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<170> PatentIn version 3.3

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Ile Arg Asp Thr Leu Tyr Ile Ala Gly Arg Asp Gln Val Tyr Thr Val
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Thr Trp Arg Ser Arg Gln Gln Asp Arg Glu Asn Cys Ala Met Lys Gly
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Lys His Lys Asp Glu Cys His Asn Phe Ile Lys Val Phe Val Pro Arg
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Cys Arg Tyr Tyr Arg Leu Ser Thr Leu Glu Tyr Asp Gly Glu Glu Ile
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Ala Ser Asp Ala Val Ile Tyr Arg Ser Met Gly Asp Gly Ser Ala Leu
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Arg Thr Ile Lys Tyr Asp Ser Lys Trp Ile Lys Glu Pro His Phe Leu
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His Ala Ile Glu Tyr Gly Asn Tyr Val Tyr Phe Phe Phe Arg Glu Ile
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Ala Val Glu His Asn Asn Leu Gly Lys Ala Val Tyr Ser Arg Val Ala
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Arg Ile Cys Lys Asn Asp Met Gly Gly Ser Gln Arg Val Leu Glu Lys
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His Trp Thr Ser Phe Leu Lys Ala Arg Leu Asn Cys Ser Val Pro Gly
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Asp Ser Phe Phe Tyr Phe Asp Val Leu Gln Ser Ile Thr Asp Ile Ile
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His Lys Ala Glu Lys Lys Leu Gln Asn Ile Asp His Pro Leu Thr Lys
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Leu Phe Ala Asp Gly Lys Leu Tyr Ser Ala Thr Val Ala Asp Phe Leu
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Tyr Cys Tyr Arg Asp Met Phe Val Arg Lys Asn Arg Lys Ile His Lys

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615

620

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His Gly His Gly Ala Ser Arg Lys Glu Thr Pro Gln Phe Phe Pro Ser
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Gln Leu Arg Ala Val Ser Phe Pro Glu Asp Asp Glu Pro Leu Asn Thr
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Val Asp Tyr His Tyr Ser Arg Gln Tyr Pro Val Phe Arg Gly Arg Pro
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Ser Gly Asn Glu Ser Gln His Arg Leu Asp Phe Gln Leu Met Leu Lys
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Ile Arg Asp Thr Leu Tyr Ile Ala Gly Arg Asp Gln Val Tyr Thr Val
65          70          75          80

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Asn Leu Asn Glu Met Pro Lys Thr Glu Val Ile Pro Asn Lys Lys Leu
          85          90          95

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Thr Trp Arg Ser Arg Gln Gln Asp Arg Glu Asn Cys Ala Met Lys Gly
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Lys His Lys Asp Glu Cys His Asn Phe Ile Lys Val Phe Val Pro Arg
          115          120          125

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Asn Asp Glu Met Val Phe Val Cys Gly Thr Asn Ala Phe Asn Pro Met
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Cys Arg Tyr Tyr Arg Leu Ser Thr Leu Glu Tyr Asp Gly Glu Glu Ile
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Ser Gly Leu Ala Arg Cys Pro Phe Asp Ala Arg Gln Thr Asn Val Ala
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Leu Phe Ala Asp Gly Lys Leu Tyr Ser Ala Thr Val Ala Asp Phe Leu
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Arg Thr Ile Lys Tyr Asp Ser Lys Trp Ile Lys Glu Pro His Phe Leu
 210 215 220

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

Ala Val Glu His Asn Asn Leu Gly Lys Ala Val Tyr Ser Arg Val Ala
 245 250 255

Arg Ile Cys Lys Asn Asp Met Gly Gly Ser Gln Arg Val Leu Glu Lys
 260 265 270

His Trp Thr Ser Phe Leu Lys Ala Arg Leu Asn Cys Ser Val Pro Gly
 275 280 285

Asp Ser Phe Phe Tyr Phe Asp Val Leu Gln Ser Ile Thr Asp Ile Ile
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Gln Ile Asn Gly Ile Pro Thr Val Val Gly Val Phe Thr Thr Gln Leu
 305 310 315 320

Asn Ser Ile Pro Gly Ser Ala Val Cys Ala Phe Ser Met Asp Asp Ile
 325 330 335

Glu Lys Val Phe Lys Gly Arg Phe Lys Glu Gln Lys Thr Pro Asp Ser
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Val Trp Thr Ala Val Pro Glu Asp Lys Val Pro Lys Pro Arg Pro Gly
 355 360 365

