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<130> ONC-A1108P

<150> US 61/522,991
<151> 2011-08-12

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<170> PatentIn version 3.5

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Met Glu Ser Asn Phe Asn Gln Glu Gly Val Pro Arg Pro
1 5 10

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tct tat gtt ttt agt gct gac cca att gca agg cct tca gaa ata aat        159
Ser Tyr Val Phe Ser Ala Asp Pro Ile Ala Arg Pro Ser Glu Ile Asn
    15                  20                  25

ttc gat ggc att aag ctt gat ctg tct cat gaa ttt tcc tta gtt gct        207
Phe Asp Gly Ile Lys Leu Asp Leu Ser His Glu Phe Ser Leu Val Ala
30                  35                  40                  45

cca aat act gag gca aac agt ttc gaa tct aaa gat tat ctc cag gtt        255
Pro Asn Thr Glu Ala Asn Ser Phe Glu Ser Lys Asp Tyr Leu Gln Val
                50                  55                  60

tgt ctt cga ata aga cca ttt aca cag tca gaa aaa gaa ctt gag tct        303
Cys Leu Arg Ile Arg Pro Phe Thr Gln Ser Glu Lys Glu Leu Glu Ser
            65                  70                  75

gag ggc tgt gtg cat att ctg gat tca cag act gtt gtg ctg aaa gag        351
Glu Gly Cys Val His Ile Leu Asp Ser Gln Thr Val Val Leu Lys Glu
        80                  85                  90

cct caa tgc atc ctt ggt cgg tta agt gaa aaa agc tca ggg cag atg        399
Pro Gln Cys Ile Leu Gly Arg Leu Ser Glu Lys Ser Ser Gly Gln Met
    95                  100                 105

gca cag aaa ttc agt ttt tcc aag gtt ttt ggc cca gca act aca cag        447
Ala Gln Lys Phe Ser Phe Ser Lys Val Phe Gly Pro Ala Thr Thr Gln
110                 115                 120                 125

aag gaa ttc ttt cag ggt tgc att atg caa cca gta aaa gac ctc ttg        495
Lys Glu Phe Phe Gln Gly Cys Ile Met Gln Pro Val Lys Asp Leu Leu
                130                 135                 140

aaa gga cag agt cgt ctg att ttt act tac ggg cta acc aat tca gga        543
Lys Gly Gln Ser Arg Leu Ile Phe Thr Tyr Gly Leu Thr Asn Ser Gly
            145                 150                 155

aaa aca tat aca ttt caa ggg aca gaa gaa aat att ggc att ctg cct        591
Lys Thr Tyr Thr Phe Gln Gly Thr Glu Glu Asn Ile Gly Ile Leu Pro
        160                 165                 170

cga act ttg aat gta tta ttt gat agt ctt caa gaa aga ctg tat aca        639
Arg Thr Leu Asn Val Leu Phe Asp Ser Leu Gln Glu Arg Leu Tyr Thr
    175                 180                 185

aag atg aac ctt aaa cca cat aga tcc aga gaa tac tta agg tta tca        687
Lys Met Asn Leu Lys Pro His Arg Ser Arg Glu Tyr Leu Arg Leu Ser
190                 195                 200                 205

tca gaa caa gag aaa gaa gaa att gct agc aaa agt gca ttg ctt cgg        735
Ser Glu Gln Glu Lys Glu Glu Ile Ala Ser Lys Ser Ala Leu Leu Arg
                210                 215                 220

caa att aaa gag gtt act gtg cat aat gat agt gat gat act ctt tat        783
Gln Ile Lys Glu Val Thr Val His Asn Asp Ser Asp Asp Thr Leu Tyr
            225                 230                 235

gga agt tta act aac tct ttg aat atc tca gag ttt gaa gaa tcc ata        831
Gly Ser Leu Thr Asn Ser Leu Asn Ile Ser Glu Phe Glu Glu Ser Ile
        240                 245                 250

aaa gat tat gaa caa gcc aac ttg aat atg gct aat agt ata aaa ttt        879
Lys Asp Tyr Glu Gln Ala Asn Leu Asn Met Ala Asn Ser Ile Lys Phe
    255                 260                 265

tct gtg tgg gtt tct ttc ttt gaa att tac aat gaa tat att tat gac        927
Ser Val Trp Val Ser Phe Phe Glu Ile Tyr Asn Glu Tyr Ile Tyr Asp
270                 275                 280                 285
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tta ttt gtt cct gta tca tct aaa ttc caa aag aga aag atg ctg cgc        975
Leu Phe Val Pro Val Ser Ser Lys Phe Gln Lys Arg Lys Met Leu Arg
                290                 295                 300

ctt tcc caa gac gta aag ggc tat tct ttt ata aaa gat cta caa tgg       1023
Leu Ser Gln Asp Val Lys Gly Tyr Ser Phe Ile Lys Asp Leu Gln Trp
            305                 310                 315

att caa gta tct gat tcc aaa gaa gcc tat aga ctt tta aaa cta gga       1071
Ile Gln Val Ser Asp Ser Lys Glu Ala Tyr Arg Leu Leu Lys Leu Gly
        320                 325                 330

ata aag cac cag agt gtt gcc ttc aca aaa ttg aat aat gct tcc agt       1119
Ile Lys His Gln Ser Val Ala Phe Thr Lys Leu Asn Asn Ala Ser Ser
    335                 340                 345

aga agt cac agc ata ttc act gtt aaa ata tta cag att gaa gat tct       1167
Arg Ser His Ser Ile Phe Thr Val Lys Ile Leu Gln Ile Glu Asp Ser
350                 355                 360                 365

