

LISTADO DE SECUENCIAS

<110> Amgen Inc.
BAKKER, Alice

<120> RECEPTORES QUIMÉRICOS DE FLT3 Y MÉTODOS DE USO DE LOS MISMO

<130> A-2065-WO-PCT

<140> PCT/US17/25613

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<160> 98

<170> PatentIn versión 3.5

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Thr Val Ala Phe Ile Ile Phe Trp Val Arg Ser Lys Arg Ser Arg Leu
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Leu His Ser Asp Tyr Met Asn Met Thr Pro Arg Arg Pro Gly Pro Thr
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Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys
35 40 45

Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys
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Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg
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Phe Pro Gly Pro Ser Lys Pro
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35 40 45

Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly Leu Asp
50 55 60

Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly
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20 25 30

Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala His Ile Phe Ser Asn Ala Glu Lys Ser Tyr Arg Thr Ser
50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

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

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Ile Pro Gly Tyr Gly Gly Asn Gly Asp Tyr His Tyr Tyr Gly Met Asp

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20 25 30

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
35 40 45

Tyr Ala Ser Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

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Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
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20 25 30

Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu

35 40 45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Thr Tyr Ser Thr Ser

50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Arg Asp Thr Ser Lys Gly Gln Val

65 70 75 80

Val Leu Thr Met Thr Lys Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr

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100 105 110

Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser

115 120 125

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<211> 15

<212> PRT

<213> Homo sapiens

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Ile Pro Tyr Tyr Gly Ser Gly Ser His Asn Tyr Gly Met Asp Val

1 5 10 15

<210> 28

<211> 324

<212> ADN

<213> Homo sapiens

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 20 25 30

Phe Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Gln Arg Leu Leu
 35 40 45

Tyr Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asn Thr Tyr Pro Trp
 85 90 95

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

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

Ala Val Ile Trp Tyr Asp Gly Ser Asn Glu Tyr Tyr Gly Asp Pro Val
 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Met Leu Tyr
 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ser Gly Ile Ala Val Ala Gly Ala Phe Asp Tyr Trp Gly Gln
 100 105 110

Gly Thr Leu Val Thr Val Ser Ser
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Val Ile Trp Tyr Asp Gly Ser Asn Glu Tyr Tyr Gly Asp Pro Val Lys
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<213>	Homo sapiens

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Ser Gly Ile Ala Val Ala Gly Ala Phe Asp Tyr
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<210>	37
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Gln His Tyr Gly Arg Thr Pro Phe Thr
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<210> 41
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<213> Homo sapiens

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Glu Ile Val Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly
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Glu Lys Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

Phe Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Ser Leu Leu
35 40 45

Ile Tyr Val Ala Ser Arg Arg Ala Ala Gly Ile Pro Asp Arg Phe Ser
50 55 60

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

Pro Glu Asp Phe Gly Met Phe Tyr Cys Gln His Tyr Gly Arg Thr Pro
85 90 95

Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
100 105

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<400> 42

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
 20 25 30

Tyr Ile His Trp Val Arg Gln Ala Pro Glu Gln Gly Leu Glu Trp Met
 35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
 50 55 60

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

Met Asp Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Ile Arg Gly Gly Asn Ser Val Phe Asp Tyr Trp Gly Gln Gly
 100 105 110

Thr Leu Val Thr Val Ser Ser
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<400> 43

Gly Tyr Tyr Ile His
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Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe Gln
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Gly

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Ser Asn Asn Lys Asn Phe Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
 35 40 45

Pro Pro Lys Leu Leu Ile Ser Trp Ala Ser Ile Arg Glu Ser Gly Val
 50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Ala Leu Thr
 65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
 85 90 95

Tyr Phe Ser Thr Met Phe Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile
 100 105 110

Lys Arg

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<213> Homo sapiens

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Lys Ser Thr Gln Ser Ile Leu Tyr Thr Ser Asn Asn Lys Asn Phe Leu
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Ala

<210> 49

<211> 7
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<400> 49

Trp Ala Ser Ile Arg Glu Ser
 1 5

<210> 50
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<400> 50

Gln Gln Tyr Phe Ser Thr Met Phe Ser
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<210> 51
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<400> 52

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
 20 25 30

Ala Tyr Tyr Trp Thr Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
 35 40 45

Trp Ile Gly Tyr Ile His Tyr Ser Gly Ser Thr Tyr Ser Asn Pro Ser
 50 55 60

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

Ser Leu Lys Leu Asn Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
 85 90 95

Cys Ala Arg Gln Glu Asp Tyr Gly Gly Leu Phe Asp Tyr Trp Gly Gln
 100 105 110

Gly Thr Leu Val Thr Val Ser Ser
 115 120

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<400> 53

Ser Gly Ala Tyr Tyr Trp Thr
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<210> 54
 <211> 16
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<400> 54

Tyr Ile His Tyr Ser Gly Ser Thr Tyr Ser Asn Pro Ser Leu Lys Ser
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<210> 55
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Gln Glu Asp Tyr Gly Gly Leu Phe Asp Tyr
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<210> 56
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<400> 56

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<400> 57

Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
 1 5 10 15

Glu Arg Ile Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Thr Asp
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Leu Ala Trp Tyr Gln Gln Met Pro Gly Gln Ala Pro Arg Leu Leu Ile
 35 40 45

Tyr Asp Ala Ser Thr Arg Ala Thr Gly Phe Pro Ala Arg Phe Ser Gly
 50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln His Tyr Lys Thr Trp Pro Leu
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
 100 105

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Asp Ala Ser Thr Arg Ala Thr
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 <213> Homo sapiens

<400> 60

Gln His Tyr Lys Thr Trp Pro Leu Thr
 1 5

<210> 61

<211> 1482

<212> ADN

<213> Homo sapiens

<400> 61

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ctcacctgca cagtctccgg cttcagcctc atcaatgcca ggatgggagt ttcctggatc    180

aggcaaccgc ccggaaggc cctggaatgg ctgcacata ttttcagtaa cgctgaaaaa    240

agctatcgga cttctctgaa aagtcggctc acgattagta aggacacatc caagagccaa    300

gtggtgctta cgatgactaa catggaccct gtggatactg caacctatta ctgtgctcga    360

atccctgggt atggcggaaa tggggactac cactactacg gtatggatgt ctggggccaa    420

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ggaggcagcg atatccagat gacgcagtc cctagttcac tttccgcatc cctgggggat    540

cgggttacca ttacatgccg cgcgtcacag ggtatccgga atgatctggg atggtaccag    600

cagaagccgg gaaaggctcc taagcgcctc atctacgcca gctccaccct gcagagtgga    660

gtgccctccc ggttttcagg cagtggctcc ggtacggagt ttactcttac aattagcagc    720

ctgcagccag aagattttgc aactactac tgtttgagc ataataattt ccctggacc    780

tttggtcagg gcaccaaggt ggagatcaaa agagcagccg ccatcgaagt aatgtatccc    840

ccccgtacc ttgacaatga gaagtcaaat ggaaccatta tccatgttaa gggcaaacac    900

ctctgccctt ctccactgtt cctggccct agtaagccgt tttgggtgct ggtggtagtc    960

ggtgggggtgc tggcttgta ctctcttctc gtgaccgtcg ctttataat cttttgggtc   1020

agatcaaaaa gaagccgcct gtcctatagc gattacatga atatgactcc acgccgcct   1080

ggccccacaa ggaaacacta ccagccttac gcaccaccta gagatttcgc tgcctatcgg   1140

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ctttacaatg agctgaacct gggtcgcaga gaagagtacg acgttttgga caaacgccgg   1260

ggccgagatc ctgagatggg ggggaagccg agaaggaaga atcctcaaga aggcctgtac   1320

aacgagcttc aaaaagacaa aatggctgag gcgtactctg agatcgcat gaagggcgag   1380

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cggagacgag gcaaggggtca cgatggcttg tatcagggcc tgagtacagc cacaaaggac 1440

acctatgacg ccctccacat gcaggcactg cccccacgct ag 1482

<210> 62

<211> 493

<212> PRT

<213> Homo sapiens

<400> 62

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
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His Ala Ala Arg Pro Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu
20 25 30