Cys Cys Ala Lys His Gly Leu Ala Glu Ala Tyr Lys Thr Ser Ile Asp
 370 375 380

Phe Pro Asp Glu Thr Leu Ser Phe Ile Lys Ser His Pro Leu Met Asp
 385 390 395 400

Ser Ala Val Pro Pro Ile Ala Asp Glu Pro Trp Phe Thr Lys Thr Arg
 405 410 415

Val Arg Tyr Arg Leu Thr Ala Ile Ser Val Asp His Ser Ala Gly Pro
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Tyr Gln Asn Tyr Thr Val Ile Phe Val Gly Ser Glu Ala Gly Met Val
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Leu Lys Val Leu Ala Lys Thr Ser Pro Phe Ser Leu Asn Asp Ser Val
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Leu Leu Glu Glu Ile Glu Ala Tyr Asn His Ala Lys Cys Ser Ala Glu
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Asn Glu Glu Asp Lys Lys Val Ile Ser Leu Gln Leu Asp Lys Asp His
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His Ala Leu Tyr Val Ala Phe Ser Ser Cys Ile Ile Arg Ile Pro Leu
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Ser Arg Cys Glu Arg Tyr Gly Ser Cys Lys Lys Ser Cys Ile Ala Ser
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Arg Asp Pro Tyr Cys Gly Trp Leu Ser Gln Gly Ser Cys Gly Arg Val
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Asn Thr Ala His Leu Gly Asp Cys His Glu Ile Leu Pro Thr Ser Thr
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Thr Pro Asp Tyr Lys Ile Phe Gly Gly Pro Thr Ser Asp Met Glu Val
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Ser Ser Ser Ser Val Thr Thr Met Ala Ser Ile Pro Glu Ile Thr Pro
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Lys Val Ile Asp Thr Trp Arg Pro Lys Leu Thr Ser Ser Arg Lys Phe
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Val Val Gln Asp Asp Pro Asn Thr Ser Asp Phe Thr Asp Pro Leu Ser
 625 630 635 640