gaa atg tct cgt gta att cga gtc agt gaa tta tct tta tgt gat ctt       1215
Glu Met Ser Arg Val Ile Arg Val Ser Glu Leu Ser Leu Cys Asp Leu
                370                 375                 380

gct ggt tca gaa cga act atg aag aca cag aat gaa ggt gaa agg tta       1263
Ala Gly Ser Glu Arg Thr Met Lys Thr Gln Asn Glu Gly Glu Arg Leu
            385                 390                 395

aga gag act ggg aat atc aac act tct tta ttg act ctg gga aag tgt       1311
Arg Glu Thr Gly Asn Ile Asn Thr Ser Leu Leu Thr Leu Gly Lys Cys
        400                 405                 410

att aac gtc ttg aag aat agt gaa aag tca aag ttt caa cag cat gtg       1359
Ile Asn Val Leu Lys Asn Ser Glu Lys Ser Lys Phe Gln Gln His Val
    415                 420                 425

cct ttc cgg gaa agt aaa ctg act cac tat ttt caa agt ttt ttt aat       1407
Pro Phe Arg Glu Ser Lys Leu Thr His Tyr Phe Gln Ser Phe Phe Asn
430                 435                 440                 445

ggt aaa ggg aaa att tgt atg att gtc aat atc agc caa tgt tat tta       1455
Gly Lys Gly Lys Ile Cys Met Ile Val Asn Ile Ser Gln Cys Tyr Leu
                450                 455                 460

gcc tat gat gaa aca ctc aat gta ttg aag ttc tcc gcc att gca caa       1503
Ala Tyr Asp Glu Thr Leu Asn Val Leu Lys Phe Ser Ala Ile Ala Gln
            465                 470                 475

aaa gtt tgt gtc cca gac act tta aat tcc tct caa gag aaa tta ttt       1551
Lys Val Cys Val Pro Asp Thr Leu Asn Ser Ser Gln Glu Lys Leu Phe
        480                 485                 490

gga cct gtc aaa tct tct caa gat gta tca cta gac agt aat tca aac       1599
Gly Pro Val Lys Ser Ser Gln Asp Val Ser Leu Asp Ser Asn Ser Asn
    495                 500                 505

agt aaa ata tta aat gta aaa aga gcc acc att tca tgg gaa aat agt       1647
Ser Lys Ile Leu Asn Val Lys Arg Ala Thr Ile Ser Trp Glu Asn Ser
510                 515                 520                 525

cta gaa gat ttg atg gaa gac gag gat ttg gtt gag gag cta gaa aac       1695
Leu Glu Asp Leu Met Glu Asp Glu Asp Leu Val Glu Glu Leu Glu Asn
                530                 535                 540

gct gaa gaa act caa aat gtg gaa act aaa ctt ctt gat gaa gat cta       1743
Ala Glu Glu Thr Gln Asn Val Glu Thr Lys Leu Leu Asp Glu Asp Leu
            545                 550                 555
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gat aaa aca tta gag gaa aat aag gct ttc att agc cac gag gag aaa        1791
Asp Lys Thr Leu Glu Glu Asn Lys Ala Phe Ile Ser His Glu Glu Lys
        560                 565                 570

aga aaa ctg ttg gac tta ata gaa gac ttg aaa aaa aaa ctg ata aat        1839
Arg Lys Leu Leu Asp Leu Ile Glu Asp Leu Lys Lys Lys Leu Ile Asn
    575                 580                 585

gaa aaa aag gaa aaa tta acc ttg gaa ttt aaa att cga gaa gaa gtt        1887
Glu Lys Lys Glu Lys Leu Thr Leu Glu Phe Lys Ile Arg Glu Glu Val
590                 595                 600                 605

aca cag gag ttt act cag tat tgg gct caa cgg gaa gct gac ttt aag        1935
Thr Gln Glu Phe Thr Gln Tyr Trp Ala Gln Arg Glu Ala Asp Phe Lys
                610                 615                 620

gag act ctg ctt caa gaa cga gag ata tta gaa gaa aat gct gaa cgt        1983
Glu Thr Leu Leu Gln Glu Arg Glu Ile Leu Glu Glu Asn Ala Glu Arg
            625                 630                 635

cgt ttg gct atc ttc aag gat ttg gtt ggt aaa tgt gac act cga gaa        2031
Arg Leu Ala Ile Phe Lys Asp Leu Val Gly Lys Cys Asp Thr Arg Glu
        640                 645                 650

gaa gca gcg aaa gac att tgt gcc aca aaa gtt gaa act gaa gaa gct        2079
Glu Ala Ala Lys Asp Ile Cys Ala Thr Lys Val Glu Thr Glu Glu Ala
    655                 660                 665

act gct tgt tta gaa cta aag ttt aat caa att aaa gct gaa tta gct        2127
Thr Ala Cys Leu Glu Leu Lys Phe Asn Gln Ile Lys Ala Glu Leu Ala
670                 675                 680                 685

aaa acc aaa gga gaa tta atc aaa acc aaa gaa gag tta aaa aag aga        2175
Lys Thr Lys Gly Glu Leu Ile Lys Thr Lys Glu Glu Leu Lys Lys Arg
                690                 695                 700

gaa aat gaa tca gat tca ttg att caa gag ctt gag aca tct aat aag        2223
Glu Asn Glu Ser Asp Ser Leu Ile Gln Glu Leu Glu Thr Ser Asn Lys
            705                 710                 715

aaa ata att aca cag aat caa aga att aaa gaa ttg ata aat ata att        2271
Lys Ile Ile Thr Gln Asn Gln Arg Ile Lys Glu Leu Ile Asn Ile Ile
        720                 725                 730