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

Ser Leu Ile Asn Ala Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro
50 55 60

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

Ser Tyr Arg Thr Ser Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr
85 90 95

Ser Lys Ser Gln Val Val Leu Thr Met Thr Asn Met Asp Pro Val Asp
100 105 110

Thr Ala Thr Tyr Tyr Cys Ala Arg Ile Pro Gly Tyr Gly Gly Asn Gly
115 120 125

Asp Tyr His Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val
130 135 140

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly

145 150 155 160

Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala
 165 170 175

Ser Leu Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile
 180 185 190

Arg Asn Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
 195 200 205

Arg Leu Ile Tyr Ala Ser Ser Thr Leu Gln Ser Gly Val Pro Ser Arg
 210 215 220

Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser
 225 230 235 240

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

Phe Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Ala
 260 265 270

Ala Ala Ile Glu Val Met Tyr Pro Pro Pro Tyr Leu Asp Asn Glu Lys
 275 280 285

Ser Asn Gly Thr Ile Ile His Val Lys Gly Lys His Leu Cys Pro Ser
 290 295 300

Pro Leu Phe Pro Gly Pro Ser Lys Pro Phe Trp Val Leu Val Val Val
 305 310 315 320

Gly Gly Val Leu Ala Cys Tyr Ser Leu Leu Val Thr Val Ala Phe Ile
 325 330 335

Ile Phe Trp Val Arg Ser Lys Arg Ser Arg Leu Leu His Ser Asp Tyr
 340 345 350

Met Asn Met Thr Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln
 355 360 365

Pro Tyr Ala Pro Pro Arg Asp Phe Ala Ala Tyr Arg Ser Arg Val Lys
 370 375 380

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln
 385 390 395 400

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
 405 410 415

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
 420 425 430

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
 435 440 445

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
 450 455 460

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

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
 485 490

<210> 63

<211> 1455

<212> ADN

<213> Homo sapiens

<400> 63

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ctcacgtgta cagtgagtgg ttttccttg atcaacgcaa ggatgggctg cagctggatc 180

aggcaacccc ctggcaaggc tctggaatgg ctcgctcaca tattcagcaa tgccgaaaaa 240

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<210> 64

<211> 484

<212> PRT

<213> Homo sapiens

<400> 64

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

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

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

Ser Leu Ile Asn Ala Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro
 50 55 60

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

Ser Tyr Arg Thr Ser Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr
 85 90 95

Ser Lys Ser Gln Val Val Leu Thr Met Thr Asn Met Asp Pro Val Asp
 100 105 110

Thr Ala Thr Tyr Tyr Cys Ala Arg Ile Pro Gly Tyr Gly Gly Asn Gly
 115 120 125

Asp Tyr His Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val
 130 135 140

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
 145 150 155 160

Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala
 165 170 175

Ser Leu Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile
 180 185 190

Arg Asn Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys

195 200 205

Arg Leu Ile Tyr Ala Ser Ser Thr Leu Gln Ser Gly Val Pro Ser Arg
210 215 220

Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser
225 230 235 240

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

Phe Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Ala
260 265 270

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

Gly Lys His Leu Cys Pro Ser Pro Leu Phe Pro Gly Pro Ser Lys Pro
290 295 300

Phe Trp Val Leu Val Val Val Gly Gly Val Leu Ala Cys Tyr Ser Leu
305 310 315 320

Leu Val Thr Val Ala Phe Ile Ile Phe Trp Val Arg Ser Lys Arg Ser
325 330 335

Arg Leu Leu His Ser Asp Tyr Met Asn Met Thr Pro Arg Arg Pro Gly
340 345 350

Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro Pro Arg Asp Phe Ala
355 360 365

Ala Tyr Arg Ser Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala
370 375 380

Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg
385 390 395 400

Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu
 405 410 415

Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn
 420 425 430

Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met
 435 440 445

Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly
 450 455 460

Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala
 465 470 475 480

Leu Pro Pro Arg

<210> 65

<211> 1563

<212> ADN

<213> Homo sapiens

<400> 65

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ctgacttgca ccgtgtctgg gttctctctg attaacgctc gaatgggtgt gagttggata 180

cgccagcctc caggggaaggc tctggagtgg ttggcccaca ttttctcaa cgccgagaag 240

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gtggtgctga caatgacaaa catggacccg gttgatactg ctacctatta ttgtccccgc 360

attccccggt acggcggcaa tggcgactat cactattatg gtatggatgt ctgggggcag 420

gggaccactg ttaccgtgtc cagcgggggt ggtggcagcg gaggtggagg gagcgggtgt 480

gggggggagtg atattcagat gaccagagc ctagctctc tttccgttc tctgggcgat 540

agagtcacca tcacctgccg ggcctctcaa ggcatccgga acgatcttgg atggtatcag 600

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 gtgccgtccc gggtttctgg ttctggtagt gggaccgagt ttactctgac tatttcttcc 720
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<210> 66

<211> 520

<212> PRT

<213> Homo sapiens

<400> 66

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
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His Ala Ala Arg Pro Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu
 20 25 30

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

Ser Leu Ile Asn Ala Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro
 50 55 60

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

Ser Tyr Arg Thr Ser Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr
 85 90 95

Ser Lys Ser Gln Val Val Leu Thr Met Thr Asn Met Asp Pro Val Asp
 100 105 110

Thr Ala Thr Tyr Tyr Cys Ala Arg Ile Pro Gly Tyr Gly Gly Asn Gly
 115 120 125

Asp Tyr His Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val
 130 135 140

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
 145 150 155 160

Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala
 165 170 175

Ser Leu Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile
 180 185 190

Arg Asn Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
 195 200 205

Arg Leu Ile Tyr Ala Ser Ser Thr Leu Gln Ser Gly Val Pro Ser Arg
 210 215 220

Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser

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

Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly
 435 440 445

Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu
 450 455 460

Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser
 465 470 475 480

Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly
 485 490 495

Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu
 500 505 510

His Met Gln Ala Leu Pro Pro Arg
 515 520

<210> 67

<211> 1464

<212> ADN

<213> Homo sapiens

<400> 67

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ctgtcatgcg tggcgtctgg cttcacattc aagaactacg gcatgcactg ggtgcgacag 180

gccccgggaa agggtttga gtgggtcgcc gtgatctggt acgacggatc taatgagtat 240

tacggagatc ctgtgaaggg aaggttcacc atctcccgcg acaatagcaa aaatatgctc 300

tacctgcaaa tgaactcact cagggcggtat gatacggcgg tctactattg cgctcgctca 360

gggattgctg tggccggcgc attcgattac tggggacagg gtaccctggt gacagtatca 420

agcggaggcg gcggctctgg cggcggcgga tctggcgggg ggggaagtga gattgtgttg 480

acacagtctc ccgataccct gtactgtca cccggcgaga aggcaacgct gagttgcaga 540

gcaagccagt cagtctctc ttcttttctg gcctggtatc agcaaaaacc aggtcaggca 600

ccatctctcc tgatttacgt tgccagcaga cgggcggctg gcattcccga caggttctct 660
 ggaagcggat ctgggaccga tttaccctg acaattagcc gcttgagacc cgaagacttt 720
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<210> 68

