 290 295 300

Met Thr Arg Thr Phe His Asp Leu Glu Gly Asn Ala Val Lys Arg Asp
 305 310 315 320

Ser Gly Ile Trp Ile Asn Gly Phe Asp Tyr Thr Gly Ile Ser His Ile
 325 330 335

Thr Pro His Ile Pro Glu Ile Asn Asp Ser Ile Arg Ala His Cys Glu
 340 345 350

Glu Asn Ala Pro Leu Cys Gly Phe Pro Trp Tyr Leu Pro Val His Phe
 355 360 365

Leu Ile Arg Lys Asn Trp Tyr Leu Pro Ala Pro Glu Val Ser Pro Arg
 370 375 380

Asn Pro Pro His Phe Arg Leu Ile Ser Lys Glu Gln Thr Pro Trp Asp
 385 390 395 400

Ser Ile Lys Leu Thr Phe Glu Ala Thr Gly Pro Ser His Met Ser Phe

160

405

410

415

Tyr Val Arg Ala His Lys Gly Ser Thr Leu Ser Gln Trp Ser Leu Gly
 420 425 430

Asn Gly Thr Pro Val Thr Ser Lys Gly Gly Asp Tyr Phe Val Phe Tyr
 435 440 445

Ser His Gly Leu Gln Ala Ser Ala Trp Gln Phe Trp Ile Glu Val Gln
 450 455 460

Val Ser Glu Glu His Pro Glu Gly Met Val Thr Val Ala Ile Ala Ala
 465 470 475 480

His Tyr Leu Ser Gly Glu Asp Lys Arg Ser Pro Gln Leu Asp Ala Leu
 485 490 495

Lys Glu Lys Phe Pro Asp Trp Thr Phe Pro Ser Ala Trp Val Cys Thr
 500 505 510

Tyr Asp Leu Phe Val Phe
 515

<210> 90

<211> 904

<212> PRT

<213> Homo sapiens

<400> 90

Met Glu Trp Gly Ser Glu Ser Ala Ala Val Arg Arg His Arg Val Gly
 1 5 10 15

Val Glu Arg Arg Glu Gly Ala Ala Ala Ala Pro Pro Pro Glu Arg Glu
 20 25 30

Ala Arg Ala Gln Glu Pro Leu Val Asp Gly Cys Ser Gly Gly Gly Arg
 35 40 45

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

Gly Thr Gly Leu Ser Glu Val Arg Ala Ala Leu Gly Leu Ala Leu Tyr
 65 70 75 80

Leu Ile Ala Leu Arg Thr Leu Val Gln Leu Ser Leu Gln Gln Leu Val
 85 90 95

161

Leu Arg Gly Ala Ala Gly His Arg Gly Glu Phe Asp Ala Leu Gln Ala
 100 105 110

Arg Asp Tyr Leu Glu His Ile Thr Ser Ile Gly Pro Arg Thr Thr Gly
 115 120 125

Ser Pro Glu Asn Glu Ile Leu Thr Val His Tyr Leu Leu Glu Gln Ile
 130 135 140

Lys Leu Ile Glu Val Gln Ser Asn Ser Leu His Lys Ile Ser Val Asp
 145 150 155 160

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

Thr Ser Tyr Tyr Asp Asn Ile Thr Asn Val Val Val Lys Leu Glu Pro
 180 185 190

Arg Asp Gly Ala Gln His Ala Val Leu Ala Asn Cys His Phe Asp Ser
 195 200 205

Val Ala Asn Ser Pro Gly Ala Ser Asp Asp Ala Val Ser Cys Ser Val
 210 215 220

Met Leu Glu Val Leu Arg Val Leu Ser Thr Ser Ser Glu Ala Leu His
 225 230 235 240

His Ala Val Ile Phe Leu Phe Asn Gly Ala Glu Glu Asn Val Leu Gln
 245 250 255

Ala Ser His Gly Phe Ile Thr Gln His Pro Trp Ala Ser Leu Ile Arg
 260 265 270

Ala Phe Ile Asn Leu Glu Ala Ala Gly Val Gly Gly Lys Glu Leu Val
 275 280 285

Phe Gln Thr Gly Pro Glu Asn Pro Trp Leu Val Gln Ala Tyr Val Ser
 290 295 300

Ala Ala Lys His Pro Phe Ala Ser Val Val Ala Gln Glu Val Phe Gln
 305 310 315 320

Ser Gly Ile Ile Pro Ser Asp Thr Asp Phe Arg Ile Tyr Arg Asp Phe
 325 330 335

Gly Asn Ile Pro Gly Ile Asp Leu Ala Phe Ile Glu Asn Gly Tyr Ile
 340 345 350

Tyr His Thr Lys Tyr Asp Thr Ala Asp Arg Ile Leu Thr Asp Ser Ile
 355 360 365

Gln Arg Ala Gly Asp Asn Ile Leu Ala Val Leu Lys His Leu Ala Thr
 370 375 380

Ser Asp Met Leu Ala Ala Ala Ser Lys Tyr Arg His Gly Asn Met Val
 385 390 395 400

Phe Phe Asp Val Leu Gly Leu Phe Val Ile Ala Tyr Pro Ser Arg Ile
 405 410 415

Gly Ser Ile Ile Asn Tyr Met Val Val Met Gly Val Val Leu Tyr Leu
 420 425 430

Gly Lys Lys Phe Leu Gln Pro Lys His Lys Thr Gly Asn Tyr Lys Lys
 435 440 445

Asp Phe Leu Cys Gly Leu Gly Ile Thr Leu Ile Ser Trp Phe Thr Ser
 450 455 460

Leu Val Thr Val Leu Ile Ile Ala Val Phe Ile Ser Leu Ile Gly Gln
 465 470 475 480

Ser Leu Ser Trp Tyr Asn His Phe Tyr Val Ser Val Cys Leu Tyr Gly
 485 490 495

Thr Ala Thr Val Ala Lys Ile Ile Leu Ile His Thr Leu Ala Lys Arg
 500 505 510

Phe Tyr Tyr Met Asn Ala Ser Ala Gln Tyr Leu Gly Glu Val Phe Phe
 515 520 525

Asp Ile Ser Leu Phe Val His Cys Cys Phe Leu Val Thr Leu Thr Tyr
 530 535 540

Gln Gly Leu Cys Ser Ala Phe Ile Ser Ala Val Trp Val Ala Phe Pro
 545 550 555 560

Leu Leu Thr Lys Leu Cys Val His Lys Asp Phe Lys Gln His Gly Ala
 565 570 575

Gln Gly Lys Phe Ile Ala Phe Tyr Leu Leu Gly Met Phe Ile Pro Tyr
 580 585 590

163

Leu Tyr Ala Leu Tyr Leu Ile Trp Ala Val Phe Glu Met Phe Thr Pro
 595 600 605

Ile Leu Gly Arg Ser Gly Ser Glu Ile Pro Pro Asp Val Val Leu Ala