gat caa aaa gaa gat act atc aac gaa ttt cag aac cta aag tct cat        2319
Asp Gln Lys Glu Asp Thr Ile Asn Glu Phe Gln Asn Leu Lys Ser His
    735                 740                 745

atg gaa aac aca ttt aaa tgc aat gac aag gct gat aca tct tct tta        2367
Met Glu Asn Thr Phe Lys Cys Asn Asp Lys Ala Asp Thr Ser Ser Leu
750                 755                 760                 765

ata ata aac aat aaa ttg att tgt aat gaa aca gtt gaa gta cct aag        2415
Ile Ile Asn Asn Lys Leu Ile Cys Asn Glu Thr Val Glu Val Pro Lys
                770                 775                 780

gac agc aaa tct aaa atc tgt tca gaa aga aaa aga gta aat gaa aat        2463
Asp Ser Lys Ser Lys Ile Cys Ser Glu Arg Lys Arg Val Asn Glu Asn
            785                 790                 795

gaa ctt cag caa gat gaa cca cca gca aag aaa ggg tct atc cat gtt        2511
Glu Leu Gln Gln Asp Glu Pro Pro Ala Lys Lys Gly Ser Ile His Val
        800                 805                 810

agt tca gct atc act gaa gac caa aag aaa agt gaa gaa gtg cga ccg        2559
Ser Ser Ala Ile Thr Glu Asp Gln Lys Lys Ser Glu Glu Val Arg Pro
    815                 820                 825
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aac att gca gaa att gaa gac atc aga gtt tta caa gaa aat aat gaa       2607
Asn Ile Ala Glu Ile Glu Asp Ile Arg Val Leu Gln Glu Asn Asn Glu
830                 835                 840                 845

gga ctg aga gca ttt tta ctc act att gag aat gaa ctt aaa aat gaa       2655
Gly Leu Arg Ala Phe Leu Leu Thr Ile Glu Asn Glu Leu Lys Asn Glu
                850                 855                 860

aag gaa gaa aaa gca gaa tta aat aaa cag att gtt cat ttt cag cag       2703
Lys Glu Glu Lys Ala Glu Leu Asn Lys Gln Ile Val His Phe Gln Gln
            865                 870                 875

gaa ctt tct ctt tct gaa aaa aag aat tta act tta agt aaa gag gtc       2751
Glu Leu Ser Leu Ser Glu Lys Lys Asn Leu Thr Leu Ser Lys Glu Val
        880                 885                 890

caa caa att cag tca aat tat gat att gca att gct gaa tta cat gtg       2799
Gln Gln Ile Gln Ser Asn Tyr Asp Ile Ala Ile Ala Glu Leu His Val
    895                 900                 905

cag aaa agt aaa aat caa gaa cag gag gaa aag atc atg aaa ttg tca       2847
Gln Lys Ser Lys Asn Gln Glu Gln Glu Glu Lys Ile Met Lys Leu Ser
910                 915                 920                 925

aat gag ata gaa act gct aca aga agc att aca aat aat gtt tca caa       2895
Asn Glu Ile Glu Thr Ala Thr Arg Ser Ile Thr Asn Asn Val Ser Gln
                930                 935                 940

ata aaa tta atg cac acg aaa ata gac gaa cta cgt act ctt gat tca       2943
Ile Lys Leu Met His Thr Lys Ile Asp Glu Leu Arg Thr Leu Asp Ser
            945                 950                 955

gtt tct cag att tca aac ata gat ttg ctc aat ctc agg gat ctg tca       2991
Val Ser Gln Ile Ser Asn Ile Asp Leu Leu Asn Leu Arg Asp Leu Ser
        960                 965                 970

aat ggt tct gag gag gat aat ttg cca aat aca cag tta gac ctt tta       3039
Asn Gly Ser Glu Glu Asp Asn Leu Pro Asn Thr Gln Leu Asp Leu Leu
    975                 980                 985

ggt aat gat tat ttg gta agt aag caa gtt aaa  gaa tat cga att caa       3087
Gly Asn Asp Tyr Leu Val Ser Lys Gln Val Lys  Glu Tyr Arg Ile Gln
990                 995                 1000                1005

gaa ccc aat agg gaa  aat tct ttc cac tct  agt att gaa gct att          3132
Glu Pro Asn Arg Glu  Asn Ser Phe His Ser  Ser Ile Glu Ala Ile
                1010                1015                1020

tgg gaa gaa tgt aaa  gag att gtg aag gcc  tct tcc aaa aaa agt          3177
Trp Glu Glu Cys Lys  Glu Ile Val Lys Ala  Ser Ser Lys Lys Ser
                1025                1030                1035

cat cag att gag gaa  ctg gaa caa caa att  gaa aaa ttg cag gca          3222
His Gln Ile Glu Glu  Leu Glu Gln Gln Ile  Glu Lys Leu Gln Ala
                1040                1045                1050

gaa gta aaa ggc tat  aag gat gaa aac aat  aga cta aag gag aag          3267
Glu Val Lys Gly Tyr  Lys Asp Glu Asn Asn  Arg Leu Lys Glu Lys
                1055                1060                1065

gag cat aaa aac caa  gat gac cta cta aaa  gaa aaa gaa act ctt          3312
Glu His Lys Asn Gln  Asp Asp Leu Leu Lys  Glu Lys Glu Thr Leu
                1070                1075                1080

ata cag cag ctg aaa  gaa gaa ttg caa gaa  aaa aat gtt act ctt          3357
Ile Gln Gln Leu Lys  Glu Glu Leu Gln Glu  Lys Asn Val Thr Leu
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gat gtt caa ata cag  cat gta gtt gaa gga  aag aga gcg ctt tca          3402
Asp Val Gln Ile Gln  His Val Val Glu Gly  Lys Arg Ala Leu Ser
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gaa ctt aca caa ggt  gtt act tgc tat aag  gca aaa ata aag gaa          3447
Glu Leu Thr Gln Gly  Val Thr Cys Tyr Lys  Ala Lys Ile Lys Glu
                1115                1120                1125