<211> 487

<212> PRT

<213> Homo sapiens

<400> 68

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
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His Ala Ala Arg Pro Gln Ile Gln Leu Val Glu Ser Gly Gly Gly Val
 20 25 30

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe
 35 40 45

Thr Phe Lys Asn Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys
 50 55 60

Gly Leu Glu Trp Val Ala Val Ile Trp Tyr Asp Gly Ser Asn Glu Tyr
 65 70 75 80

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

Lys Asn Met Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Asp Asp Thr
 100 105 110

Ala Val Tyr Tyr Cys Ala Arg Ser Gly Ile Ala Val Ala Gly Ala Phe
 115 120 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
 130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu
 145 150 155 160

Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Lys Ala Thr
 165 170 175

Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser Phe Leu Ala Trp
 180 185 190

Tyr Gln Gln Lys Pro Gly Gln Ala Pro Ser Leu Leu Ile Tyr Val Ala
 195 200 205

Ser Arg Arg Ala Ala Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser
 210 215 220

Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe
 225 230 235 240

Gly Met Phe Tyr Cys Gln His Tyr Gly Arg Thr Pro Phe Thr Phe Gly

245 250 255

Pro Gly Thr Lys Val Asp Ile Lys Arg Ala Ala Ala Ile Glu Val Met
260 265 270

Tyr Pro Pro Pro Tyr Leu Asp Asn Glu Lys Ser Asn Gly Thr Ile Ile
275 280 285

His Val Lys Gly Lys His Leu Cys Pro Ser Pro Leu Phe Pro Gly Pro
290 295 300

Ser Lys Pro Phe Trp Val Leu Val Val Val Gly Gly Val Leu Ala Cys
305 310 315 320

Tyr Ser Leu Leu Val Thr Val Ala Phe Ile Ile Phe Trp Val Arg Ser
325 330 335

Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn Met Thr Pro Arg
340 345 350

Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro Pro Arg
355 360 365

Asp Phe Ala Ala Tyr Arg Ser Arg Val Lys Phe Ser Arg Ser Ala Asp
370 375 380

Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn
385 390 395 400

Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg
405 410 415

Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly
420 425 430

Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu
435 440 445

Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu
 450 455 460

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

Met Gln Ala Leu Pro Pro Arg
 485

<210> 69

<211> 1437

<212> ADN

<213> Homo sapiens

<400> 69

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ctctctgtg tggcaagcgg atttacctt aagaactatg gcatgcactg ggtgaggcag 180

gcccctggaa aaggactgga gtgggttgct gtgatctggt acgacgggac caacgaatat 240

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tacctgcaa tgaactctct gcgcgctgat gacactgccg tgtattattg cgctcggagt 360

ggatcgccg tcgcaggagc atttgattat tgggggcaag ggaccctcgt gacagtgagt 420

tccggagggg gaggttctgg tggaggcggc tctggtgggg gaggcagcga gatcgttctg 480

accagctctc ctgacacact gtcactgtcc cctggtgaaa aggccacact gtcttgtaga 540

gcgtccaga gcgtttccag ttccttctt gcatggatc aacaaaaacc cgggcaggct 600

ccaagctgc tgatctacgt ggccagccgc cgggccgcag gcatccctga taggtttagc 660

ggttctggga gcgggacgga cttcacctg acaatatcac ggctggaacc cgaagacttc 720

ggaatgttt attgccagca ctacggaaga actccattca ctttggccc gggaacgaag 780

gtagacatca agagagcagc agccctcgac aacgagaaat ccaatggaac cattatccat 840

gtgaagggga aacatctctg ccctcacca ttgttcctg gaccagcaa gccttttgg 900

gttctggtcg tgggtgggggg cgtcctggct tgttactccc tcctcgttac agtcgccttc 960

ataatctttt gggtagatc caaaagaagc cgcctgctcc atagcgatta catgaatatg 1020
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<210> 70

<211> 478

<212> PRT

<213> Homo sapiens

<400> 70

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

His Ala Ala Arg Pro Gln Ile Gln Leu Val Glu Ser Gly Gly Gly Val
 20 25 30

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe
 35 40 45

Thr Phe Lys Asn Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys
 50 55 60

Gly Leu Glu Trp Val Ala Val Ile Trp Tyr Asp Gly Ser Asn Glu Tyr
 65 70 75 80

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

Lys Asn Met Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Asp Asp Thr

100 105 110

Ala Val Tyr Tyr Cys Ala Arg Ser Gly Ile Ala Val Ala Gly Ala Phe
115 120 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu
145 150 155 160

Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Lys Ala Thr
165 170 175

Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser Phe Leu Ala Trp
180 185 190

Tyr Gln Gln Lys Pro Gly Gln Ala Pro Ser Leu Leu Ile Tyr Val Ala
195 200 205

Ser Arg Arg Ala Ala Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser
210 215 220

Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe
225 230 235 240

Gly Met Phe Tyr Cys Gln His Tyr Gly Arg Thr Pro Phe Thr Phe Gly
245 250 255

Pro Gly Thr Lys Val Asp Ile Lys Arg Ala Ala Ala Leu Asp Asn Glu
260 265 270

Lys Ser Asn Gly Thr Ile Ile His Val Lys Gly Lys His Leu Cys Pro
275 280 285

Ser Pro Leu Phe Pro Gly Pro Ser Lys Pro Phe Trp Val Leu Val Val
290 295 300

Val Gly Gly Val Leu Ala Cys Tyr Ser Leu Leu Val Thr Val Ala Phe
 305 310 315 320

Ile Ile Phe Trp Val Arg Ser Lys Arg Ser Arg Leu Leu His Ser Asp
 325 330 335

Tyr Met Asn Met Thr Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr
 340 345 350