 610 615 620

Ser Ile Leu Ala Gly Cys Thr Met Ile Leu Ser Ser Tyr Phe Ile Asn
 625 630 635 640

Phe Ile Tyr Leu Ala Lys Ser Thr Lys Lys Thr Met Leu Thr Leu Thr
 645 650 655

Leu Val Cys Ala Ile Thr Phe Leu Leu Val Cys Ser Gly Thr Phe Phe
 660 665 670

Pro Tyr Ser Ser Asn Pro Ala Asn Pro Lys Pro Lys Arg Val Phe Leu
 675 680 685

Gln His Met Thr Arg Thr Phe His Asp Leu Glu Gly Asn Ala Val Lys
 690 695 700

Arg Asp Ser Gly Ile Trp Ile Asn Gly Phe Asp Tyr Thr Gly Ile Ser
 705 710 715 720

His Ile Thr Pro His Ile Pro Glu Ile Asn Asp Ser Ile Arg Ala His
 725 730 735

Cys Glu Glu Asn Ala Pro Leu Cys Gly Phe Pro Trp Tyr Leu Pro Val
 740 745 750

His Phe Leu Ile Arg Lys Asn Trp Tyr Leu Pro Ala Pro Glu Val Ser
 755 760 765

Pro Arg Asn Pro Pro His Phe Arg Leu Ile Ser Lys Glu Gln Thr Pro
 770 775 780

Trp Asp Ser Ile Lys Leu Thr Phe Glu Ala Thr Gly Pro Ser His Met
 785 790 795 800

Ser Phe Tyr Val Arg Ala His Lys Gly Ser Thr Leu Ser Gln Trp Ser
 805 810 815

Leu Gly Asn Gly Thr Pro Val Thr Ser Lys Gly Gly Asp Tyr Phe Val
 820 825 830

Phe Tyr Ser His Gly Leu Gln Ala Ser Ala Trp Gln Phe Trp Ile Glu
 835 840 845

Val Gln Val Ser Glu Glu His Pro Glu Gly Met Val Thr Val Ala Ile
 850 855 860

Ala Ala His Tyr Leu Ser Gly Glu Asp Lys Arg Ser Pro Gln Leu Asp
 865 870 875 880

Ala Leu Lys Glu Lys Phe Pro Asp Trp Thr Phe Pro Ser Ala Trp Val
 885 890 895

Cys Thr Tyr Asp Leu Phe Val Phe
 900

<210> 91
 <211> 419
 <212> PRT
 <213> Homo sapiens

<400> 91

Met Val Val Met Gly Val Val Leu Tyr Leu Gly Lys Lys Phe Leu Gln
 1 5 10 15

Pro Lys His Lys Thr Gly Asn Tyr Lys Lys Asp Phe Leu Cys Gly Leu
 20 25 30

Gly Ile Thr Leu Ile Ser Trp Phe Thr Ser Leu Val Thr Val Leu Ile
 35 40 45

Ile Ala Val Phe Ile Ser Leu Ile Gly Gln Ser Leu Ser Trp Tyr Asn
 50 55 60

His Phe Tyr Val Ser Val Cys Leu Tyr Gly Thr Ala Thr Val Ala Lys
 65 70 75 80

Ile Ile Leu Ile His Thr Leu Ala Lys Arg Phe Tyr Tyr Met Asn Ala
 85 90 95

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

His Cys Cys Phe Leu Val Thr Leu Thr Tyr Gln Gly Leu Cys Ser Ala
 115 120 125

Phe Ile Ser Ala Val Trp Val Ala Phe Pro Leu Leu Thr Lys Leu Cys
 130 135 140

Val His Lys Asp Phe Lys Gln His Gly Ala Gln Gly Lys Phe Ile Ala

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

Pro Gln Arg Val Asn Thr Phe Ser Val Val Ser Trp Gln Trp His Pro
 405 410 415

Ser His Lys

<210> 92

<211> 4974

<212> DNA

<213> Homo sapiens

<400> 92

```

ggcgcgggga cggggtgtc tgagggtgcgc gccgcgctgg ggctcgcgct ctacctgac 60
gcgctgcgga cgctggtgca gctctcgtcg cagcagctcg tgctacgcgg ggccgctgga 120
caccgcgggg agttcgacgc gctccaagcc agggattatc ttgaacacat aacctccatt 180
ggccccagga ctacaggaag tccagaaaat gaaattctga ccgtgcacta ccttttggaa 240
cagattaaac tgattgaagt gcaaagcaac agccttcata agatttcagt agatgtacaa 300
cggccccacag gctcttttag cattgatttc ttgggaggtt ttacaagcta ttatgacaac 360
atcaccaatg ttgtggtaaa gctggaaccc agagatggag ccagcatgc tgtcttggct 420
aattgtcatt ttgactcagt agcaaaactca ccaggccagt catggtttca ttactcagca 480
cccctgggct agcttgattc gtgcattcat taacctagag gcagcaggtg taggagggaa 540
agaacttgta ttccaaacag gtcctgaaaa tccttggttg gttcaagctt atgtttcagc 600
agctaaacac ccttttgctt ctgtggtggc tcaggaggtt tttcagagtg gaatcattcc 660
ttcagatact gactttcgta tctacaggga ttttggaac attccaggaa tagacttagc 720
ttttattgag aatggataca tttatcacac caagtatgac acagcggaca gaattctaac 780
agattccatt cagagagcag gtgacaacat tttagcagtt ctttaagcatc tagctacatc 840
tgatatgctg gctgctgctt ctaagtatcg acatggaaac atgggtcttct ttgatgtgct 900
gggcctgttt gtcattgcct acccctctcg tattggctca atcataaact acatgggtgg 960
aatgggtggt gttttgtacc tgggcaaaaa atttttgcag cccaaacata agactggtaa 1020
ctacaagaag gacttcttgt gtggacttgg catcactttg atcagctggg ttagtagcct 1080
tgttaccggt ctattatag cagtgttcat ctctcttatt ggacagtctc tctcatggta 1140
taaccacttc tatgtctccg tttgtctgta tggaactgca actgtagcca aaataatact 1200
tatacatact cttgcgaaaa gattttatta catgaatgcc agtgcccagt atctgggaga 1260
agtatttttt gacatttcgc tgtttgtcca ttgctgtttt cttgttacct tcacttacca 1320
aggactttgc tcggcgttta ttagtgctgt ctgggtagca ttcccattgc tcacaaagct 1380
ctgtgtgcat aaggacttca agcagcatgg tgcccaagga aaatttattg ctttttacct 1440