ctt gaa aca att tta  gag act cag aaa gtt  gaa tgt agt cat tca          3492
Leu Glu Thr Ile Leu  Glu Thr Gln Lys Val  Glu Cys Ser His Ser
                1130                1135                1140

gcc aag tta gaa caa  gac att ttg gaa aag  gaa tct atc atc tta          3537
Ala Lys Leu Glu Gln  Asp Ile Leu Glu Lys  Glu Ser Ile Ile Leu
                1145                1150                1155

aag cta gaa aga aat  ttg aag gaa ttt caa  gaa cat ctt cag gat          3582
Lys Leu Glu Arg Asn  Leu Lys Glu Phe Gln  Glu His Leu Gln Asp
                1160                1165                1170

tct gtc aaa aac acc  aaa gat tta aat gta  aag gaa ctc aag ctg          3627
Ser Val Lys Asn Thr  Lys Asp Leu Asn Val  Lys Glu Leu Lys Leu
                1175                1180                1185

aaa gaa gaa atc aca  cag tta aca aat aat  ttg caa gat atg aaa          3672
Lys Glu Glu Ile Thr  Gln Leu Thr Asn Asn  Leu Gln Asp Met Lys
                1190                1195                1200

cat tta ctt caa tta  aaa gaa gaa gaa gaa  gaa acc aac agg caa          3717
His Leu Leu Gln Leu  Lys Glu Glu Glu Glu  Glu Thr Asn Arg Gln
                1205                1210                1215

gaa aca gaa aaa ttg  aaa gag gaa ctc tct  gca agc tct gct cgt          3762
Glu Thr Glu Lys Leu  Lys Glu Glu Leu Ser  Ala Ser Ser Ala Arg
                1220                1225                1230

acc cag aat ctg aaa  gca gat ctt cag agg  aag gaa gaa gat tat          3807
Thr Gln Asn Leu Lys  Ala Asp Leu Gln Arg  Lys Glu Glu Asp Tyr
                1235                1240                1245

gct gac ctg aaa gag  aaa ctg act gat gcc  aaa aag cag att aag          3852
Ala Asp Leu Lys Glu  Lys Leu Thr Asp Ala  Lys Lys Gln Ile Lys
                1250                1255                1260

caa gta cag aaa gag  gta tct gta atg cgt  gat gag gat aaa tta          3897
Gln Val Gln Lys Glu  Val Ser Val Met Arg  Asp Glu Asp Lys Leu
                1265                1270                1275

ctg agg att aaa att  aat gaa ctg gag aaa  aag aaa aac cag tgt          3942
Leu Arg Ile Lys Ile  Asn Glu Leu Glu Lys  Lys Lys Asn Gln Cys
                1280                1285                1290

tct cag gaa tta gat  atg aaa cag cga acc  att cag caa ctc aag          3987
Ser Gln Glu Leu Asp  Met Lys Gln Arg Thr  Ile Gln Gln Leu Lys
                1295                1300                1305

gag cag tta aat aat  cag aaa gtg gaa gaa  gct ata caa cag tat          4032
Glu Gln Leu Asn Asn  Gln Lys Val Glu Glu  Ala Ile Gln Gln Tyr
                1310                1315                1320

gag aga gca tgc aaa  gat cta aat gtt aaa  gag aaa ata att gaa          4077
Glu Arg Ala Cys Lys  Asp Leu Asn Val Lys  Glu Lys Ile Ile Glu
                1325                1330                1335

gac atg cga atg aca  cta gaa gaa cag gaa  caa act cag gta gaa          4122
Asp Met Arg Met Thr  Leu Glu Glu Gln Glu  Gln Thr Gln Val Glu
                1340                1345                1350
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cag gat caa gtg ctt  gag gct aaa tta gag  gaa gtt gaa agg ctg          4167
Gln Asp Gln Val Leu  Glu Ala Lys Leu Glu  Glu Val Glu Arg Leu
                1355                1360                1365

gcc aca gaa ttg gaa  aaa tgg aag gaa aaa  tgc aat gat ttg gaa          4212
Ala Thr Glu Leu Glu  Lys Trp Lys Glu Lys  Cys Asn Asp Leu Glu
                1370                1375                1380

acc aaa aac aat caa  agg tca aat aaa gaa  cat gag aac aac aca          4257
Thr Lys Asn Asn Gln  Arg Ser Asn Lys Glu  His Glu Asn Asn Thr
                1385                1390                1395

gat gtg ctt gga aag  ctc act aat ctt caa  gat gag tta cag gag          4302
Asp Val Leu Gly Lys  Leu Thr Asn Leu Gln  Asp Glu Leu Gln Glu
                1400                1405                1410

tct gaa cag aaa tat  aat gct gat aga aag  aaa tgg tta gaa gaa          4347
Ser Glu Gln Lys Tyr  Asn Ala Asp Arg Lys  Lys Trp Leu Glu Glu
                1415                1420                1425

aaa atg atg ctt atc  act caa gcg aaa gaa  gca gag aat ata cga          4392
Lys Met Met Leu Ile  Thr Gln Ala Lys Glu  Ala Glu Asn Ile Arg
                1430                1435                1440

aat aaa gag atg aaa  aaa tat gct gag gac  agg gag cgt ttt ttt          4437
Asn Lys Glu Met Lys  Lys Tyr Ala Glu Asp  Arg Glu Arg Phe Phe
                1445                1450                1455