Gln Pro Tyr Ala Pro Pro Arg Asp Phe Ala Ala Tyr Arg Ser Arg Val
 355 360 365

Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn
 370 375 380

Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val
 385 390 395 400

Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg
 405 410 415

Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys
 420 425 430

Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg
 435 440 445

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

Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
 465 470 475

<210> 71

<211> 1545

<212> ADN

<213> Homo sapiens

<400> 71

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 ccgcagatac agcttgctga atccggtggc ggggtggcgc agcctggacg cagcctgcgg 120
 ctttctgctg tggccagcgg atttaccttc aagaactacg ggatgcattg ggtccgccag 180
 gcacccggca aaggccttga gtgggttgca gtgatctggt acgacggcag taacgagtat 240
 tatggcgacc ccgtgaaggg aaggtttact attcaagag ataatagtaa gaacatgttg 300
 tatctgcaaa tgaacagtct gagagcggac gacactgccg tgtactactg tgctcgctcc 360
 ggcatcgctg tggcaggggc cttgactac tggggtcagg ggacgctggt cacggttagt 420
 tccgggggcg gtggttccgg aggaggcggg tccggcggcg gcggatcaga aatcgttctt 480
 actcagagtc ccgatacgtc gtccttgtct ccgggagaaa aagccacact gagctgccga 540
 gcctcacagt cagtaagttc ttcattcttc gcctggtacc agcaaaaacc ggggcaggcc 600
 ccttcctgc ttatctacgt ggctctagg agagccgccg gtattcctga ccggttcagc 660
 ggaagtgggt ccgggactga tttacgctc acgatctccc gattggagcc cgaggatttc 720
 gggatgttct actgtcagca ttatggaaga acgcccttta ccttcggtcc gggaactaag 780
 gttgatatta agcgggctgc tggccttagc aactccatca tgtatttttc tcacttcgtg 840
 ccagtattcc tgccagccaa accgaccaca accccagcac ctagacctcc tactcccgt 900
 cccaccatag cttcacagcc gctgagtttg aggccagagg cctgtcggcc tgctgcaggc 960
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 gcgggaacct gcgggggtgct cttttgtca ctcgttatca cactgtattg caatcatagg 1080
 aatagatcca aaagaagccg cctgtccat agcgattaca tgaatatgac tccacgccgc 1140
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 cggagccgag tgaaattttc tagatcagct gatgctccc cctatcagca gggacagaat 1260
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 cggggccgag atcctgagat gggggggaag ccgagaagga agaatcctca agaaggcctg 1380
 tacaacgagc ttcaaaaaga caaatggct gaggcgtact ctgagatcgg catgaagggc 1440
 gagcggagac gaggcaaggg tcacgatggc ttgtatcagg gcctgagtac agccacaaag 1500

gacacctatg acgccctcca catgcaggca ctgccccac gctag 1545

<210> 72

<211> 514

<212> PRT

<213> Homo sapiens

<400> 72

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

His Ala Ala Arg Pro Gln Ile Gln Leu Val Glu Ser Gly Gly Gly Val
20 25 30

Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Val Ala Ser Gly Phe
35 40 45

Thr Phe Lys Asn Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys
50 55 60

Gly Leu Glu Trp Val Ala Val Ile Trp Tyr Asp Gly Ser Asn Glu Tyr
65 70 75 80

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

Lys Asn Met Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Asp Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Ser Gly Ile Ala Val Ala Gly Ala Phe
115 120 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Leu
145 150 155 160

Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Lys Ala Thr
 165 170 175

Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser Phe Leu Ala Trp
 180 185 190

Tyr Gln Gln Lys Pro Gly Gln Ala Pro Ser Leu Leu Ile Tyr Val Ala
 195 200 205

Ser Arg Arg Ala Ala Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser
 210 215 220

Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe
 225 230 235 240

Gly Met Phe Tyr Cys Gln His Tyr Gly Arg Thr Pro Phe Thr Phe Gly
 245 250 255

Pro Gly Thr Lys Val Asp Ile Lys Arg Ala Ala Ala Leu Ser Asn Ser
 260 265 270

Ile Met Tyr Phe Ser His Phe Val Pro Val Phe Leu Pro Ala Lys Pro
 275 280 285

Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala
 290 295 300

Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly
 305 310 315 320

Gly Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile
 325 330 335

Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val
 340 345 350

Ile Thr Leu Tyr Cys Asn His Arg Asn Arg Ser Lys Arg Ser Arg Leu

355 360 365

Leu His Ser Asp Tyr Met Asn Met Thr Pro Arg Arg Pro Gly Pro Thr
370 375 380

Arg Lys His Tyr Gln Pro Tyr Ala Pro Pro Arg Asp Phe Ala Ala Tyr
385 390 395 400

Arg Ser Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln
405 410 415

Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu
420 425 430

Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly
435 440 445

Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu
450 455 460

Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly
465 470 475 480

Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser
485 490 495

Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro
500 505 510

Pro Arg

<210> 73

<211> 1476

<212> ADN

<213> Homo sapiens

<400> 73

atggcactcc ccgtaactgc tctgctgctg ccgttggcat tgctcctgca cgccgcacgc 60

ccgcaggtgc agctggtgca gagtggggca gaagtaaaga agcctggtgc ctctgtcaaa 120
 gttagttgca aagcatctgg gtatacttc accggttact atatcattg gggtcggcag 180
 gccccggagc agggactgga gtggatgggc tggatcaacc caaattcagg cggcactaac 240
 tatgtctaaa agttccaggg cagggtcaca atggcccggg atacttcaat tagcaccgtc 300
 tatatggatc ttagtcggct gcgcagtgac gataccgctg tctactattg cgcaaggatc 360
 aggggaggga attctgtttt tgactattgg ggccagggaa cactggtgac cgtctcctct 420
 ggtggaggcg gtagtgggtg aggcgggtcc ggaggagggg gctccgatat agtgatgact 480
 caaagtcccg atagcttggc agtatctctt gggaacgcg ccactattaa ctgtaaatcc 540
 acccagtcca ttctctatac cttaacaac aagaatttcc tcgctggta tcagcaaaaa 600
 cccgggcagc cacctaaact gcttatatcc tgggccagca tcaggagtc cggcgtcctt 660
 gatcggttca gcggtagttg cagcgggaca gacttcgctc tgaccatcag tagcctccag 720
 gctgaagatg tcgcagtgtg ttattgccag cagtacttca gcacgatgtt tagcttcggg 780
 cagggaacca agctggaaat aaagagagct gcagcaatcg aggtgatgta cccacctcca 840
 tatctggaca atgaaaagtc caatggcact atcatacacg tgaagggcaa acacctgtgt 900
 ccatctccac tttcccggg cccgtctaaa ctttctggg tgctggtggt ggtgggcgga 960
 gttctggcct gttattcact gctggtcacc gtggctttca tcatttttg ggtaagatcc 1020
 aaaagaagcc gcctgctcca tagcgattac atgaatatga ctccacgccg ccctggcccc 1080
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 aatgagctga acctgggtcg cagagaagag tacgacgttt tggacaaacg ccggggccga 1260
 gatcctgaga tgggggggaa gccgagaagg aagaatctc aagaaggcct gtacaacgag 1320
 cttcaaaaag acaaaatggc tgaggcgtac tctgagatcg gcatgaaggg cgagcggaga 1380
 cgaggcaagg gtcacgatgg cttgtatcag ggcctgagta cagccacaaa ggacacctat 1440
 gacgccctcc acatgcaggc actgccccca cgctag 1476

<210> 74

<211> 491

<212> PRT

<213> Homo sapiens

<400> 74

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu

1 5 10 15

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val

20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr

35 40 45

Thr Phe Thr Gly Tyr Tyr Ile His Trp Val Arg Gln Ala Pro Glu Gln

50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn

65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Ala Arg Asp Thr Ser

85 90 95

Ile Ser Thr Val Tyr Met Asp Leu Ser Arg Leu Arg Ser Asp Asp Thr

100 105 110

Ala Val Tyr Tyr Cys Ala Arg Ile Arg Gly Gly Asn Ser Val Phe Asp

115 120 125

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly

130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr

145 150 155 160

Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile

165 170 175

Asn Cys Lys Ser Thr Gln Ser Ile Leu Tyr Thr Ser Asn Asn Lys Asn
 180 185 190

Phe Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu
 195 200 205

Ile Ser Trp Ala Ser Ile Arg Glu Ser Gly Val Pro Asp Arg Phe Ser
 210 215 220

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

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

Phe Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Ala Ala Ala
 260 265 270

Ile Glu Val Met Tyr Pro Pro Pro Tyr Leu Asp Asn Glu Lys Ser Asn
 275 280 285

Gly Thr Ile Ile His Val Lys Gly Lys His Leu Cys Pro Ser Pro Leu
 290 295 300

Phe Pro Gly Pro Ser Lys Pro Phe Trp Val Leu Val Val Val Gly Gly
 305 310 315 320

Val Leu Ala Cys Tyr Ser Leu Leu Val Thr Val Ala Phe Ile Ile Phe
 325 330 335

Trp Val Arg Ser Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn
 340 345 350