Gly Ile Pro Lys Gly Val Arg Trp Glu Val Gln Ser Gly Glu Ser Asn
 645 650 655

Gln Met Val His Met Asn Val Leu Ile Thr Cys Val Phe Ala Ala Phe
 660 665 670

Val Leu Gly Ala Phe Ile Ala Gly Val Ala Val Tyr Cys Tyr Arg Asp
675 680 685

Met Phe Val Arg Lys Asn Arg Lys Ile His Lys Asp Ala Glu Ser Ala
690 695 700

Gln Ser Cys Thr Asp Ser Ser Gly Ser Phe Ala Lys Leu Asn Gly Leu
705 710 715 720

Phe Asp Ser Pro Val Lys Glu Tyr Gln Gln Asn Ile Asp Ser Pro Lys
725 730 735

Leu Tyr Ser Asn Leu Leu Thr Ser Arg Lys Glu Leu Pro Pro Asn Gly
740 745 750

Asp Thr Lys Ser Met Val Met Asp His Arg Gly Gln Pro Pro Glu Leu
755 760 765

Ala Ala Leu Pro Thr Pro Glu Ser Thr Pro Val Leu His Gln Lys Thr
770 775 780

Leu Gln Ala Met Lys Ser His Ser Glu Lys Ala His Gly His Gly Ala
785 790 795 800

Ser Arg Lys Glu Thr Pro Gln Phe Phe Pro Ser Ser Pro Pro Pro His
805 810 815

Ser Pro Leu Ser His Gly His Ile Pro Ser Ala Ile Val Leu Pro Asn
820 825 830

Ala Thr His Asp Tyr Asn Thr Ser Phe Ser Asn Ser Asn Ala His Lys
835 840 845

Ala Glu Lys Lys Leu Gln Asn Ile Asp His Pro Leu Thr Lys Ser Ser
850 855 860

Ser Lys Arg Asp His Arg Arg Ser Val Asp Ser Arg Asn Thr Leu Asn
865 870 875 880

Asp Leu Leu Lys His Leu Asn Asp Pro Asn Ser Asn Pro Lys Ala Ile
885 890 895

Met Gly Asp Ile Gln Met Ala His Gln Asn Leu Met Leu Asp Pro Met
900 905 910

Gly Ser Met Ser Glu Val Pro Pro Lys Val Pro Asn Arg Glu Ala Ser

915

920

925

Leu Tyr Ser Pro Pro Ser Thr Leu Pro Arg Asn Ser Pro Thr Lys Arg
 930 935 940

Val Asp Val Pro Thr Thr Pro Gly Val Pro Met Thr Ser Leu Glu Arg
 945 950 955 960

Gln Arg Gly Tyr His Lys Asn Ser Ser Gln Arg His Ser Ile Ser Ala
 965 970 975

Met Pro Lys Asn Leu Asn Ser Pro Asn Gly Val Leu Leu Ser Arg Gln
 980 985 990

Pro Ser Met Asn Arg Gly Gly Tyr Met Pro Thr Pro Thr Gly Ala Lys
 995 1000 1005

Val Asp Tyr Ile Gln Gly Thr Pro Val Ser Val His Leu Gln Pro
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Ser Leu Ser Arg Gln Ser Ser Tyr Thr Ser Asn Gly Thr Leu Pro
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Arg Thr Gly Leu Lys Arg Thr Pro Ser Leu Lys Pro Asp Val Pro
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Asn Lys Tyr Thr Tyr
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Met Arg Val Phe Leu Leu Cys Ala Tyr Ile Leu	
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ctg ctg atg gtt tcc cag ttg agg gca gtc agc ttt cct gaa gat gat	520
Leu Leu Met Val Ser Gln Leu Arg Ala Val Ser Phe Pro Glu Asp Asp	
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Glu Pro Leu Asn Thr Val Asp Tyr His Tyr Ser Arg Gln Tyr Pro Val	
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Phe Arg Gly Arg Pro Ser Gly Asn Glu Ser Gln His Arg Leu Asp Phe	
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Gln Leu Met Leu Lys Ile Arg Asp Thr Leu Tyr Ile Ala Gly Arg Asp	
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Gln Val Tyr Thr Val Asn Leu Asn Glu Met Pro Lys Thr Glu Val Ile	
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ccc aac aag aaa ctg aca tgg cga tca aga caa cag gat cga gaa aac	760
Pro Asn Lys Lys Leu Thr Trp Arg Ser Arg Gln Gln Asp Arg Glu Asn	
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Cys Ala Met Lys Gly Lys His Lys Asp Glu Cys His Asn Phe Ile Lys	
110 115 120	
gta ttt gtt cca aga aac gat gag atg gtt ttt gtt tgt ggt acc aat	856
Val Phe Val Pro Arg Asn Asp Glu Met Val Phe Val Cys Gly Thr Asn	
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Ala Phe Asn Pro Met Cys Arg Tyr Tyr Arg Leu Ser Thr Leu Glu Tyr	
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Asp Gly Glu Glu Ile Ser Gly Leu Ala Arg Cys Pro Phe Asp Ala Arg	
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caa acc aat gtt gcc ctc ttt gct gat ggg aag ctg tat tct gcc aca	1000
Gln Thr Asn Val Ala Leu Phe Ala Asp Gly Lys Leu Tyr Ser Ala Thr	
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gtg gct gac ttc ttg gcc agc gat gcc gtt att tat cga agc atg ggt	1048
Val Ala Asp Phe Leu Ala Ser Asp Ala Val Ile Tyr Arg Ser Met Gly	
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Lys Cys Ser Ala Glu Asn Glu Glu Asp Lys Lys Val Ile Ser Leu Gln	
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Leu Asp Lys Asp His His Ala Leu Tyr Val Ala Phe Ser Ser Cys Ile	
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Ile Arg Ile Pro Leu Ser Arg Cys Glu Arg Tyr Gly Ser Cys Lys Lys	
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Ser Cys Ile Ala Ser Arg Asp Pro Tyr Cys Gly Trp Leu Ser Gln Gly	
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Asp Thr Glu Phe Gly Asn Thr Ala His Leu Gly Asp Cys His Asp Met	
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Gln Leu Arg Ala Val Ser Phe Pro Glu Asp Asp Glu Pro Leu Asn Thr
20           25           30

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Val Asp Tyr His Tyr Ser Arg Gln Tyr Pro Val Phe Arg Gly Arg Pro
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Ser Gly Asn Glu Ser Gln His Arg Leu Asp Phe Gln Leu Met Leu Lys
50           55           60

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Ile Arg Asp Thr Leu Tyr Ile Ala Gly Arg Asp Gln Val Tyr Thr Val
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Asn Leu Asn Glu Met Pro Lys Thr Glu Val Ile Pro Asn Lys Lys Leu
85 90 95