aag caa cag aat gaa  atg gaa ata ctg aca  gcc cag ctg aca gag          4482
Lys Gln Gln Asn Glu  Met Glu Ile Leu Thr  Ala Gln Leu Thr Glu
                1460                1465                1470

aaa gat agt gac ctt  caa aag tgg cga gaa  gaa cga gat caa ctg          4527
Lys Asp Ser Asp Leu  Gln Lys Trp Arg Glu  Glu Arg Asp Gln Leu
                1475                1480                1485

gtt gca gct tta gaa  ata cag cta aaa gca  ctg ata tcc agt aat          4572
Val Ala Ala Leu Glu  Ile Gln Leu Lys Ala  Leu Ile Ser Ser Asn
                1490                1495                1500

gta cag aaa gat aat  gaa att gaa caa cta  aaa agg atc ata tca          4617
Val Gln Lys Asp Asn  Glu Ile Glu Gln Leu  Lys Arg Ile Ile Ser
                1505                1510                1515

gag act tct aaa ata  gaa aca caa atc atg  gat atc aag ccc aaa          4662
Glu Thr Ser Lys Ile  Glu Thr Gln Ile Met  Asp Ile Lys Pro Lys
                1520                1525                1530

cgt att agt tca gca  gat cct gac aaa ctt  caa act gaa cct cta          4707
Arg Ile Ser Ser Ala  Asp Pro Asp Lys Leu  Gln Thr Glu Pro Leu
                1535                1540                1545

tcg aca agt ttt gaa  att tcc aga aat aaa  ata gag gat gga tct          4752
Ser Thr Ser Phe Glu  Ile Ser Arg Asn Lys  Ile Glu Asp Gly Ser
                1550                1555                1560

gta gtc ctt gac tct  tgt gaa gtg tca aca  gaa aat gat caa agc          4797
Val Val Leu Asp Ser  Cys Glu Val Ser Thr  Glu Asn Asp Gln Ser
                1565                1570                1575

act cga ttt cca aaa  cct gag tta gag att  caa ttt aca cct tta          4842
Thr Arg Phe Pro Lys  Pro Glu Leu Glu Ile  Gln Phe Thr Pro Leu
                1580                1585                1590

cag cca aac aaa atg  gca gtg aaa cac cct  ggt tgt acc aca cca          4887
Gln Pro Asn Lys Met  Ala Val Lys His Pro  Gly Cys Thr Thr Pro
                1595                1600                1605
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gtg aca gtt aag att  ccc aag gct cgg aag  agg aag agt aat gaa          4932
Val Thr Val Lys Ile  Pro Lys Ala Arg Lys  Arg Lys Ser Asn Glu
                1610                1615                1620

atg gag gag gac ttg  gtg aaa tgt gaa aat  aag aag aat gct aca          4977
Met Glu Glu Asp Leu  Val Lys Cys Glu Asn  Lys Lys Asn Ala Thr
                1625                1630                1635

ccc aga act aat ttg  aaa ttt cct att tca  gat gat aga aat tct          5022
Pro Arg Thr Asn Leu  Lys Phe Pro Ile Ser  Asp Asp Arg Asn Ser
                1640                1645                1650

tct gtc aaa aag gaa  caa aag gtt gcc ata  cgt cca tca tct aag          5067
Ser Val Lys Lys Glu  Gln Lys Val Ala Ile  Arg Pro Ser Ser Lys
                1655                1660                1665

aaa aca tat tct tta  cgg agt cag gca tcc  ata att ggt gta aac          5112
Lys Thr Tyr Ser Leu  Arg Ser Gln Ala Ser  Ile Ile Gly Val Asn
                1670                1675                1680

ctg gcc act aag aaa  aaa gaa gga aca cta  cag aaa ttt gga gac          5157
Leu Ala Thr Lys Lys  Lys Glu Gly Thr Leu  Gln Lys Phe Gly Asp
                1685                1690                1695

ttc tta caa cat tct  ccc tca att ctt caa  tca aaa gca aag aag          5202
Phe Leu Gln His Ser  Pro Ser Ile Leu Gln  Ser Lys Ala Lys Lys
                1700                1705                1710

ata att gaa aca atg  agc tct tca aag ctc  tca aat gta gaa gca          5247
Ile Ile Glu Thr Met  Ser Ser Ser Lys Leu  Ser Asn Val Glu Ala
                1715                1720                1725

agt aaa gaa aat gtg  tct caa cca aaa cga  gcc aaa cgg aaa tta          5292
Ser Lys Glu Asn Val  Ser Gln Pro Lys Arg  Ala Lys Arg Lys Leu
                1730                1735                1740

tac aca agt gaa att  tca tct cct att gat  ata tca ggc caa gtg          5337
Tyr Thr Ser Glu Ile  Ser Ser Pro Ile Asp  Ile Ser Gly Gln Val
                1745                1750                1755

att tta atg gac cag  aaa atg aag gag agt  gat cac cag att atc          5382
Ile Leu Met Asp Gln  Lys Met Lys Glu Ser  Asp His Gln Ile Ile
                1760                1765                1770

aaa cga cga ctt cga  aca aaa aca gcc aaa  taa atcacttatg               5425
Lys Arg Arg Leu Arg  Thr Lys Thr Ala Lys
                1775                1780