Met Thr Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr
 355 360 365

Ala Pro Pro Arg Asp Phe Ala Ala Tyr Arg Ser Arg Val Lys Phe Ser

370 375 380

Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr
385 390 395 400

Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys
405 410 415

Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn
420 425 430

Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu
435 440 445

Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly
450 455 460

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

Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
485 490

<210> 75

<211> 1449

<212> ADN

<213> Homo sapiens

<400> 75

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ccgcaggtac agctggtgca gagcggggcc gaggtcaaaa agcccggggc ttcagttaag 120

gttagctgca aggcttccgg ctacacctt accggttact atattcactg ggtagacag 180

gcacctgagc aaggactgga gtggatgggg tggattaacc ccaatagcgg tgggaccaac 240

tacgcccaga agtttcaagg ccgagtgaca atggcacgag acacctccat ttccactgtg 300

tacatggact tgagccgcct caggtcagac gacaccgcag tgtactactg tgcgcgaatc 360

cgcggcggaa acagcgtgtt tgactactgg ggtcagggca cgttgggtgac cgtgtcttcc 420

ggaggggggg gatctggtgg cgggggctcc ggcggaggcg gtagtgatat tgtgatgact 480
 cagtcaccgg acagtcttgc tgttcactt ggtgagaggg ccaccataaa ttgtaaaagc 540
 acccagagca ttctctacac atctaacaac aaaaatttcc tggcctggta ccagcagaag 600
 cccggacagc cacccaaatt gctgattagc tgggccagca ttcgagaatc tggggttccg 660
 gaccgctttt ccgggtctgg ctctgggacc gacttcgctt tgaccataag ctctcttcag 720
 gccgaagacg tcgcagtata ctattgtcaa cagtattttt ctaccatggt ttccttcggc 780
 cagggaacta agttggagat caagagagca gctgcattgg ataagagaa gtccaatggc 840
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 tacatgaata tgactccacg ccgccctggc cccacaagga aacactacca gccttacgca 1080
 ccacntagag atttcgctgc ctatcggagc cgagtgaat tttctagatc agctgatgct 1140
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 tactctgaga tcggcatgaa gggcgagcgg agacgaggca agggtcacga tggcttgat 1380
 cagggcctga gtacagccac aaaggacacc tatgacgcc tccacatgca ggcactgccc 1440
 ccacgctag 1449

<210> 76

<211> 482

<212> PRT

<213> Homo sapiens

<400> 76

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

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val

20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Gly Tyr Tyr Ile His Trp Val Arg Gln Ala Pro Glu Gln
50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Ala Arg Asp Thr Ser
85 90 95

Ile Ser Thr Val Tyr Met Asp Leu Ser Arg Leu Arg Ser Asp Asp Thr
100 105 110

Ala Val Tyr Tyr Cys Ala Arg Ile Arg Gly Gly Asn Ser Val Phe Asp
115 120 125

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr
145 150 155 160

Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile
165 170 175

Asn Cys Lys Ser Thr Gln Ser Ile Leu Tyr Thr Ser Asn Asn Lys Asn
180 185 190

Phe Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu
195 200 205

Ile Ser Trp Ala Ser Ile Arg Glu Ser Gly Val Pro Asp Arg Phe Ser
210 215 220

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

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

Phe Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Ala Ala Ala
 260 265 270

Leu Asp Asn Glu Lys Ser Asn Gly Thr Ile Ile His Val Lys Gly Lys
 275 280 285

His Leu Cys Pro Ser Pro Leu Phe Pro Gly Pro Ser Lys Pro Phe Trp
 290 295 300

Val Leu Val Val Val Gly Gly Val Leu Ala Cys Tyr Ser Leu Leu Val
 305 310 315 320

Thr Val Ala Phe Ile Ile Phe Trp Val Arg Ser Lys Arg Ser Arg Leu
 325 330 335

Leu His Ser Asp Tyr Met Asn Met Thr Pro Arg Arg Pro Gly Pro Thr
 340 345 350

Arg Lys His Tyr Gln Pro Tyr Ala Pro Pro Arg Asp Phe Ala Ala Tyr
 355 360 365

Arg Ser Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln
 370 375 380

Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu
 385 390 395 400

Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly
 405 410 415

Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu

420

425

430

Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly
 435 440 445

Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser
 450 455 460

Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro
 465 470 475 480

Pro Arg

<210> 77

<211> 1557

<212> ADN

<213> Homo sapiens

<400> 77

atggcactcc ccgtaactgc tctgtgctg ccgttggcat tgctcctgca cgccgcacgc 60

ccgcaagttc agcttgtgca gagcggagct gaggtgaaaa aaccaggcgc ctccgttaag 120

gtgtcttgca aagccagcgg atacacattt accgggtact atattcactg ggtgaggcag 180

gcccctgaac agggccttga atggatgggg tggatcaatc caaattccgg gggaaccaat 240

tatgctcaga aatttcaggg cagagtgaca atggccaggg acacctcaat cagcacagtc 300

tacatggacc tgagccgcct gaggtctgat gacacagccg tctactactg tgcccggatc 360

agaggggggaa acagtgtctt cgactattgg gggcaggggaa ccctggtgac tgtctcctcc 420

gggggagggg gtagcggggg aggcggcagc ggcgggggtg gttctgacat tggtatgacc 480

caatccccag actctctggc cgtgagcctg ggtgagagag ccaccatcaa ttgcaagtcc 540

accagagca tactctatac gtcaaacaat aagaatttcc tggcgtggta tcagcaaaaag 600

ccgggtcaac cacccaagtt gttgattagc tgggcatcaa ttcgagaatc tggcgtcctt 660

gataggttta gcgggagcgg tagtggaacc gactttgcgc tgaccatttc atccctcag 720

gcagaggacg tggctgtgta ttactgtcaa cagtacttca gcacgatgtt ttcttcggc 780

caggggacga agctggagat aaagcgggcc gcagcactca gcaacagcat catgtacttt 840
 ttcatttcg tcccagtttt tctccccgcc aaaccaccca ctaccctgc tcctaggcct 900
 cccactcccg caccacccat tgcttcccaa cctctgtcat tgaggcccg agcctgcaga 960
 cctgccgcag gaggggctgt gcacaccgc ggtctggatt ttgcttga tatctacatt 1020
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 actccagcc gccctggccc cacaaggaaa cactaccagc cttacgcacc acctagagat 1200
 ttcgtgcct atcggagccg agtgaaattt tctagatcag ctgatgtcc cgcctatcag 1260
 caggacaga atcaacttta caatgagctg aacctgggtc gcagagaaga gtacgacgtt 1320
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 caagaaggcc tgtacaacga gttcaaaaa gacaaaatgg ctgaggcgta ctctgagatc 1440
 ggcatgaagg gcgagcggag acgaggcaag ggtcacgatg gcttgatca gggcctgagt 1500
 acagccacaa aggacaccta tgacgcctc cacatgcagg cactgcccc acgctag 1557