Thr Trp Arg Ser Arg Gln Gln Asp Arg Glu Asn Cys Ala Met Lys Gly
100 105 110

Lys His Lys Asp Glu Cys His Asn Phe Ile Lys Val Phe Val Pro Arg
115 120 125

Asn Asp Glu Met Val Phe Val Cys Gly Thr Asn Ala Phe Asn Pro Met
130 135 140

Cys Arg Tyr Tyr Arg Leu Ser Thr Leu Glu Tyr Asp Gly Glu Glu Ile
145 150 155 160

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

Leu Phe Ala Asp Gly Lys Leu Tyr Ser Ala Thr Val Ala Asp Phe Leu
180 185 190

Ala Ser Asp Ala Val Ile Tyr Arg Ser Met Gly Asp Gly Ser Ala Leu
195 200 205

Arg Thr Ile Lys Tyr Asp Ser Lys Trp Ile Lys Glu Pro His Phe Leu
210 215 220

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

Ala Val Glu His Asn Asn Leu Gly Lys Ala Val Tyr Ser Arg Val Ala
245 250 255

Arg Ile Cys Lys Asn Asp Met Gly Gly Ser Gln Arg Val Leu Glu Lys
260 265 270

His Trp Thr Ser Phe Leu Lys Ala Arg Leu Asn Cys Ser Val Pro Gly
275 280 285

Asp Ser Phe Phe Tyr Phe Asp Val Leu Gln Ser Ile Thr Asp Ile Ile
290 295 300

Gln Ile Asn Gly Ile Pro Thr Val Val Gly Val Phe Thr Thr Gln Leu
 305 310 315 320

Asn Ser Ile Pro Gly Ser Ala Val Cys Ala Phe Ser Met Asp Asp Ile
 325 330 335

Glu Lys Val Phe Lys Gly Arg Phe Lys Glu Gln Lys Thr Pro Asp Ser
 340 345 350

Val Trp Thr Ala Val Pro Glu Asp Lys Val Pro Lys Pro Arg Pro Gly
 355 360 365

Cys Cys Ala Lys His Gly Leu Ala Glu Ala Tyr Lys Thr Ser Ile Asp
 370 375 380

Phe Pro Asp Glu Thr Leu Ser Phe Ile Lys Ser His Pro Leu Met Asp
 385 390 395 400

Ser Ala Val Pro Pro Ile Ala Asp Glu Pro Trp Phe Thr Lys Thr Arg
 405 410 415

Val Arg Tyr Arg Leu Thr Ala Ile Ser Val Asp His Ser Ala Gly Pro
 420 425 430

Tyr Gln Asn Tyr Thr Val Ile Phe Val Gly Ser Glu Ala Gly Met Val
 435 440 445

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

Leu Leu Glu Glu Ile Glu Ala Tyr Asn His Ala Lys Cys Ser Ala Glu
 465 470 475 480

Asn Glu Glu Asp Lys Lys Val Ile Ser Leu Gln Leu Asp Lys Asp His
 485 490 495

His Ala Leu Tyr Val Ala Phe Ser Ser Cys Ile Ile Arg Ile Pro Leu
 500 505 510

Ser Arg Cys Glu Arg Tyr Gly Ser Cys Lys Lys Ser Cys Ile Ala Ser
 515 520 525

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

Thr Pro Gly Met Leu Ala Glu Gly Tyr Glu Gln Asp Thr Glu Phe Gly
 545 550 555 560

Asn Thr Ala His Leu Gly Asp Cys His Asp Met Glu Val Ser Ser Ser
 565 570 575

Ser Val Thr Thr Met Val Tyr Asp Gly Lys Ser Ser Leu Glu Ser Pro
 580 585 590

Thr Arg Trp Ser Thr
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<210> 11
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 <212> DNA
 <213> Homo sapiens

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 ctccggcaac gagaggcggt ctgcagccgg gagggagccg ccgctcgcgc cggcagccgc 360
 tggcaggggc atggtgagga ggaaggtagc tcagtggcat ttctgagcag gggccaccct 420
 gacttcacct tggcccacc atg agg gtc ttc ctg ctt tgt gcc tac ata ctg 472
 Met Arg Val Phe Leu Leu Cys Ala Tyr Ile Leu
 1 5 10
 ctg ctg atg gtt tcc cag ttg agg gca gtc agc ttt cct gaa gat gat 520
 Leu Leu Met Val Ser Gln Leu Arg Ala Val Ser Phe Pro Glu Asp Asp
 15 20 25
 gaa ccc ctt aat act gtc gac tat cac tat tca agg caa tat ccg gtt 568
 Glu Pro Leu Asn Thr Val Asp Tyr His Tyr Ser Arg Gln Tyr Pro Val
 30 35 40
 ttt aga gga cgc cct tca ggc aat gaa tcg cag cac agg ctg gac ttt 616
 Phe Arg Gly Arg Pro Ser Gly Asn Glu Ser Gln His Arg Leu Asp Phe
 45 50 55
 cag ctg atg ttg aaa att cga gac aca ctt tat att gct ggc agg gat 664
 Gln Leu Met Leu Lys Ile Arg Asp Thr Leu Tyr Ile Ala Gly Arg Asp
 60 65 70 75

caa gtt tat aca gta aac tta aat gaa atg ccc aaa aca gaa gta ata	712
Gln Val Tyr Thr Val Asn Leu Asn Glu Met Pro Lys Thr Glu Val Ile	
80 85 90	
ccc aac aag aaa ctg aca tgg cga tca aga caa cag gat cga gaa aac	760
Pro Asn Lys Lys Leu Thr Trp Arg Ser Arg Gln Gln Asp Arg Glu Asn	
95 100 105	
tgt gct atg aaa ggc aag cat aaa gat gaa tgc cac aac ttt atc aaa	808
Cys Ala Met Lys Gly Lys His Lys Asp Glu Cys His Asn Phe Ile Lys	
110 115 120	
gta ttt gtt cca aga aac gat gag atg gtt ttt gtt tgt ggt acc aat	856
Val Phe Val Pro Arg Asn Asp Glu Met Val Phe Val Cys Gly Thr Asn	
125 130 135	
gca ttc aat ccc atg tgt aga tac tac agg ttg agt acc tta gaa tat	904
Ala Phe Asn Pro Met Cys Arg Tyr Tyr Arg Leu Ser Thr Leu Glu Tyr	
140 145 150 155	
gat ggg gaa gaa att agt ggc ctg gca aga tgc cca ttt gat gcc aga	952
Asp Gly Glu Glu Ile Ser Gly Leu Ala Arg Cys Pro Phe Asp Ala Arg	
160 165 170	
caa acc aat gtt gcc ctc ttt gct gat ggg aag ctg tat tct gcc aca	1000
Gln Thr Asn Val Ala Leu Phe Ala Asp Gly Lys Leu Tyr Ser Ala Thr	
175 180 185	
gtg gct gac ttc ttg gcc agc gat gcc gtt att tat cga agc atg ggt	1048
Val Ala Asp Phe Leu Ala Ser Asp Ala Val Ile Tyr Arg Ser Met Gly	
190 195 200	
gat gga tct gcc ctt cgc aca ata aaa tat gat tcc aaa tgg ata aaa	1096
Asp Gly Ser Ala Leu Arg Thr Ile Lys Tyr Asp Ser Lys Trp Ile Lys	
205 210 215	
gag cca cac ttt ctt cat gcc ata gaa tat gga aac tat gtc tat ttc	1144
Glu Pro His Phe Leu His Ala Ile Glu Tyr Gly Asn Tyr Val Tyr Phe	
220 225 230 235	
ttc ttt cga gaa atc gct gtc gaa cat aat aat tta ggc aag gct gtg	1192
Phe Phe Arg Glu Ile Ala Val Glu His Asn Asn Leu Gly Lys Ala Val	
240 245 250	
tat tcc cgc gtg gcc cgc ata tgt aaa aac gac atg ggt ggt tcc cag	1240
Tyr Ser Arg Val Ala Arg Ile Cys Lys Asn Asp Met Gly Gly Ser Gln	
255 260 265	
cgg gtc ctg gag aaa cac tgg act tca ttt cta aag gct cgg ctg aac	1288
Arg Val Leu Glu Lys His Trp Thr Ser Phe Leu Lys Ala Arg Leu Asn	
270 275 280	
tgt tct gtc cct gga gat tgc ttt ttc tac ttt gat gtt ctg cag tct	1336
Cys Ser Val Pro Gly Asp Ser Phe Phe Tyr Phe Asp Val Leu Gln Ser	
285 290 295	
att aca gac ata ata caa atc aat ggc atc ccc act gtg gtc ggg gtg	1384
Ile Thr Asp Ile Ile Gln Ile Asn Gly Ile Pro Thr Val Val Gly Val	
300 305 310 315	
ttt acc acg cag ctc aat agc atc cct ggt tct gct gtc tgt gca ttt	1432