gaaatgttta atataaattt tatagtcata gtcattggaa cttgcatcct gtattgtaaa     5485

tataaatgta tatattatgc attaaatcac tctgcatata gattgctgtt ttatacatag     5545

tataatttta attcaataaa tgagtcaaaa tttgtatatt tttataaggc ttttttataa     5605

tagcttcttt caaactgtat ttccctatta tctcagacat tggatcagtg aagatcctag     5665

gaaagaggct gttattctca tttattttgc tatacaggat gtaataggtc aggtatttgg     5725

tttacttata tttaacaatg tcttatgaat tttttttact ttatctgtta tacaactgat     5785

tttacatatc tgtttggatt atagctagga tttggagaat aagtgtgtac agatcacaaa     5845

acatgtatat acattattta gaaaagatct caagtcttta attagaatgt ctcacttatt     5905

ttgtaaacat tttgtgggta catagtacat gtatatattt acggggtatg tgagatgttt     5965

tgacacaggc atgcaatgtg aaatacgtgt atcatggaga atgaggtatc catcccctca     6025
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agcatttttc ctttgaatta cagataatcc aattacattc tttagatcat ttaaaaatat 6085

acaagtaagt tattattgat tatagtcact ctattgtgct atcagatagt agatcattct 6145

ttttatctta tttgtttttg tacccattaa ccatccccac ctccccctgc aaccgtcagt 6205

acccttacca gccactggta accattcttc tactctgtat gcccatgagg tcaattgatt 6265

ttatttttag atcccataaa taaatgagaa catgcagtct ttgtcaaaaa aaaa 6319

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<211> 1780
<212> PRT
<213> Homo sapiens

<400> 126

Met Glu Ser Asn Phe Asn Gln Glu Gly Val Pro Arg Pro Ser Tyr Val
1 5 10 15

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

Ile Lys Leu Asp Leu Ser His Glu Phe Ser Leu Val Ala Pro Asn Thr
35 40 45

Glu Ala Asn Ser Phe Glu Ser Lys Asp Tyr Leu Gln Val Cys Leu Arg
50 55 60

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

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

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

Phe Ser Phe Ser Lys Val Phe Gly Pro Ala Thr Thr Gln Lys Glu Phe
115 120 125

Phe Gln Gly Cys Ile Met Gln Pro Val Lys Asp Leu Leu Lys Gly Gln
130 135 140

Ser Arg Leu Ile Phe Thr Tyr Gly Leu Thr Asn Ser Gly Lys Thr Tyr
145 150 155 160

Thr Phe Gln Gly Thr Glu Glu Asn Ile Gly Ile Leu Pro Arg Thr Leu
165 170 175

Asn Val Leu Phe Asp Ser Leu Gln Glu Arg Leu Tyr Thr Lys Met Asn
180 185 190

Leu Lys Pro His Arg Ser Arg Glu Tyr Leu Arg Leu Ser Ser Glu Gln
195 200 205

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Glu Lys Glu Glu Ile Ala Ser Lys Ser Ala Leu Leu Arg Gln Ile Lys
    210                 215                 220

Glu Val Thr Val His Asn Asp Ser Asp Asp Thr Leu Tyr Gly Ser Leu
225                 230                 235                 240

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

Glu Gln Ala Asn Leu Asn Met Ala Asn Ser Ile Lys Phe Ser Val Trp
            260                 265                 270

Val Ser Phe Phe Glu Ile Tyr Asn Glu Tyr Ile Tyr Asp Leu Phe Val
        275                 280                 285

Pro Val Ser Ser Lys Phe Gln Lys Arg Lys Met Leu Arg Leu Ser Gln
    290                 295                 300

Asp Val Lys Gly Tyr Ser Phe Ile Lys Asp Leu Gln Trp Ile Gln Val
305                 310                 315                 320

Ser Asp Ser Lys Glu Ala Tyr Arg Leu Leu Lys Leu Gly Ile Lys His
                325                 330                 335

Gln Ser Val Ala Phe Thr Lys Leu Asn Asn Ala Ser Ser Arg Ser His
            340                 345                 350

Ser Ile Phe Thr Val Lys Ile Leu Gln Ile Glu Asp Ser Glu Met Ser
        355                 360                 365

Arg Val Ile Arg Val Ser Glu Leu Ser Leu Cys Asp Leu Ala Gly Ser
    370                 375                 380

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

Gly Asn Ile Asn Thr Ser Leu Leu Thr Leu Gly Lys Cys Ile Asn Val
                405                 410                 415

Leu Lys Asn Ser Glu Lys Ser Lys Phe Gln Gln His Val Pro Phe Arg
            420                 425                 430

Glu Ser Lys Leu Thr His Tyr Phe Gln Ser Phe Phe Asn Gly Lys Gly
        435                 440                 445

Lys Ile Cys Met Ile Val Asn Ile Ser Gln Cys Tyr Leu Ala Tyr Asp
    450                 455                 460

Glu Thr Leu Asn Val Leu Lys Phe Ser Ala Ile Ala Gln Lys Val Cys
465                 470                 475                 480
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Val Pro Asp Thr Leu Asn Ser Ser Gln Glu Lys Leu Phe Gly Pro Val
485 490 495