```

tttggggatg	tttattcctt	atcttttatgc	attgtacctc	atctgggcag	tatttgagat	1500
gtttaccctt	atcctcgga	gaagtgggtc	tgaaatccca	cctgatgttg	tgctggcatc	1560
cattttggct	ggctgtacaa	tgattctctc	gtcctatfff	attaacttca	tctaccttgc	1620
caagagcaca	aaaaaaacca	tgctaacttt	aactttggta	tgtgcaatta	cattcctcct	1680
tgtttgagct	ggaacatttt	ttccatatag	ctccaatcct	gctaataccg	agccaaagag	1740
agtgtttctt	cagcatatga	ctagaacatt	ccatgacttg	gaaggaaatg	cagttaaacg	1800
ggactctgga	atatggatca	atgggtttga	ttatactgga	atttctcaca	taacccttca	1860
cattcctgag	atcaatgata	gtatccgagc	tactgtgag	gagaatgcac	ctctttgtgg	1920
ttttccttgg	tatcttccag	tgcaactttt	gatcaggaaa	aactgggtatc	ttcctgcccc	1980
agaagtttct	ccaagaaatc	ctcctcattt	ccgactcata	tccaaagaac	agacaccttg	2040
ggattctata	aaattgactt	ttgaagcaac	aggaccaagc	catatgtcct	tctatgttcg	2100
agcccacaaa	gggtcaacac	tttctcagtg	gtctcttggc	aatggcaccc	cagtcacaag	2160
taaaggagga	gactactttg	tcttttactc	ccatggactc	caggcctctg	catggcagtt	2220
ctggatagaa	gtgcaggttt	cagaagaaca	tctgaagga	atggtcaccg	tggccattgc	2280
tgcccactat	ctgtctgggg	aagacaagag	atcccctcaa	ctggatgctc	tgaaggaaaa	2340
gttcccagat	tggacatttc	cctctgcctg	ggtgtgcacc	tacgatctct	ttgtatttta	2400
atcttgtgga	tgagctctaa	gtacatgccc	agtggatact	ccatgtgaca	tggtttctcc	2460
ctatgttacg	tggatgtttg	taacgtaagt	caatgaattt	taatgatcat	atgttcaaag	2520
agctttctgg	gttaacgctt	ttcaggggcca	agcactataa	gggttttagct	gtggcgagct	2580
gatgcatggc	ctgttgacac	ttgaaaatgc	cagtcttttg	gcacttcagc	acatgtgggt	2640
actgccacta	cacacacgtc	atfcttatatg	accttaagga	caaagccaac	aatccacttc	2700
aatagctgcc	ccttttaggat	caagaaagat	gtacactgtc	agagcattgt	taatgagaca	2760
aaagttgttt	ccaatttaag	ccccaaaacc	atttgttgta	ttagtggatg	gtgggtaaaa	2820
tatcattcac	tgaggtaatg	attccccttg	agaatataac	tctgtgtagg	tactggaaa	2880
gtgattgcca	tagggctggg	agagaagcat	tgcaactctg	aggctgtagc	ctgtgtcaag	2940
ctgtttcttc	aggcagcctc	tcaaatgtgc	tttgtctctc	tgtgctgagg	cctggaccct	3000
gtgctgagct	ggtgactcac	tgctctgaca	agtggacaca	cagatgcact	gctgtgctgc	3060
tttcttgagg	tggttttcta	tgctgttttt	cctctgaaac	atgtctgtta	cccctctcca	3120
tcttaccag	ttgaaaagg	gaatatattg	ccacataccc	ctctggtttt	cgtaggttct	3180
tttggttcag	aatattgttt	gtgccagtac	atgaccttaa	cttccttcct	cagagcactg	3240
agctgccatc	tgggctattc	tggggtagaa	ggaaggctgg	gagtgggtgg	aattttataa	3300

```

atattttattc tcttttcttt gtttcatagg agtcttgtgt tatacaaggt tagtccttca 3360
tggtataatc ttactgatgc actgggccta tctttttgtt ttccagccag ttgaatagat 3420
tagtttttct cagtaactta ctatccagca gactggcttt cctgagactt gaggttgtgg 3480
cttatactgg aatgagacca ctgtacgtgt aggtgggttca gatcctgcgt aatggcagca 3540
tgaggactta aaaggtggtt ttcattttga agatggctat gtagcttgta aggtgtatca 3600
cagcagtacc tctcatggct ttttggttcc agcagtgagg gcattggtga gatcaatggt 3660
aaactgtgca agctttcttt ttatcattag gaaatgtgaa acgttggaca aattttgagt 3720
tttaacaagg acaaaaagtt gaaagaaaag gcacagttaa caaaaaaggg tggctagatt 3780
tatcttgggt gatggaggaa atgagagagg aatgctcttg aaaggtggtc tgtggatctg 3840
tctgaataga aagagcacag taagtatgca ttgccggaga aaacgtcctt gaagctgctt 3900
gtctcatgtg tatgatgtgc tttttaaatc atgcccctcg ttgcctgcct aatctgtgac 3960
tccctaaaaa ctaactgggc ccatgtagat ggggctgcaa ccagagctga ataacatgtt 4020
aggctcacac atgcatcagc actgcacact ggaatcattg ctcttcctgg actttgtaga 4080
aatcagtctc aagtgttca agagtctggc tcctgctact tttatctgtc aggtagcaca 4140
taaggtttgc agggtttata ttttgtagat aatcacagtt gtggagaaaa agtaataatt 4200
tctcaatgaa ttttaaaaaat gggcctattt tctatccccg tggttcatct gatataatta 4260
gtgttccctg tgaattcccc ccctctatgg gaaggatgcc tttactcttt atcagtaata 4320
aattatgact gttttcatat tgccttaggg ttatttccct gtgtaaacca ttgtcttttg 4380
ttttggtttt ctttagcatt atgaagcttt ggtattgtac aaggtcagta gtaagatgct 4440
cactagtctc agggcttgtg taatattctg ggaggtcatt taaatgccag aaatgggtcaa 4500
gcaattatac acagtattta tgactctgtt aagcataccg tttgtctgtc acattagtag 4560
attctgagat taaaaaaaaat ttttaaagag tgatcattta aataatttct aaaaggtct 4620
tttcaagctc taacaaagtc actaacaaat gcattatttt ctacagaatt agatgttagt 4680
agtacagtac tgcatattca gggaaaaagt gtgaggaatt gatttcaaaa tagttcgttc 4740
ttgtgtttga cctaagaatg attgtcgcat gaagtgtttg tttttacagt ttagcatata 4800
taaacaaaca tgataggatt ccttaagatg ttaccacca gggggccaca agccagcctg 4860
ctgtctcagg aagctgtaga aggagtgttt gtcaatttct tgtcactggg ttgctgactt 4920
actgaggatt aattgttgcc ttacaatgtt actgaaataa actgtttaat atac 4974