Phe Thr Thr Gln Leu Asn Ser Ile Pro Gly Ser Ala Val Cys Ala Phe	
320 325 330	
agc atg gat gac att gaa aaa gta ttc aaa gga cgg ttt aag gaa cag	1480
Ser Met Asp Asp Ile Glu Lys Val Phe Lys Gly Arg Phe Lys Glu Gln	
335 340 345	
aaa act cca gat tct gtt tgg aca gca gtt ccc gaa gac aaa gtg cca	1528
Lys Thr Pro Asp Ser Val Trp Thr Ala Val Pro Glu Asp Lys Val Pro	
350 355 360	
aag cca agg cct ggc tgt tgt gca aaa cac ggc ctt gcc gaa gct tat	1576
Lys Pro Arg Pro Gly Cys Cys Ala Lys His Gly Leu Ala Glu Ala Tyr	
365 370 375	
aaa acc tcc atc gat ttc ccg gat gaa act ctg tca ttc atc aaa tct	1624
Lys Thr Ser Ile Asp Phe Pro Asp Glu Thr Leu Ser Phe Ile Lys Ser	
380 385 390 395	
cat ccc ctg atg gac tct gcc gtt cca ccc att gcc gat gag ccc tgg	1672
His Pro Leu Met Asp Ser Ala Val Pro Pro Ile Ala Asp Glu Pro Trp	
400 405 410	
ttc aca aag act cgg gtc agg tac aga ctg acg gcc atc tca gtg gac	1720
Phe Thr Lys Thr Arg Val Arg Tyr Arg Leu Thr Ala Ile Ser Val Asp	
415 420 425	
cat tca gcc gga ccc tac cag aac tac aca gtc atc ttt gtt ggc tct	1768
His Ser Ala Gly Pro Tyr Gln Asn Tyr Thr Val Ile Phe Val Gly Ser	
430 435 440	
gaa gct ggc atg gta ctt aaa gtt ctg gca aag acc agt cct ttc tct	1816
Glu Ala Gly Met Val Leu Lys Val Leu Ala Lys Thr Ser Pro Phe Ser	
445 450 455	
ttg aac gac agc gta tta ctg gaa gag att gaa gcc tac aac cat gca	1864
Leu Asn Asp Ser Val Leu Leu Glu Glu Ile Glu Ala Tyr Asn His Ala	
460 465 470 475	
aag tag gtatatgtta cgagaacgcc cttcagcact gctcaaaaat tttcggcatg	1920
Lys	
tatttcatct agtcatgtcc ttttggctcct cttaaattagc agtggttttg cataatagtg	1980
ttttgtgttt tttttctcat tgaaataaat cttggggttg tttttttccc gagcctgcta	2040
gggcgagggg ggtgaatggt tgatgagttt aaaaataatg cagcccttgt ttttcacctg	2100
tagaatatga gaacatttta acagcacctc tcttatcttg cagatatatt ccaagatgct	2160
acatgcagca gacagctgtg agcttgcata cacacacaca caaatataca tgcacataca	2220
tacacagaat gcagtactag ttaagtatct ccttcctatc ttttaataagt aagagaatat	2280
ttagaccatt	2290