<210> 78

<211> 518

<212> PRT

<213> Homo sapiens

<400> 78

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

His Ala Ala Arg Pro Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val
 20 25 30

Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr
 35 40 45

Thr Phe Thr Gly Tyr Tyr Ile His Trp Val Arg Gln Ala Pro Glu Gln
 50 55 60

Gly Leu Glu Trp Met Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn
65 70 75 80

Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Ala Arg Asp Thr Ser
 85 90 95

Ile Ser Thr Val Tyr Met Asp Leu Ser Arg Leu Arg Ser Asp Asp Thr
 100 105 110

Ala Val Tyr Tyr Cys Ala Arg Ile Arg Gly Gly Asn Ser Val Phe Asp
 115 120 125

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
 130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr
145 150 155 160

Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile
 165 170 175

Asn Cys Lys Ser Thr Gln Ser Ile Leu Tyr Thr Ser Asn Asn Lys Asn
 180 185 190

Phe Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu
 195 200 205

Ile Ser Trp Ala Ser Ile Arg Glu Ser Gly Val Pro Asp Arg Phe Ser
 210 215 220

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

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

Phe Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Ala Ala Ala

260 265 270

Leu Ser Asn Ser Ile Met Tyr Phe Ser His Phe Val Pro Val Phe Leu
275 280 285

Pro Ala Lys Pro Thr Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala
290 295 300

Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg
305 310 315 320

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

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu
340 345 350

Leu Ser Leu Val Ile Thr Leu Tyr Cys Asn His Arg Asn Arg Ser Lys
355 360 365

Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn Met Thr Pro Arg Arg
370 375 380

Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro Pro Arg Asp
385 390 395 400

Phe Ala Ala Tyr Arg Ser Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
405 410 415

Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
420 425 430

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
435 440 445

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
450 455 460

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
 465 470 475 480

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
 485 490 495

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
 500 505 510

Gln Ala Leu Pro Pro Arg
 515

<210> 79

<211> 1461

<212> ADN

<213> Homo sapiens

<400> 79

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ccgcaggtgc agctccaaga gtcaggacca ggacttgta aaccaagcca gaccctcagc 120

cttacctgca ccgtcagcgg gggctccatc agctctgggg ctactactg gacatggata 180

cgacagcatc ccggtaaagg tctggagtgg atcgggtaca tacactatag tggttccaca 240

tattctaac catctcttaa gattcgaatt acaatttcac tcgatacttc aaagaatcag 300

ttcagcttga aactgaactc cgtgaccgcg gctgacaccg ccgtgtacta ctgtgcacgc 360

caagaggatt atggcgggact gttcgattat tgggggcagg gaactctcgt gacagtgagc 420

tccggcgggg gcggcagcgg tgggggtgga agtgggtggag ggggcagcga gatcgtgatg 480

accagagtc ctgccacact gtcagtgagt cctgggggagc gaatcacact ttctgtcga 540

gcgtctcagt ccgtgaccac ggacctggcg tggtagcagc agatgccagg ccaggcgcca 600

agactcctga tctacgacgc ttctaccgcg gctactggtt tccccgccag attctccgga 660

agcgggtccg ggacggattt tacacttacc atctcttcat tgcaggctga ggattttgcc 720

gtgtactact gtcagcatta caaacctgg cccctcactt tcgggggcgg aacaaaagtg 780

gaaattaaac gggcagcagc tattgaggtg atgtaccac cccctacat ggacaacgag 840

aaatccaatg gcaccatcat ccacgttaag ggtaagcact tgtgtccctc accactcttc 900
 cctgggccta gcaagccatt ctgggtcctg gtggtcgtgg gaggcgtgct ggcctgctat 960
 tccctcctgg ttaccgttgc cttatcata ttttgggtca gatccaaaag aagccgcctg 1020
 ctccatagcg attacatgaa tatgactcca cgccgcctg gccccacaag gaaacactac 1080
 cagccttacg caccacctag agatttcgct gcctatcgga gccgagtga attttctaga 1140
 tcagctgatg ctcccgcta tcagcaggga cagaatcaac ttacaatga gctgaacctg 1200
 ggtcgcagag aagagtacga cgttttggac aaacgccggg gccgagatcc tgagatgggg 1260
 gggaagccga gaaggaagaa tcctcaagaa ggcctgtaca acgagcttca aaaagacaaa 1320
 atggctgagg cgtactctga gatcggcatg aagggcgagc ggagacgagg caagggtcac 1380
 gatggcttgt atcagggcct gagtacagcc acaaaggaca cctatgacgc cctccacatg 1440
 caggcactgc ccccagcta g 1461

<210> 80

<211> 486

<212> PRT

<213> Homo sapiens

<400> 80

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

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
 20 25 30

Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
 35 40 45

Ser Ile Ser Ser Gly Ala Tyr Tyr Trp Thr Trp Ile Arg Gln His Pro
 50 55 60

Gly Lys Gly Leu Glu Trp Ile Gly Tyr Ile His Tyr Ser Gly Ser Thr
 65 70 75 80

Tyr Ser Asn Pro Ser Leu Lys Ser Arg Ile Thr Ile Ser Leu Asp Thr
85 90 95

Ser Lys Asn Gln Phe Ser Leu Lys Leu Asn Ser Val Thr Ala Ala Asp
100 105 110

Thr Ala Val Tyr Tyr Cys Ala Arg Gln Glu Asp Tyr Gly Gly Leu Phe
115 120 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met
145 150 155 160

Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly Glu Arg Ile Thr
165 170 175

Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Thr Asp Leu Ala Trp Tyr
180 185 190

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

Thr Arg Ala Thr Gly Phe Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
210 215 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Phe Ala
225 230 235 240

Val Tyr Tyr Cys Gln His Tyr Lys Thr Trp Pro Leu Thr Phe Gly Gly
245 250 255

Gly Thr Lys Val Glu Ile Lys Arg Ala Ala Ala Ile Glu Val Met Tyr
260 265 270

Pro Pro Pro Tyr Leu Asp Asn Glu Lys Ser Asn Gly Thr Ile Ile His

275 280 285

Val Lys Gly Lys His Leu Cys Pro Ser Pro Leu Phe Pro Gly Pro Ser
290 295 300

Lys Pro Phe Trp Val Leu Val Val Val Gly Gly Val Leu Ala Cys Tyr
305 310 315 320

Ser Leu Leu Val Thr Val Ala Phe Ile Ile Phe Trp Val Arg Ser Lys
325 330 335

Arg Ser Arg Leu Leu His Ser Asp Tyr Met Asn Met Thr Pro Arg Arg
340 345 350

Pro Gly Pro Thr Arg Lys His Tyr Gln Pro Tyr Ala Pro Pro Arg Asp
355 360 365

Phe Ala Ala Tyr Arg Ser Arg Val Lys Phe Ser Arg Ser Ala Asp Ala
370 375 380

Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu
385 390 395 400

Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp
405 410 415

Pro Glu Met Gly Gly Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu
420 425 430

Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile
435 440 445

Gly Met Lys Gly Glu Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr
450 455 460

Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met
465 470 475 480

Gln Ala Leu Pro Pro Arg
485

<210> 81

<211> 1434

<212> ADN

<213> Homo sapiens

<400> 81

atggcactcc ccgtaactgc tctgctgctg ccgttggcat tgctcctgca cgccgcacgc 60

ccgcaggtgc agttgcagga gagcggggcca ggcttgggtga agcccagcca aactgagc 120

ctcacctgta ctgtgtccgg tggtagcatt tccagcgggg cgtattattg gacatggata 180

cgccaacacc ctggaagg gttggagtgg attggataca tccattattc tgggtccacc 240

tatagtaacc cttctctcaa gtctgcatt actattagt tggatactc taagaatcag 300

tttagtctga agctgaacag tgtaaccgcc gccgacaccg cggctacta ctgtgctagg 360

caggaggatt acgggggact gttcgattac tggggccagg ggacattggc caccgttca 420

agcgggggcg gcggatctgg cggaggggga tctggaggcg gaggctctga gatcgtaatg 480

actcagagcc cagccacct gtccgtctct cccggcgaac gcatcactct gagctgtagg 540

gcatcacagt ctgttaccac agatctggct tggatcaac aaatgcctgg gcaggccccg 600

cgactgtga tttatgacgc ctctacggg gccacaggat ttctgcccc gttctccggg 660

tctggttctg gcaccgattt tacctgaca atcagtagct tgcaggcaga agatttcgct 720

gtgtattact gccaacatta taagacatgg cctttgacat tcggcggggg aaccaaagtg 780

gagatcaaac gcgccgcagc cctggacaat gagaagtcta atgggacat cattcacgtc 840

aaagggaac acctgtgcc ctctctctg tcccaggcc ctctaagcc cttctgggtt 900

ctcgtggtgg tgggcggtgt cctggcctgc tattcccttc ttgtgacagt ggcctttatc 960

atTTTTGGG tgagatcaa aagaagccgc ctgctcata gcgattacat gaatatgact 1020

ccacgccgcc ctggccccac aaggaaacac taccagcctt acgcaccacc tagagatttc 1080

gctgcctatc ggagccgagt gaaattttct agatcagctg atgctccgc ctatcagcag 1140

ggacagaatc aactttacaa tgagctgaac ctgggtcgca gagaagagta cgacgtttg 1200

gacaaacgcc ggggccgaga tcctgagatg ggggggaagc cgagaaggaa gaatcctcaa 1260

gaaggcctgt acaacgagct tcaaaaagac aaaatggctg aggcgtactc tgagatcggc 1320

atgaagggcg agcggagacg aggcaagggt cacgatggct tgtatcaggg cctgagtaca 1380

gccacaaagg acacctatga cgccctccac atgcaggcac tgcccccacg ctag 1434

<210> 82

<211> 477

<212> PRT

<213> Homo sapiens

<400> 82

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

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
20 25 30

Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
35 40 45

Ser Ile Ser Ser Gly Ala Tyr Tyr Trp Thr Trp Ile Arg Gln His Pro
50 55 60

Gly Lys Gly Leu Glu Trp Ile Gly Tyr Ile His Tyr Ser Gly Ser Thr
65 70 75 80

Tyr Ser Asn Pro Ser Leu Lys Ser Arg Ile Thr Ile Ser Leu Asp Thr
85 90 95

Ser Lys Asn Gln Phe Ser Leu Lys Leu Asn Ser Val Thr Ala Ala Asp
100 105 110

Thr Ala Val Tyr Tyr Cys Ala Arg Gln Glu Asp Tyr Gly Gly Leu Phe
115 120 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly

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

Met Asn Met Thr Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln
 340 345 350

Pro Tyr Ala Pro Pro Arg Asp Phe Ala Ala Tyr Arg Ser Arg Val Lys
 355 360 365

Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln
 370 375 380

Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu
 385 390 395 400

Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg
 405 410 415

Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met
 420 425 430

Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly
 435 440 445

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

Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
 465 470 475

<210> 83

<211> 1542

<212> ADN

<213> Homo sapiens

<400> 83

atggcactcc ccgtaactgc tctgctgctg ccgttggcat tgctcctgca cgccgcacgc 60

ccgcaggtac agttgcagga aagcggcccc ggccttgtaa aaccaagcca gactctcagt 120

ttgacttgca ccgtctcagg aggaagcatt tccagtgggg cttattattg gacttggatt 180

cggcagcatc ctgggaaagg gttggaatgg atcggttata ttcattatag cggtagcacc 240

tattccaatc cgtctttgaa aagcagaatc actatttcac tcgacacctc taagaaccag 300
 ttcagtctca aactgaactc cgtgacagcg gccgacacag ctgtgtacta ctgtgcacgg 360
 caagaagatt atgggggggct gttcgattat tggggccaag gcacactggg gacagtatca 420
 agcgggtggag gaggctccgg gggcggagga agtggaggcg gggggagcga aattgtgatg 480
 acccagtctc cagccacgct gtcagtgtct ccgggagaac gcataaccct ctctgccgg 540
 gccagtcaat ccgtcacgac cgatttggtt tggatcaac agatgcctgg gcaggccccc 600
 cgcttgctga tctatgacgc ctccaccaga gcaactggtt tcccccccg gttcagcggg 660
 tctggaagcg gtacagattt tacacttacc atctcatcat tgcaagctga ggatttgcc 720
 gtgtactact gccagcacta caagacctgg ccttgacgt tcggcggcgg aacaaaagt 780
 gagattaa gagccgctgc cctcagtaac tcaatcatgt acttagtca cttgtgcct 840
 gtgtttctgc cagcaaagcc aacaaccaca ccagcaccgc gccctccaac gcctgcccc 900
 accatgcct cccagcctct gagcttgagg cctgaggctt gtcgccagc tgctggaggt 960
 gctgtgcata cagaggact ggatttcgcc tgcgatctct atatctgggc accactgcc 1020
 ggtactgtg gtgtgttct gctctactg gtcacacgc tgtactgtaa ccataggaat 1080
 agatcaaaa gaagccgct gctccatagc gattacatga atatgactcc acgccgcct 1140
 ggccccacaa ggaaacta ccagcctac gcaccaccta gagatttcgc tgcctatcgg 1200
 agccgagtga aattttctag atcagctgat gctccgcct atcagcagg acagaatcaa 1260
 cttacaatg agctgaacct gggtcgcaga gaagagtacg acgttttga caaacgccgg 1320
 ggccgagatc ctgagatggg ggggaagccg agaaggaaga atcctcaaga aggcctgtac 1380
 aacgagcttc aaaaagacaa aatggctgag gcgtactctg agatcgcat gaaggcgag 1440
 cggagacgag gcaagggtca cgatggctt tatcagggcc tgagtacagc cacaaggac 1500
 acctatgacg cctccacat gcaggcactg cccccacgt ag 1542

<210> 84

<211> 513

<212> PRT

<213> Homo sapiens

<400> 84

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

His Ala Ala Arg Pro Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu
 20 25 30