```

```

<210> 93
<211> 5338
<212> DNA
<213> Homo sapiens

```


<400> 93
 ggccgggggct gtcgcggggtt ggggcgggtt ggctggcagc tgaggctcgt ggccatggag 60
 tggggttctg agtcggctgc tgtgaggcgg caccgcgtcg gagtagagcg tcgagaggga 120
 gcggcggccg cgccaccgcc ggagagggag gcccagcgc aggagcctct ggtggatggg 180
 tgcagcggcg gcgggaggac gcggaagagg agccccgggg gtagcggcgg cgcgagcagg 240
 ggcgcgggga ccgggctgtc tgagggtgcgc gccgcgtcgg ggctcgcgct ctacctgac 300
 gcgctgcgga cgctgggtgca gctctcgtc cagcagctcg tgctacgagg ggccgctgga 360
 caccgcgggg agttcgacgc gctccaagcc agggattatc ttgaacacat aacctccatt 420
 ggccccagga ctacaggaag tccagaaaat gaaattctga ccgtgcacta ccttttggaa 480
 cagattaaac tgattgaagt gcaaaacaac agccttcata agatttcagt agatgtacaa 540
 cggccacag gctcttttag cattgatttc ttgggagggt ttacaagcta ttatgacaac 600
 atcaccaatg ttgtggtaaa gctggaacc agagatggag ccagcatgc tgtcttggct 660
 aattgtcatt ttgactcagt agcaaaactca ccaggtgcca gtgatgatgc agttagctgc 720
 tcagtgatgc tggaagtcct tcgcgtcttg tcaacatctt cagaagcctt gcatcatgct 780
 gtcataatttc tctttaatgg tgctgaggaa aatgtcttgc aagccagtca tggtttcatt 840
 actcagcacc cctgggctag cttgattcgt gcattcatta acctagaggc agcaggtgta 900
 ggagggaaaag aacttgtatt ccaaacaggc cctgaaaatc cttggttggg tcaagcttat 960
 gtttcagcag ctaaacaccc ttttgcttct gtggtggctc aggaggtttt tcagagtgga 1020
 atcattcctt cagatactga ctttcgtatc tacagggatt ttgggaacat tccaggaata 1080
 gacttagctt ttattgagaa tggatacatt tatcacacca agtatgacac agcggacaga 1140
 attctaacag attccattca gagagcagg gacaacattt tagcagttct taagcatcta 1200
 gctacatctg atatgctggc tgctgcttct aagtatcgac atggaaacat ggtcttcttt 1260
 gatgtgctgg gcctgtttgt cattgcctac ccctctcgta ttggctcaat cataaactac 1320
 atggtggtaa tgggtgttgt tttgtacctg ggcaaaaaat ttttgcagcc caaacataag 1380
 actggttaact acaagaagga cttcttgtgt ggacttggca tcactttgat cagctggttc 1440
 actagccttg ttaccgttct cattatagca gtgttcatct ctcttattgg acagtctctc 1500
 tcatgggtata accacttcta tgtctccgtt tgtctgtatg gaactgcaac tgtagccaaa 1560
 ataatactta tacatactct tgcgaaaaga ttttattaca tgaatgccag tgcccagtat 1620
 ctggggagaag tattttttga catttcgctg tttgtccatt gctgttttct tgttaccctc 1680
 acttaccaag gactttgctc ggcgtttatt agtgctgtct gggtagcatt ccattgctc 1740
 acaaagctct gtgtgcataa ggacttcaag cagcatggtg cccaaggaaa atttattgct 1800