<210> 12
 <211> 476
 <212> PRT

<213> Homo sapiens

<400> 12

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

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

Ser Gly Asn Glu Ser Gln His Arg Leu Asp Phe Gln Leu Met Leu Lys
50 55 60

Ile Arg Asp Thr Leu Tyr Ile Ala Gly Arg Asp Gln Val Tyr Thr Val
65 70 75 80

Asn Leu Asn Glu Met Pro Lys Thr Glu Val Ile Pro Asn Lys Lys Leu
85 90 95

Thr Trp Arg Ser Arg Gln Gln Asp Arg Glu Asn Cys Ala Met Lys Gly
100 105 110

Lys His Lys Asp Glu Cys His Asn Phe Ile Lys Val Phe Val Pro Arg
115 120 125

Asn Asp Glu Met Val Phe Val Cys Gly Thr Asn Ala Phe Asn Pro Met
130 135 140

Cys Arg Tyr Tyr Arg Leu Ser Thr Leu Glu Tyr Asp Gly Glu Glu Ile
145 150 155 160

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

Leu Phe Ala Asp Gly Lys Leu Tyr Ser Ala Thr Val Ala Asp Phe Leu
180 185 190

Ala Ser Asp Ala Val Ile Tyr Arg Ser Met Gly Asp Gly Ser Ala Leu
195 200 205

Arg Thr Ile Lys Tyr Asp Ser Lys Trp Ile Lys Glu Pro His Phe Leu
210 215 220

His Ala Ile Glu Tyr Gly Asn Tyr Val Tyr Phe Phe Phe Arg Glu Ile

225		230		235		240
Ala Val Glu His Asn Asn Leu Gly Lys Ala Val Tyr Ser Arg Val Ala	245		250		255	
Arg Ile Cys Lys Asn Asp Met Gly Gly Ser Gln Arg Val Leu Glu Lys	260		265		270	
His Trp Thr Ser Phe Leu Lys Ala Arg Leu Asn Cys Ser Val Pro Gly	275		280		285	
Asp Ser Phe Phe Tyr Phe Asp Val Leu Gln Ser Ile Thr Asp Ile Ile	290		295		300	
Gln Ile Asn Gly Ile Pro Thr Val Val Gly Val Phe Thr Thr Gln Leu	305		310		315	320
Asn Ser Ile Pro Gly Ser Ala Val Cys Ala Phe Ser Met Asp Asp Ile	325		330		335	
Glu Lys Val Phe Lys Gly Arg Phe Lys Glu Gln Lys Thr Pro Asp Ser	340		345		350	
Val Trp Thr Ala Val Pro Glu Asp Lys Val Pro Lys Pro Arg Pro Gly	355		360		365	
Cys Cys Ala Lys His Gly Leu Ala Glu Ala Tyr Lys Thr Ser Ile Asp	370		375		380	
Phe Pro Asp Glu Thr Leu Ser Phe Ile Lys Ser His Pro Leu Met Asp	385		390		395	400
Ser Ala Val Pro Pro Ile Ala Asp Glu Pro Trp Phe Thr Lys Thr Arg	405		410		415	
Val Arg Tyr Arg Leu Thr Ala Ile Ser Val Asp His Ser Ala Gly Pro	420		425		430	
Tyr Gln Asn Tyr Thr Val Ile Phe Val Gly Ser Glu Ala Gly Met Val	435		440		445	
Leu Lys Val Leu Ala Lys Thr Ser Pro Phe Ser Leu Asn Asp Ser Val	450		455		460	
Leu Leu Glu Glu Ile Glu Ala Tyr Asn His Ala Lys	465		470		475	

<210> 13
 <211> 658
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (217)..(217)
 <223> SNP61=G/T

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 actttaacct gtgttgtctg caataagtcc aggtgttttag taagtatcag aattgaatag 180
 aattgttgaa cacacagttg gtatctggag aatcagktga ctgccagtat taggaaccct 240
 tccccagccc ataccaaggc acccaaatgt gtgatcacag ttgggtacct gagctttggc 300
 aggcaggcag tcatgtcacc aggtgcacat gacaaatgtc atgcatgttt taactaaata 360
 caaggtgaga gtcagaaatt ctcttctggt gtttagtagc aatgaagact gcacctgacc 420
 aaaaaataaa aattcacgaa acttaaatgc taaaaaaaaa aaaaaaaaaa ttttaccgaa 480
 gagaatcttt ccatttaagg gcctcaagca cacaactttt ttcacagaag ccattcttgaa 540
 tgttcaacat acatagattg cttttgctct caaaattgac agagatgggg agcaggattg 600
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<210> 14
 <211> 802
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (269)..(269)
 <223> SNP63=A/G

<400> 14
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 ttagcctttc ggttttaaaag gcaaggctca atgagtgatc ctgagtgggtg atacgcagaa 120
 ccctcaccct tccaagcaca gtggctgcac atagaataag agaaagcaga ggcagtcaga 180
 atgtcactaa aggaggcaaa tgtgaccctg tgggtggaaa tttcaagtta tcctcttaat 240
 caaagaatag tttattgaca atgttttcra catggatcaa gctttctcaa agaccatgct 300
 ttagtcaggt tgaattacaa gggtttaaaa tggccccagt gacttctgat gacaataatg 360

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gtgtctgagg aatcagtcgc ttttcccaca agctacgtct ttccttccaa ccttcctcga 420
cactcacctt tctgtgaaag aaagccaggc ttgacatttc agatgtgaaa attaccctaa 480
aactgatttc tgaaatagac actcagttct tatttgaaa tattctgttg ccaacagcat 540
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agatggggtc ccaggagcca gtgctggttt tgtgttgaga cacggctgtc ccatgggctg 660
cagtgtgaag agagatagaa agagagtgtc cgggacaaca tgagacaaac ccgccaaaag 720
gaatggatgc aaagattgaa tcagatagga gacaatgaca tagaagcgga gtgtcaagac 780
ataaaaatac taccttgaga ag 802

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<210> 15
<211> 701
<212> DNA
<213> Homo sapiens

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<220>
<221> misc_feature
<222> (501)..(501)
<223> SNP67=A/G