Lys Ser Ser Gln Asp Val Ser Leu Asp Ser Asn Ser Asn Ser Lys Ile
500 505 510

Leu Asn Val Lys Arg Ala Thr Ile Ser Trp Glu Asn Ser Leu Glu Asp
515 520 525

Leu Met Glu Asp Glu Asp Leu Val Glu Glu Leu Glu Asn Ala Glu Glu
530 535 540

Thr Gln Asn Val Glu Thr Lys Leu Leu Asp Glu Asp Leu Asp Lys Thr
545 550 555 560

Leu Glu Glu Asn Lys Ala Phe Ile Ser His Glu Glu Lys Arg Lys Leu
565 570 575

Leu Asp Leu Ile Glu Asp Leu Lys Lys Lys Leu Ile Asn Glu Lys Lys
580 585 590

Glu Lys Leu Thr Leu Glu Phe Lys Ile Arg Glu Glu Val Thr Gln Glu
595 600 605

Phe Thr Gln Tyr Trp Ala Gln Arg Glu Ala Asp Phe Lys Glu Thr Leu
610 615 620

Leu Gln Glu Arg Glu Ile Leu Glu Glu Asn Ala Glu Arg Arg Leu Ala
625 630 635 640

Ile Phe Lys Asp Leu Val Gly Lys Cys Asp Thr Arg Glu Glu Ala Ala
645 650 655

Lys Asp Ile Cys Ala Thr Lys Val Glu Thr Glu Glu Ala Thr Ala Cys
660 665 670

Leu Glu Leu Lys Phe Asn Gln Ile Lys Ala Glu Leu Ala Lys Thr Lys
675 680 685

Gly Glu Leu Ile Lys Thr Lys Glu Glu Leu Lys Lys Arg Glu Asn Glu
690 695 700

Ser Asp Ser Leu Ile Gln Glu Leu Glu Thr Ser Asn Lys Lys Ile Ile
705 710 715 720

Thr Gln Asn Gln Arg Ile Lys Glu Leu Ile Asn Ile Ile Asp Gln Lys
725 730 735

Glu Asp Thr Ile Asn Glu Phe Gln Asn Leu Lys Ser His Met Glu Asn
740 745 750

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Thr Phe Lys Cys Asn Asp Lys Ala Asp Thr Ser Ser Leu Ile Ile Asn
        755                 760                 765

Asn Lys Leu Ile Cys Asn Glu Thr Val Glu Val Pro Lys Asp Ser Lys
    770                 775                 780

Ser Lys Ile Cys Ser Glu Arg Lys Arg Val Asn Glu Asn Glu Leu Gln
785                 790                 795                 800

Gln Asp Glu Pro Pro Ala Lys Lys Gly Ser Ile His Val Ser Ser Ala
                805                 810                 815

Ile Thr Glu Asp Gln Lys Lys Ser Glu Glu Val Arg Pro Asn Ile Ala
            820                 825                 830

Glu Ile Glu Asp Ile Arg Val Leu Gln Glu Asn Asn Glu Gly Leu Arg
        835                 840                 845

Ala Phe Leu Leu Thr Ile Glu Asn Glu Leu Lys Asn Glu Lys Glu Glu
    850                 855                 860

Lys Ala Glu Leu Asn Lys Gln Ile Val His Phe Gln Gln Glu Leu Ser
865                 870                 875                 880

Leu Ser Glu Lys Lys Asn Leu Thr Leu Ser Lys Glu Val Gln Gln Ile
                885                 890                 895

Gln Ser Asn Tyr Asp Ile Ala Ile Ala Glu Leu His Val Gln Lys Ser
            900                 905                 910

Lys Asn Gln Glu Gln Glu Glu Lys Ile Met Lys Leu Ser Asn Glu Ile
        915                 920                 925

Glu Thr Ala Thr Arg Ser Ile Thr Asn Asn Val Ser Gln Ile Lys Leu
    930                 935                 940

Met His Thr Lys Ile Asp Glu Leu Arg Thr Leu Asp Ser Val Ser Gln
945                 950                 955                 960

Ile Ser Asn Ile Asp Leu Leu Asn Leu Arg Asp Leu Ser Asn Gly Ser
                965                 970                 975

Glu Glu Asp Asn Leu Pro Asn Thr Gln Leu Asp Leu Leu Gly Asn Asp
            980                 985                 990

Tyr Leu Val Ser Lys Gln Val Lys  Glu Tyr Arg Ile Gln  Glu Pro Asn
        995                 1000                1005

Arg Glu  Asn Ser Phe His Ser  Ser Ile Glu Ala Ile  Trp Glu Glu
    1010                1015                1020
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Cys Lys Glu Ile Val Lys Ala Ser Ser Lys Lys Ser His Gln Ile
1025 1030 1035

Glu Glu Leu Glu Gln Gln Ile Glu Lys Leu Gln Ala Glu Val Lys
1040 1045 1050

Gly Tyr Lys Asp Glu Asn Asn Arg Leu Lys Glu Lys Glu His Lys
1055 1060 1065

Asn Gln Asp Asp Leu Leu Lys Glu Lys Glu Thr Leu Ile Gln Gln
1070 1075 1080

Leu Lys Glu Glu Leu Gln Glu Lys Asn Val Thr Leu Asp Val Gln
1085 1090 1095

Ile Gln His Val Val Glu Gly Lys Arg Ala Leu Ser Glu Leu Thr
1100 1105 1110

Gln Gly Val Thr Cys Tyr Lys Ala Lys Ile Lys Glu Leu Glu Thr
1115 1120 1125

Ile Leu Glu Thr Gln Lys Val Glu Cys Ser His Ser Ala Lys Leu
1130 1135 1140

Glu Gln Asp Ile Leu Glu Lys Glu Ser Ile Ile Leu Lys Leu Glu
1145 1150 1155

Arg Asn Leu Lys Glu Phe Gln Glu His Leu Gln Asp Ser Val Lys
1160 1165 1170

Asn Thr Lys Asp Leu Asn Val Lys Glu Leu Lys Leu Lys Glu Glu
1175 1180 1185

Ile Thr Gln Leu Thr Asn Asn Leu Gln Asp Met Lys His Leu Leu
1190 1195 1200

Gln Leu Lys Glu Glu Glu Glu Glu Thr Asn Arg Gln Glu Thr Glu
1205 1210 1215

Lys Leu Lys Glu Glu Leu Ser Ala Ser Ser Ala Arg Thr Gln Asn
1220 1225 1230

Leu Lys Ala Asp Leu Gln Arg Lys Glu Glu Asp Tyr Ala Asp Leu
1235 1240 1245

Lys Glu Lys Leu Thr Asp Ala Lys Lys Gln Ile Lys Gln Val Gln
1250 1255 1260

Lys Glu Val Ser Val Met Arg Asp Glu Asp Lys Leu Leu Arg Ile
1265 1270 1275

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Lys Ile  Asn Glu Leu Glu Lys  Lys Lys Asn Gln Cys  Ser Gln Glu
    1280                 1285                 1290