ttttaccttt	tggggatggt	tattccttat	ctttatgcat	tgtacctcat	ctgggcagta	1860
tttgagatgt	ttacccttat	cctcgggaga	agtgggttctg	aatcccacc	tgatgttgtg	1920
ctggcatcca	ttttggctgg	ctgtacaatg	attctctctg	cctattttat	taacttcac	1980
taccttgcca	agagcacaaa	aaaaaccatg	ctaacttta	ctttggtatg	tgcaattaca	2040
ttcctccttg	tttgcatggg	aacatTTTTT	ccatatagct	ccaatcctgc	taatccgaag	2100
ccaaagagag	tgtttcttca	gcatatgact	agaacattcc	atgacttgga	aggaaatgca	2160
gttaaacggg	actctggaat	atggatcaat	gggtttgatt	atactggaat	ttctcacata	2220
acccctcaca	ttcctgagat	caatgatagt	atccgagctc	actgtgagga	gaatgcacct	2280
ctttgtgggt	ttccttggtg	tcttccagtg	cactttctga	tcaggaaaaa	ctgggtatctt	2340
cctgccccag	aagtttctcc	aagaaatcct	cctcatttcc	gactcatatc	caaagaacag	2400
acaccttggg	attctataaa	attgactttt	gaagcaacag	gaccaagcca	tatgtccttc	2460
tatgttcgag	cccacaaagg	gtcaacactt	tctcagtggg	ctcttgga	tggcacccca	2520
gtcacaagta	aaggaggaga	ctactttgtc	ttttactccc	atggactcca	ggcctctgca	2580
tggcagttct	ggatagaagt	gcaggtttca	gaagaacatc	ctgaaggaat	ggtcaccgtg	2640
gccattgctg	cccactatct	gtctggggaa	gacaagagat	cccctcaact	ggatgctctg	2700
aaggaaaagt	tcccagattg	gacatttccc	tctgcctggg	tgtgcaccta	cgatctcttt	2760
gtatTTTaat	cttgtggatg	agctctaagt	acatgcccag	tggatactcc	atgtgacatg	2820
gtttctccct	atgttacgtg	gatgtttgta	acgtaagtca	atgaatttta	atgatcatat	2880
gttcaaagag	ctttctgggt	taacgctttt	cagggccaag	cactataagg	gttttagctgt	2940
ggcgcagtga	tgcatggcct	gttgacactt	gaaaatgcc	gtcttttggc	acttcagcac	3000
atgtgggtac	tgccactaca	cacacgtcat	tttatatgac	cttaaggaca	aagccaacaa	3060
tccacttcaa	tagctgcccc	tttaggatca	agaaagatgt	acactgtcag	agcattgtta	3120
atgagacaaa	agttgtttcc	aatttaagcc	ccaaaaccat	ttgttgtatt	agtggatggg	3180
gggtaaaata	tcattcactg	aggtaatgat	tccccttgag	aatataactc	tgtgtaggtc	3240
actggaaagt	gattgccata	gggctgggag	agaagcattg	cactcttgag	gctgtagcct	3300
gtgtcaagct	gtttcttcag	gcagcctctc	aatgtgctt	tgtctctctg	tgctgaggcc	3360
tggaccctgt	gctgagctgg	tgactcactg	tcctgacaag	tggacacaca	gatgcactgc	3420
tgtgtgtgct	tcctgaggtg	gttttctatg	cctgttttcc	tctgaaacat	gtctgttacc	3480
cctctccatc	ttaccaagtt	gaaaagggga	atatttggcc	acatacccct	ctggttttcg	3540
taggttcttt	tggttcagaa	tattgtttgt	gccagtacat	gaccttaact	tccttcctca	3600
gagcactgag	ctgccatctg	ggctattctg	gggtagaagg	aaggctggga	gtgggtggga	3660

```

ttttataaat atttattctc ttttctttgt ttcataggag tcttgtgtta tacaaggtta 3720
gtccttcatg gtataatctt actgatgcac tgggcctatc tttttgtttt ccagccagtt 3780
gaatagatta gtttttctca gtaacttact atccagcaga ctggccttcc tgagacttga 3840
ggttgtggct tatactggaa tgagaccact gtacgtgtag gtggttcaga tcctgcgtaa 3900
tggcagcatg aggacttaaa aggtggtttt cattttgaag atggctatgt agcttgtaag 3960
gtgtatcaca gcagtacctc tcatggcttt ttggttccag cagtgagggc attggtgaga 4020
tcaatggtaa actgtgcaag ctttcttttt atcattagga aatgtgaaac gttggacaaa 4080
ttttgagttt taacaaggac aaaaagttga aagaaaaggc acagttaaca aaaaaggggtg 4140
gctagattta tcttgggtga tggaggaaat gagagaggaa tgctcttgaa aggtgggtctg 4200
tggatctgtc tgaatagaaa gagcacagta agtatgcatt gccggagaaa acgtccttga 4260
agctgcttgt ctcatgtgta tgatgtgctt tttaaactcat gccctcgtt gcctgcctaa 4320
tctgtgactc cctaaaaact aactggggcc atgtagatgg ggctgcaacc agagctgaat 4380
aacatgttag gctcacacat gcatcagcac tgcacactgg aatcattgct cttcctggac 4440
tttgtagaaa tcagtctcaa gtgcttcaag agtctggctc ctgctacttt tatctgtcag 4500
gtagcacata aggtttgcag gggttatatt ttgtatagaa tcacagttgt ggagaaaaag 4560
taataatttc tcaatgaatt ttaaaaaatg gcctattttc tatccccgtg gttcatctga 4620
tataattagt gttccctgtg aattcccccc ctctatggga aggatgcctt tactctttat 4680
cagtaataaa ttatgactgt tttcatattg ccttaggggt atttccctgt gtaaaccatt 4740
gtcttttgtt ttggttttct ttagcattat gaagctttgg tattgtacaa ggtcagtagt 4800
aagatgctca ctagtctcag ggcttgtgta atattctggg aggtcattta atgccagaa 4860
atgggtcaagc aattatacac agtatttatg actctgttaa gcataccgtt tgtctgtcac 4920
attagtagat tctgagatta aaaaaaattt ttaaagagtg atcatttaaa taatttctaa 4980
aagggctttt tcaagctcta acaaagtcac taacaaatgc attattttct acagaattag 5040
atgttagtag tacagtactg catattcagg gaaaaagtgt gaggaattga tttcaaaata 5100
gttcgttctt gtgtttgacc taagaatgat tgtcgcatga agtggttgtt tttacagttt 5160
agcatatata acaaacatg ataggattcc ttaagatgtt accaccagg gggccacaag 5220
ccagcctgct gtctcaggaa gctgtagaag gagtgtttgt caatttcttg tctactggttt 5280
gctgacttac tgaggattaa ttgttgcctt acaatgttac tgaaataaac tgtttaat 5338