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<400> 15
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tctgctttgc tagctccttc catgttccta gtaggactgg tacattcaag gtgagaatcc 180
aacagatcaa gagacaaact ctcccaggaa acctttccta gtaacagatt ttcccgggct 240
ctcattggat aacatcatgt cacctgctca tgtatgaagc ctaaagcagt cttgggcagg 300
ggaatgggac cacctcagtt gacccaaatg ggagagattg gcttaccagt ggatacacia 360
acaaaatcac ctttttggtt tagagaatta tacattgtta tttataccat tgttatttat 420
acatattacc tacacatagt gtacattaaa cacatttgtg aatgtgctca aactattcaa 480
agtttggtgt ttggccagca rtgtttttct gcatgatttg aaaattttgc atacttgga 540
cagaatttgc atttgattag gcaattaaaa aaaataaaag atatgacact gcaagaaaat 600
gctacaaaaa tgtaggcagg attcataaaa cgacttctct ttcactatac ttccatattt 660
gtttcctgta gcttctttta aatgagaaat aagatacccc t 701

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<210> 16
<211> 845
<212> DNA
<213> Homo sapiens

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<220>

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<221> misc_feature
 <222> (566)..(566)
 <223> SNP68=C/T

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 aaggctaadc tcagaaaggc tcaaaatgga tttgcattga caaaatcaaa actagggtcc 180
 acagtgcacat tcagcattgt ctacagctat ggggccaaaga gggaccagag gacagcattt 240
 ggatgccact tctctgaacc ccgtaaaatt cgggcatggt aaagcacccc ctcatccag 300
 tgcaaactca gctttctcca cctttctgcc tttggatgtg ctgtcccat cactacctgg 360
 aatgctcttc ttgtcccttc ctcttcatga ctgattcctc atgagaaatc acttcccacc 420
 aggattttcc ttcttttctt tctccggcca tgaaaatctg ggctcacttt catcagagca 480
 catatcacgt gatagtctgt ttccttcttt tcataactta ctccccgca ctgtagggtt 540
 ctttgagtgc aggaactgcc ttttaygtct gcaaataaac tccccaaaaa gtggttagtc 600
 cacagggttt taatagttct tgttgaatga atttctgtgt gcgaccctgt gccttctcaa 660
 gaaaaaaaaa acattgaaaa atctccacag agccctttac cactgatgg tgaattgcta 720
 atgacaggtc atccacgatc accagtaatg aacacatata cgaccaaca tattaaatta 780
 tgtattaaat tattaaatta agcattaaat tatgcagcag tatttccggt aggcaattgc 840
 cctta 845

<210> 17
 <211> 601
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (301)..(301)
 <223> SNP70=A/G

<400> 17
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 cccttttgca actattcatt tattcattgt gcatttattg agtgtgtact gttgagcctc 120
 atgagagcac ctagagaaat cagtggaaat gcattgagct taagttttcc aatttaaccg 180
 ggctttgatg atgaataaag aaacaaaaat gaaaaacaca gaataggcca ggagagtta 240
 tgtatctttt cttaagtagg gccaatccat gcagaggaag gccctctagt ctggataatc 300
 rtacagcatg ctggaaagta ctgctgctct gtcaccaatg agaaagcacc tggctcaaga 360
 acaaacagg ttgtatacat tgggtggggt gtgaaatgaa tcagttgttc cctgaaactg 420

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gtggtggcag acatggtctc tcgtcctaga aggacaaacg acaaactcac gttctctaaa 480
atctgtctcc cttctgcttt ctcatgtttt ctgcccctgg ttcttgggaa atggcgagag 540
aagcagtaga actgggttaa acggataaaag taaataagct ttgctctggg atcacattgt 600
t 601

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<210> 18
<211> 649
<212> DNA
<213> Homo sapiens

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<220>
<221> misc_feature
<222> (240)..(240)
<223> SNP62=C/T

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<400> 18
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ggctctccagg acacctgtgt gatccttcct tcagcccaga tataccagtc actcccttat 180
gctttacaac aaccacatct ttcccctgcc tggatatatc ttggatgatc agaagtctay 240
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gtgatctcat cctactctta gtattcataa gcttattttc tgaatcattt tttgccatac 360
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gtaatgtgga gtgaatgagt gcttctgata tatagaaata tgagagacaa agaggagaaa 540
aaacccaaaa tctattatct tcaagggata ttcccacctg gtctttgtgt ggttttctgt 600
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<210> 19
<211> 701
<212> DNA
<213> Homo sapiens

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<220>
<221> misc_feature
<222> (501)..(501)
<223> SNP64=A/G

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<400> 19
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gttcaatcta aatacaagaa aattcttcaa atattaaaag gacaatcata atagaagctg 120

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gaataaaatt attatgtctt cattcattca acaattatta ttgaaggcat tgtcatggga 180
gtattttaagc ataggctggg gaagagctgt taagggtttt atagagtatg aaaagatcag 240
ataaatgagt aggttaacaa acctttaagg tattttccaa ccttgagact ctgattcgca 300
ttgactagag atgggaggga cattgatgag gcaacataat ttcagcagac tacttggaag 360
aggacttatt ttcaagtttt gagtctaccg tttcataatg taacctggca acttcaccaa 420
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tattttgggt ggatgaaagg actgtttaaa aaatgagggc tttcagggag gcaaaggaaa 600
tgactcatgg gccatcgtgc aagttggcaa agacagtgt aaccaatttt gaatcatgga 660
taaacaattt tgaatcatta caaatataat ggatttaata t 701