Leu Asp  Met Lys Gln Arg Thr  Ile Gln Gln Leu Lys  Glu Gln Leu
    1295                 1300                 1305

Asn Asn  Gln Lys Val Glu Glu  Ala Ile Gln Gln Tyr  Glu Arg Ala
    1310                 1315                 1320

Cys Lys  Asp Leu Asn Val Lys  Glu Lys Ile Ile Glu  Asp Met Arg
    1325                 1330                 1335

Met Thr  Leu Glu Glu Gln Glu  Gln Thr Gln Val Glu  Gln Asp Gln
    1340                 1345                 1350

Val Leu  Glu Ala Lys Leu Glu  Glu Val Glu Arg Leu  Ala Thr Glu
    1355                 1360                 1365

Leu Glu  Lys Trp Lys Glu Lys  Cys Asn Asp Leu Glu  Thr Lys Asn
    1370                 1375                 1380

Asn Gln  Arg Ser Asn Lys Glu  His Glu Asn Asn Thr  Asp Val Leu
    1385                 1390                 1395

Gly Lys  Leu Thr Asn Leu Gln  Asp Glu Leu Gln Glu  Ser Glu Gln
    1400                 1405                 1410

Lys Tyr  Asn Ala Asp Arg Lys  Lys Trp Leu Glu Glu  Lys Met Met
    1415                 1420                 1425

Leu Ile  Thr Gln Ala Lys Glu  Ala Glu Asn Ile Arg  Asn Lys Glu
    1430                 1435                 1440

Met Lys  Lys Tyr Ala Glu Asp  Arg Glu Arg Phe Phe  Lys Gln Gln
    1445                 1450                 1455

Asn Glu  Met Glu Ile Leu Thr  Ala Gln Leu Thr Glu  Lys Asp Ser
    1460                 1465                 1470

Asp Leu  Gln Lys Trp Arg Glu  Glu Arg Asp Gln Leu  Val Ala Ala
    1475                 1480                 1485

Leu Glu  Ile Gln Leu Lys Ala  Leu Ile Ser Ser Asn  Val Gln Lys
    1490                 1495                 1500

Asp Asn  Glu Ile Glu Gln Leu  Lys Arg Ile Ile Ser  Glu Thr Ser
    1505                 1510                 1515

Lys Ile  Glu Thr Gln Ile Met  Asp Ile Lys Pro Lys  Arg Ile Ser
    1520                 1525                 1530
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Ser Ala  Asp Pro Asp Lys Leu  Gln Thr Glu Pro Leu  Ser Thr Ser
    1535                1540                1545

Phe Glu  Ile Ser Arg Asn Lys  Ile Glu Asp Gly Ser  Val Val Leu
    1550                1555                1560

Asp Ser  Cys Glu Val Ser Thr  Glu Asn Asp Gln Ser  Thr Arg Phe
    1565                1570                1575

Pro Lys  Pro Glu Leu Glu Ile  Gln Phe Thr Pro Leu  Gln Pro Asn
    1580                1585                1590

Lys Met  Ala Val Lys His Pro  Gly Cys Thr Thr Pro  Val Thr Val
    1595                1600                1605

Lys Ile  Pro Lys Ala Arg Lys  Arg Lys Ser Asn Glu  Met Glu Glu
    1610                1615                1620

Asp Leu  Val Lys Cys Glu Asn  Lys Lys Asn Ala Thr  Pro Arg Thr
    1625                1630                1635

Asn Leu  Lys Phe Pro Ile Ser  Asp Asp Arg Asn Ser  Ser Val Lys
    1640                1645                1650

Lys Glu  Gln Lys Val Ala Ile  Arg Pro Ser Ser Lys  Lys Thr Tyr
    1655                1660                1665

Ser Leu  Arg Ser Gln Ala Ser  Ile Ile Gly Val Asn  Leu Ala Thr
    1670                1675                1680

Lys Lys  Lys Glu Gly Thr Leu  Gln Lys Phe Gly Asp  Phe Leu Gln
    1685                1690                1695

His Ser  Pro Ser Ile Leu Gln  Ser Lys Ala Lys Lys  Ile Ile Glu
    1700                1705                1710

Thr Met  Ser Ser Ser Lys Leu  Ser Asn Val Glu Ala  Ser Lys Glu
    1715                1720                1725

Asn Val  Ser Gln Pro Lys Arg  Ala Lys Arg Lys Leu  Tyr Thr Ser
    1730                1735                1740

Glu Ile  Ser Ser Pro Ile Asp  Ile Ser Gly Gln Val  Ile Leu Met
    1745                1750                1755

Asp Gln  Lys Met Lys Glu Ser  Asp His Gln Ile Ile  Lys Arg Arg
    1760                1765                1770

Leu Arg  Thr Lys Thr Ala Lys
    1775                1780
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<213> Artificial Sequence

<220>
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gtctaccagg cattcgcttc at 22

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<220>
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<400> 128
tcagctggac cacagccgca gcgt 24

<210> 129
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> A primer sequence

<400> 129
tcagaaatcc tttctcttga c 21

<210> 130
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> A primer sequence

<400> 130
ctagcctctg gaatcctttc tctt 24