```

```

<210> 94
<211> 5387
<212> DNA
<213> Homo sapiens

```

<400> 94
ggccggggct gtcgcggggtt ggggcgggtt ggctggcagc tgaggctcgt ggccatggag 60
tggggttctg agtcggctgc tgtgaggcgg caccgcgtcg gagtagagcg tcgagagggg 120
gcggcggccg cgccaccgcc ggagagggag gcccgagcgc aggagcctct ggtggatggg 180
tgcagcggcg gcgggaggac gcggaagagg agccccgggg gtagcggcgg cgcgagcagg 240
ggcgcgggga cgggctgtc tgagggtgcgc gccgcgctgg ggctcgcgct ctacctgac 300
gcgctgcgga cgctggtgca gctctcgctg cagcagctcg tgctacgagg ggccgctgga 360
caccgcgggg agttcgacgc gctccaagcc agggattatc ttgaacacat aacctccatt 420
ggccccagga ctacaggaag tccagaaaat gaaattctga ccgtgcacta ctttttgaa 480
cagattaaac tgattgaagt gcaaagcaac agccttcata agatttcagt agatgtacaa 540
cggccacag gctcttttag cattgatttc ttgggagggt ttacaagcta ttatgacaac 600
atcaccaatg ttgtggtaaa gctggaacc agagatggag ccagcatgc tgtcttggt 660
aattgtcatt ttgactcagt agcaaactca ccaggtgcca gtgatgatgc agttagctgc 720
tcagtgatgc tggaagtcct tcgcgtcttg tcaacatctt cagaagcctt gcacatgc 780
gtcatatttc tctttaatgg tgctgaggaa aatgtcttgc aagccagtca tggtttcatt 840
actcagcacc cctgggctag cttgattcgt gcattcatta acctagaggc agcagggtga 900
ggagggaaaag aacttgatt ccaaacagg cctgaaaatc cttggttggt tcaagcttat 960
gtttcagcag ctaaaccacc ttttgcttct gtggtggctc aggaggtttt tcagagtgga 1020
atcattcctt cagatactga ctttcgtatc tacagggatt ttgggaacat tccaggaata 1080
gacttagctt ttattgagaa tggatacatt tatcacacca agtatgacac agcggacaga 1140
attctaacag attccattca gagagcagg gacaacattt tagcagttct taagcatcta 1200
gctacatctg atatgctggc tgctgcttct aagtatcgac atggaaacat ggtcttcttt 1260
gatgtgctgg gcctgtttgt cattgcctac ccctctcgta ttggctcaat cataaactac 1320
atggtggtaa tgggtgttgt tttgtacctg ggcaaaaaat ttttgcagcc caaacataag 1380
actggttaact acaagaagga cttcttgtgt ggacttggca tcactttgat cagctggttc 1440
actagccttg ttaccgttct cattatagca gtgttcatct ctcttattgg acagtctctc 1500
tcatgggata accacttcta tgtctccgtt tgtctgtatg gaactgcaac tgtagccaaa 1560
ataatactta tacatactct tgcgaaaaga ttttattaca tgaatgccag tgcccagtat 1620
ctgggagaag tttttttga catttcgctg tttgtccatt gctgttttct tgttaccctc 1680
acttaccaag gactttgctc ggcgtttatt agtgctgtct gggtagcatt ccattgctc 1740
acaaagctct gtgtgcataa ggacttcaag cagcatggtg cccaaggaaa atttattgct 1800
ttttacctt tggggatggt tattccttat ctttatgcat tgtacctcat ctgggcagta 1860

tttgagatgt	ttaccacctat	cctcgggaga	agtgggttctg	aatccccacc	tgatgttgtg	1920
ctggcatcca	ttttggctgg	ctgtacaatg	attctctctgt	cctattttat	taacttcac	1980
taccttgcca	agagcacaaa	aaaaaccatg	ctaacttta	ctttgggatg	tgcaattaca	2040
ttcctccttg	tttgcagtgg	aacatTTTTT	ccatatagct	ccaatcctgc	taatccgaag	2100
ccaaagagag	tgtttcttca	gcatatgact	agaacattcc	atgacttggg	aggaaatgca	2160
gttaaacggg	actctggaat	atggatcaat	gggtttgatt	atactggaat	ttctcacata	2220
acccctcaca	ttcctgagat	caatgatagt	atccgagctc	actgtgagga	gaatgcacct	2280
ctttgtgggt	ttccttggtg	tcttccagt	cactttctga	tcaggaaaaa	ctggatatct	2340
cctgccccag	aagtttctcc	aagaaatcct	cctcatttcc	gactcatatc	caaagaacag	2400
acaccttggg	attctataaa	attgactttt	gaagcaacag	cctgcctgcc	tatccttcag	2460
atTTTggact	tgccagcctc	aacaatcatg	accaagccat	atgtccttct	atgttcgagc	2520
ccacaaagg	tcaacacttt	ctcagtgggt	tcttggcaat	ggcaccacc	tcacaagtaa	2580
aggaggagac	tactttgtct	tttactccca	tggactccag	gcctctgcat	ggcagttctg	2640
gatagaagt	caggtttcag	aagaacatcc	tgaaggaaatg	gtcacctggg	ccattgctgc	2700
ccactatctg	tctggggaag	acaagagatc	ccctcaactg	gatgctctga	aggaaaagtt	2760
cccagattgg	acatttccct	ctgcctgggt	gtgcacctac	gatctctttg	tattttaatc	2820
ttgtggatga	gctctaagta	catgcccagt	ggatactcca	tgtgacatgg	tttctcccta	2880
tgttacgtgg	atgtttgtaa	cgtaagtcaa	tgaatttta	tgatcatatg	ttcaaagagc	2940
tttctgggtt	aacgcttttc	agggccaaagc	actataagg	tttagctgtg	gcgcagtgat	3000
gcatggcctg	ttgacacttg	aaaatgccag	tcttttggca	cttcagcaca	tgtgggtact	3060
gccactacac	acacgtcatt	ttatatgacc	ttaaggacaa	agccaacaat	ccacttcaat	3120
agctgcccct	ttaggatcaa	gaaagatgta	cactgtcaga	gcattgttaa	tgagacaaaa	3180
gttgtttcca	atttaagccc	caaaaccatt	tgttgtatta	gtggatgggtg	ggtaaaatat	3240
cattcactga	ggtaatgatt	ccccttgaga	atataactct	gtgtagggtca	ctggaaagt	3300
attgccatag	ggctgggaga	gaagcattgc	actcttgagg	ctgtagcctg	tgtcaagctg	3360
tttcttcagg	cagcctctca	aatgtgcttt	gtctctctgt	gctgaggcct	ggaccctgtg	3420
ctgagctggg	gactcactgt	cctgacaagt	ggacacacag	atgcactgct	gtgctgcttt	3480
cctgaggtgg	ttttctatgc	ctgttttcct	ctgaaacatg	tctgttacct	ctctccatct	3540
taccaagttg	aaaaggggaa	tatttggcca	catacccctc	tggttttcgt	aggttctttt	3600
ggttcagaat	attgtttgtg	ccagtacatg	accttaactt	ccttcctcag	agcactgagc	3660
tgccatctgg	gctattctgg	ggtagaagga	aggctgggag	tggtggggaat	tttataaata	3720

```

tttattctct tttctttggt tcataggagt cttgtgttat acaaggtag tccttcatgg 3780
tataatctta ctgatgcact gggcctatct ttttgttttc cagccagttg aatagattag 3840
tttttctcag taacttacta tccagcagac tggctttcct gagacttgag gttgtggctt 3900
atactggaat gagaccactg tacgtgtagg tggttcagat cctgcgtaat ggcagcatga 3960
ggacttaaaa ggtgggttttc attttgaaga tggctatgta gcttgtaagg tgtatcacag 4020
cagtacctct catggctttt tggttccagc agtgagggca ttggtgagat caatggtaaa 4080
ctgtgcaagc tttcttttta tcattaggaa atgtgaaacg ttggacaaat tttgagtttt 4140
aacaaggaca aaaagttgaa agaaaaggca cagttaacaa aaaaggggtg ctagatttat 4200
cttgggtgat ggaggaaatg agagaggaat gctcttgaaa ggtgggtctgt ggatctgtct 4260
gaatagaaag agcacagtaa gtatgcattg ccgagaaaaa cgtccttgaa gctgcttgct 4320
tcatgtgtat gatgtgcttt ttaaatacatg cccctcggtg cctgcctaata ctgtgactcc 4380
ctaaaaacta actgggcca tgtagatggg gctgcaacca gagctgaata acatgttagg 4440
ctcacacatg catcagcact gcacactgga atcattgctc ttcttgact ttgtagaaat 4500
cagtctcaag tgcttcaaga gtctggctcc tgctactttt atctgtcagg tagcacataa 4560
ggtttgcagg gtttatattt tgtatagaat cacagttgtg gagaaaaagt aataatttct 4620
caatgaattt taaaaatggg cctattttct atccccgtgg ttcatctgat ataattagt 4680
ttccctgtga attccccccc tctatgggaa ggatgccttt actctttatc agtaataaat 4740
tatgactgtt ttcatattgc cttaggggta tttccctgtg taaaccattg tcttttggtt 4800
tggttttctt tagcattatg aagctttggt attgtacaag gtcagtagta agatgctcac 4860
tagtctcagg gcttgtgtaa tattctggga ggtcatttaa atgccagaaa tggtaagca 4920
attatacaca gtatttatga ctctgttaag cataccgttt gtctgtcaca ttagtagatt 4980
ctgagattaa aaaaaatttt taaagagtga tcatttaaat aatttctaaa agggctcttt 5040
caagctctaa caaagtcact aacaaatgca ttattttcta cagaattaga tgtagtagt 5100
acagtactgc atattcaggg aaaaagtgtg aggaattgat ttcaaaatag ttcgttcttg 5160
tgtttgacct aagaatgatt gtcgcatgaa gtgtttgttt ttacagtta gcatatataa 5220
acaaacatga taggattcct taagatgtta ccaccaggg gccacaagc cagcctgctg 5280
tctcaggaag ctgtagaagg agtggttgtc aatttcttgt cactgggttg ctgacttact 5340
gaggattaat tgttgcctta caatgttact gaaataaact gtttaat 5387