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<210> 20
<211> 601
<212> DNA
<213> Homo sapiens

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<220>
<221> misc_feature
<222> (301)..(301)
<223> SNP65=A/G

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<400> 20
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catctacacc acactaagac caaagttctc taaaaatttc tgaaataatg atttttatat 180
agtttcatta aaagttttta aagtatctat cagcattttc tgtaaaagtg tcaggctgaa 240
aagataccac taaacagtca gctcaaaaaa gatagtagat aaaatatgat gaattgccac 300
rtctgcattt cctatgtttg caagccacca gtaagactgc atgatttcca agttggagga 360
cagagtctag gaatgtgaag gatgaagggt ttcttgtgca cgttctcttg agcacgtacg 420
ccttcagaag gtagataggc taacctgcat cactggataa aaactggatt tcctcttact 480
ttttcatgtg tatgtggctc atgtagatgt tgggtatttt ctggaaaata tgttcccgtc 540
gtctactgaa gtaactgtgt aataatttcc aattttctgc tgggcatcac ctcatggaca 600
c 601

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<210> 21
<211> 601
<212> DNA
<213> Homo sapiens

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<220>
 <221> misc_feature
 <222> (301)..(301)
 <223> SNP66=C/G

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 gaaattaata aaacacagcc cgttcttgga aatgaagttt gaattaaaat cctcttgttt 180
 tggaatatgt gacttttttt ttcttttcat ttgtgacagt caatttttaa tgatgtcact 240
 tcaaggacat tttcatttct ccacacaacat attacatgaa acacttgcct gtaaaaccgg 300
 stcattagcc tgcaaaatta tactgtacag aatggctttc attcaaagta gaaatgggat 360
 ttttagtagg caatttctgt attttataaa gataaagcaa tgtttgattg ctttcttccc 420
 agctgttttg cttagtgggt ataaagagaa atggggggcg ggggggtaat gtgggggcgg 480
 gtttgtaaag atgtgcttaa aaaataaatc ttacactgga aaactaaggc agaacttcac 540
 ggaacaactg cgccgcgagc tctcctgggc tgcagtgatt tgcctctgg gttctggagg 600
 a 601

<210> 22
 <211> 680
 <212> DNA
 <213> Homo sapiens

<220>
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 <222> (201)..(201)
 <223> SNP69=A/T

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 gtgcacacca ttatagtgtt ggagaagagg gtggaagggt tctcccatct tactgacttg 180
 cagaagtcaa tttgtaactc wgatttcgaa caaatggatg aaagaagaca caagggaaat 240
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 tccctgcaac ctctgtatcc cgggttcaag caattctcct gcctcagcct cctgagtagc 360
 ggggattaca ggcacaggca ctaccacca tgcccagcta atttttgtat ttttagtaga 420
 gaaggggttt caccatgttg gccaggttg tctcgaactc ctaacctcag gtggtccacc 480
 tacctcagcc ttccaaagtg ctgggattac aggcataagc caccacacgc agcctcttcc 540
 taggcttctt tagcattgca ttatcattca tttgcattgc ctgtttccat taaattggtg 600

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tttattatac ctactgcctg tttactagtt tttctgagtt caacgatttt tttctcttct 660
aaaaaatgca cctttctttt 680

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<210> 23
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<212> DNA
<213> Homo sapiens

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<220>
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<222> (301)..(301)
<223> SNP71=A/G

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acacatgact gaaaaagcag gtaaacagtg tggcagggaa gggtcacaag attgggggga 180
aaaaaacaca acatacattt ctgattttaa atctaccaca aagtttggat gttgtcacgc 240
tgttctgcat ggcattagca taatcaagtt tgcttacttt tagtttatga gccgaagact 300
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ggagagttgc taaagaagtt gctcacagag gggggagaga gcaggctaact ggtttccttc 420
aaaatggaat aggaaacaga aaacgtggtg aagtagagct ttttcttact gaactttgca 480
ttcatagatt ctgagtgggt ttctccacc cagaagcctc cccagaaaaa acagtcttgc 540
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c 601

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<210> 24
<211> 601
<212> DNA
<213> Homo sapiens

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<220>
<221> misc_feature
<222> (301)..(301)
<223> A/G

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<400> 24
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gcttttataa aacactttga aaatctgaag gcggggggaa gaaaaatgag gcaaaagctt 180
tccattctgt gcatggtggt ggccaaatga attgattatt ttagagcatc acaagctttg 240

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tttctttgtg cctttccctg ggtcatgtga aaaagtcttc cagtcgaagt cttccattca	300
ragcagtggg tacgtattca tccagtcatc attttaaagt aaattagaag acacattttt	360
ctattctgta tttagacatt agattggcta aattggagca gaaaggaata gaaggaaagc	420
agggagaaat gagtaaaaat gagaactata gtttatatta gtttatctgt gaagcaccaa	480
aaaagtcaag aaatttcata ttttagcagc tagagaaaag gtgtcctccc gcagttcaag	540
tttttatgaa ttttatccct aagcttttca taccacctt gatttattag cttttctcag	600
c	601