```

```

<210> 95
<211> 202
<212> PRT
<213> Homo sapiens

```

<400> 95

Met Glu Arg Gly Ala Gly Ala Lys Leu Leu Pro Leu Leu Leu Leu Leu
 1 5 10 15

Arg Ala Thr Gly Phe Thr Cys Ala Gln Thr Asp Gly Arg Asn Gly Tyr
 20 25 30

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

Trp Pro Glu Met Cys Pro Asp Gly Phe Phe Ala Ser Gly Phe Ser Leu
 50 55 60

Lys Val Glu Pro Pro Gln Gly Ile Pro Gly Asp Asp Thr Ala Leu Asn
 65 70 75 80

Gly Ile Arg Leu His Cys Ala Arg Gly Asn Val Leu Gly Asn Thr His
 85 90 95

Val Val Glu Ser Gln Ser Gly Ser Trp Gly Glu Trp Ser Glu Pro Leu
 100 105 110

Trp Cys Arg Gly Gly Ala Tyr Leu Val Ala Phe Ser Leu Arg Val Glu
 115 120 125

Ala Pro Thr Thr Leu Gly Asp Asn Thr Ala Ala Asn Asn Val Arg Phe
 130 135 140

Arg Cys Ser Asp Gly Glu Glu Leu Gln Gly Pro Gly Leu Ser Trp Gly
 145 150 155 160

Asp Phe Gly Asp Trp Ser Asp His Cys Pro Lys Gly Ala Cys Gly Leu
 165 170 175

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

Asn Asp Ala Arg Leu Phe Cys Cys Arg Ser
 195 200

<210> 96

<211> 70

<212> PRT

<213> Homo sapiens

<400> 96

176

Met Glu Arg Gly Ala Gly Ala Lys Leu Leu Pro Leu Leu Leu Leu
 1 5 10 15

Arg Ala Thr Gly Phe Thr Cys Ala Gln Thr Asp Gly Arg Asn Gly Tyr
 20 25 30

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

Trp Pro Glu Met Cys Pro Asp Gly Phe Phe Ala Ser Gly Phe Ser Leu
 50 55 60

Lys Leu Gly Arg Met Glu
 65 70

<210> 97
 <211> 102
 <212> PRT
 <213> Homo sapiens

<400> 97

Met Glu Arg Gly Ala Gly Ala Lys Leu Leu Pro Leu Leu Leu Leu
 1 5 10 15

Arg Ala Thr Gly Phe Thr Cys Ala Gln Thr Asp Gly Arg Asn Gly Tyr
 20 25 30

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

Trp Pro Glu Met Cys Pro Asp Gly Phe Phe Ala Ser Gly Phe Ser Leu
 50 55 60

Lys Val Glu Pro Pro Gln Gly Ile Pro Gly Asp Asp Thr Ala Leu Asn
 65 70 75 80

Gly Ile Arg Leu His Cys Ala Arg Gly Asn Val Leu Gly Asn Thr His
 85 90 95

Val Leu Gly Arg Met Glu
 100

<210> 98
 <211> 114
 <212> PRT
 <213> Homo sapiens

<400> 98

177

Met Glu Arg Gly Ala Gly Ala Lys Leu Leu Pro Leu Leu Leu Leu Leu
1 5 10 15

Arg Ala Thr Gly Phe Thr Cys Ala Gln Thr Asp Gly Arg Asn Gly Tyr
20 25 30

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

Trp Pro Glu Met Cys Pro Asp Gly Phe Phe Ala Ser Gly Phe Ser Leu
50 55 60

Lys Val Glu Pro Pro Gln Gly Ile Pro Gly Asp Asp Thr Ala Leu Asn
65 70 75 80

Gly Ile Arg Leu His Cys Ala Arg Gly Asn Val Leu Gly Asn Thr His
85 90 95

Val Val Glu Ser Gln Ser Gly Arg Trp Gly Ala Gly Val Glu Asp Pro
100 105 110

Leu Gly

<210> 99

<211> 769

<212> DNA

<213> Homo sapiens

<400> 99

ggaggccctt ccgcaatcgg agccctcaca gaggccaaac tgatataaat ctgcttagga 60
ggcctgattc acagacgcta caggatggag cggggcgag gagccaagct gctgccgctg 120
ctgctgcttc tgcgggagac tggtttcaca tgtgcacaga cagatggccg gaacggctac 180
acggcggtca tcgaagtgc cagcgggggt ccctggggcg actgggcctg gcctgagatg 240
tgtcccgatg gattcttcgc cagcgggttc tcgctcaagg tggagcctcc ccaaggcatt 300
cctggcgacg aactgcact gaatgggatc aggctgcact gcgcgcgcgg gaacgtccta 360
ggcaatacgc acgtggtaga gtcccagtct ggaagctggg gcgaatggag tgagccgctg 420
tggtgtcgcg gcggcgcccta cctagtggct ttctcgcttc gcgtggaggc acccagcacc 480
ctcggtgaca acacagcagc gaacaacgtg cgcttccgct gttcagacgg cgaggaactg 540
caggggcctg ggctgagctg gggagacttt ggagactgga gtgaccattg cccaagggc 600
gcgtgcggcc tgcagaccaa gatccaggga cctagaggcc tcggcgatga cactgcgctg 660
aacgacgcgc gcttattctg ctgccgcagt tgaacggcgc cgccgccgcc gctctctccc 720

gggccaggag gctagtccca cctcttgcta ttaaagcttc tctgagttg 769

<210> 100
 <211> 653
 <212> DNA
 <213> Homo sapiens

<400> 100
 ggaggccctt ccgcaatcgg agccctcaca gaggccaaac tgatataaat ctgcttagga 60
 ggcttgattc acagacgcta caggatggag cggggcgag gagccaagct gctgccgctg 120
 ctgctgcttc tgcgggagac tggtttcaca tgtgcacaga cagatggccg gaacggctac 180
 acggcgggtca tcgaagtga cagcgggggt ccctggggcg actgggctg gcctgagatg 240
 tgtcccgatg gattcttcgc cagcgggttc tcgctcaagc tggggcgaat ggagtgaacc 300
 gctgtggtgt cgcggcggcg cctacctagt ggctttctcg cttcgcgtgg aggcacccac 360
 gaccctcggg gacaacacag cagcgaacaa cgtgcgcttc cgctgttcag acggcgagga 420
 actgcagggg cctgggctga gctggggaga ctttggagac tggagtgaac attgccccaa 480
 gggcgcggtg ggctgcaga ccaagatcca gggacctaga ggctcggcg atgacactgc 540
 gctgaacgac gcgcgcttat tctgctgccg cagttgaacg gcgccgccgc cgccgctctc 600
 tcccgggcca ggaggctagt cccacctctt gctattaaag cttctctgag ttg 653

<210> 101
 <211> 747
 <212> DNA
 <213> Homo sapiens

<400> 101
 aggcccttcc gcaatcggag ccctcacaga ggccaaactg atataaatct gcttaggagg 60
 cctgattcac agacgctaca ggatggagcg gggcgagga gccaagctgc tgccgctgct 120
 gctgcttctg cgggagactg gtttcacatg tgcacagaca gatggccgga acggctacac 180
 ggcggtcatc gaagtgaacca gcgggggtcc ctggggcgac tgggcctggc ctgagatgtg 240
 tcccgatgga ttcttcgcca gcgggttctc gctcaagggtg gagcctcccc aaggcattcc 300
 tggcgacgac actgcactga atgggatcag gctgcactgc gcgcgcggga acgtcctagg 360
 caatacgcac gtgctggggc gaatggagtg agccgctgtg gtgtcgcggc ggcgctacc 420
 tagtggtttt ctcgcttcgc gtggaggcac ccacgaccct cggtgacaac acagcagcga 480
 acaacgtgag cttccgctgt tcagacggcg aggaactgca ggggctggg ctgagctggg 540
 gagactttgg agactggagt gaccattgcc ccaagggcg gcgcggcctg cagaccaaga 600
 tccagggacc tagaggcctc ggcgatgaca ctgcgctgaa cgacgcgcgc ttattctgct 660
 gccgcagttg aacggcgccg ccgccgccgc tctctcccg gccaggaggc tagtcccacc 720

tcttgctatt aaagcttctc tgagttg

747

<210> 102

<211> 803

<212> DNA

<213> Homo sapiens

<400> 102

aggcccttcc gcaatcggag ccctcacaga ggccaaactg atataaatct gcttaggagg 60

cctgattcac agacgtaca ggatggagcg gggcgagga gccaaactgc tgccgctgct 120

gctgcttctg cgggcgactg gtttcacatg tgcacagaca gatggccgga acggctacac 180

ggcggtcac gaagtgaacca gcgggggtcc ctggggcgac tgggcctggc ctgagatgtg 240

tcccgatgga ttcttcgcca gcgggttctc gctcaagggtg gagcctcccc aaggcattcc 300

tggcgacgac actgcactga atgggatcag gctgcactgc gcgcgaggga acgtcctagg 360

caatacgcac gtggtagagt ccagctctgg aagggtgggc gcaggggtcg aggatccctt 420

ggggtgatgc tggggcgaat ggagtgaacc gctgtggtgt cgcggcggcg cctacctagt 480

ggctttctcg cttcgcgtgg aggcacccac gaccctcgtg gacaacacag cagcgaacaa 540

cgtgcgcttc cgctgttcag acggcgagga actgcagggg cctgggctga gctggggaga 600

ctttggagac tggagtgaacc attgccccaa gggcgctgc gcctgcaga ccaagatcca 660

gggacctaga ggctcggcg atgacactgc gctgaacgac gcgcgcttat tctgctgccg 720

cagttgaacg gcgccgccgc cgccgctctc tcccgggcca ggaggctagt cccacctctt 780

gctattaaag cttctctgag ttg 803

<210> 103

<211> 21

<212> DNA

<213> Homo sapiens

<400> 103

cgaggacaat ctggatatca a 21

<210> 104

<211> 21

<212> DNA

<213> Homo sapiens

<400> 104

ctggagccct cgagcaagaa a 21

<210> 105

<211> 21

<212> DNA

<213> Homo sapiens

<400> 105

cccgtaggttc atctgatata a	21
<210> 106	
<211> 21	
<212> DNA	
<213> Homo sapiens	
<400> 106	
aaggactttg ctcggcggtt a	21
<210> 107	
<211> 21	
<212> DNA	
<213> Homo sapiens	
<400> 107	
tacgtggatg tttgtaacgt a	21
<210> 108	
<211> 21	
<212> DNA	
<213> Homo sapiens	
<400> 108	
ctcgtattgg ctcaatcata a	21