Val Lys Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly
 35 40 45

Ser Ile Ser Ser Gly Ala Tyr Tyr Trp Thr Trp Ile Arg Gln His Pro
 50 55 60

Gly Lys Gly Leu Glu Trp Ile Gly Tyr Ile His Tyr Ser Gly Ser Thr
 65 70 75 80

Tyr Ser Asn Pro Ser Leu Lys Ser Arg Ile Thr Ile Ser Leu Asp Thr
 85 90 95

Ser Lys Asn Gln Phe Ser Leu Lys Leu Asn Ser Val Thr Ala Ala Asp
 100 105 110

Thr Ala Val Tyr Tyr Cys Ala Arg Gln Glu Asp Tyr Gly Gly Leu Phe
 115 120 125

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
 130 135 140

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Val Met
 145 150 155 160

Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly Glu Arg Ile Thr
 165 170 175

Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Thr Asp Leu Ala Trp Tyr
 180 185 190

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

Thr Arg Ala Thr Gly Phe Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
 210 215 220

Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Phe Ala
 225 230 235 240

Val Tyr Tyr Cys Gln His Tyr Lys Thr Trp Pro Leu Thr Phe Gly Gly
 245 250 255

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

Met Tyr Phe Ser His Phe Val Pro Val Phe Leu Pro Ala Lys Pro Thr
 275 280 285

Thr Thr Pro Ala Pro Arg Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser
 290 295 300

Gln Pro Leu Ser Leu Arg Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly
 305 310 315 320

Ala Val His Thr Arg Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp
 325 330 335

Ala Pro Leu Ala Gly Thr Cys Gly Val Leu Leu Leu Ser Leu Val Ile
 340 345 350

Thr Leu Tyr Cys Asn His Arg Asn Arg Ser Lys Arg Ser Arg Leu Leu
 355 360 365

His Ser Asp Tyr Met Asn Met Thr Pro Arg Arg Pro Gly Pro Thr Arg
 370 375 380

Lys His Tyr Gln Pro Tyr Ala Pro Pro Arg Asp Phe Ala Ala Tyr Arg

385 390 395 400

Ser Arg Val Lys Phe Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln
 405 410 415

Gly Gln Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu
 420 425 430

Tyr Asp Val Leu Asp Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly
 435 440 445

Lys Pro Arg Arg Lys Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln
 450 455 460

Lys Asp Lys Met Ala Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu
 465 470 475 480

Arg Arg Arg Gly Lys Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr
 485 490 495

Ala Thr Lys Asp Thr Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro
 500 505 510

Arg

<210> 85

<211> 993

<212> PRT

<213> Homo sapiens

<400> 85

Met Pro Ala Leu Ala Arg Asp Gly Gly Gln Leu Pro Leu Leu Val Val
 1 5 10 15

Phe Ser Ala Met Ile Phe Gly Thr Ile Thr Asn Gln Asp Leu Pro Val
 20 25 30

Ile Lys Cys Val Leu Ile Asn His Lys Asn Asn Asp Ser Ser Val Gly
 35 40 45

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

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

Val Glu Val Asp Val Ser Ala Ser Ile Thr Leu Gln Val Leu Val Asp
 85 90 95

Ala Pro Gly Asn Ile Ser Cys Leu Trp Val Phe Lys His Ser Ser Leu
 100 105 110

Asn Cys Gln Pro His Phe Asp Leu Gln Asn Arg Gly Val Val Ser Met
 115 120 125

Val Ile Leu Lys Met Thr Glu Thr Gln Ala Gly Glu Tyr Leu Leu Phe
 130 135 140

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

Arg Asn Thr Leu Leu Tyr Thr Leu Arg Arg Pro Tyr Phe Arg Lys Met
 165 170 175

Glu Asn Gln Asp Ala Leu Val Cys Ile Ser Glu Ser Val Pro Glu Pro
 180 185 190

Ile Val Glu Trp Val Leu Cys Asp Ser Gln Gly Glu Ser Cys Lys Glu
 195 200 205

Glu Ser Pro Ala Val Val Lys Lys Glu Glu Lys Val Leu His Glu Leu
 210 215 220

Phe Gly Thr Asp Ile Arg Cys Cys Ala Arg Asn Glu Leu Gly Arg Glu
 225 230 235 240

Cys Thr Arg Leu Phe Thr Ile Asp Leu Asn Gln Thr Pro Gln Thr Thr
 245 250 255

Leu Pro Gln Leu Phe Leu Lys Val Gly Glu Pro Leu Trp Ile Arg Cys
 260 265 270

Lys Ala Val His Val Asn His Gly Phe Gly Leu Thr Trp Glu Leu Glu
 275 280 285

Asn Lys Ala Leu Glu Glu Gly Asn Tyr Phe Glu Met Ser Thr Tyr Ser
 290 295 300

Thr Asn Arg Thr Met Ile Arg Ile Leu Phe Ala Phe Val Ser Ser Val
 305 310 315 320

Ala Arg Asn Asp Thr Gly Tyr Tyr Thr Cys Ser Ser Ser Lys His Pro
 325 330 335

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

Thr Asn Ser Ser Glu Asp Tyr Glu Ile Asp Gln Tyr Glu Glu Phe Cys
 355 360 365

Phe Ser Val Arg Phe Lys Ala Tyr Pro Gln Ile Arg Cys Thr Trp Thr
 370 375 380

Phe Ser Arg Lys Ser Phe Pro Cys Glu Gln Lys Gly Leu Asp Asn Gly
 385 390 395 400

Tyr Ser Ile Ser Lys Phe Cys Asn His Lys His Gln Pro Gly Glu Tyr
 405 410 415

Ile Phe His Ala Glu Asn Asp Asp Ala Gln Phe Thr Lys Met Phe Thr
 420 425 430

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

Gln Ala Ser Cys Phe Ser Asp Gly Tyr Pro Leu Pro Ser Trp Thr Trp
450 455 460

Lys Lys Cys Ser Asp Lys Ser Pro Asn Cys Thr Glu Glu Ile Thr Glu
465 470 475 480

Gly Val Trp Asn Arg Lys Ala Asn Arg Lys Val Phe Gly Gln Trp Val
485 490 495

Ser Ser Ser Thr Leu Asn Met Ser Glu Ala Ile Lys Gly Phe Leu Val
500 505 510

Lys Cys Cys Ala Tyr Asn Ser Leu Gly Thr Ser Cys Glu Thr Ile Leu
515 520 525

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

Tyr Ala Thr Ile Gly Val Cys Leu Leu Phe Ile Val Val Leu Thr Leu
545 550 555 560

Leu Ile Cys His Lys Tyr Lys Lys Gln Phe Arg Tyr Glu Ser Gln Leu
565 570 575

Gln Met Val Gln Val Thr Gly Ser Ser Asp Asn Glu Tyr Phe Tyr Val
580 585 590

Asp Phe Arg Glu Tyr Glu Tyr Asp Leu Lys Trp Glu Phe Pro Arg Glu
595 600 605

Asn Leu Glu Phe Gly Lys Val Leu Gly Ser Gly Ala Phe Gly Lys Val
610 615 620

Met Asn Ala Thr Ala Tyr Gly Ile Ser Lys Thr Gly Val Ser Ile Gln
625 630 635 640

Val Ala Val Lys Met Leu Lys Glu Lys Ala Asp Ser Ser Glu Arg Glu
 645 650 655

Ala Leu Met Ser Glu Leu Lys Met Met Thr Gln Leu Gly Ser His Glu
 660 665 670

Asn Ile Val Asn Leu Leu Gly Ala Cys Thr Leu Ser Gly Pro Ile Tyr
 675 680 685

Leu Ile Phe Glu Tyr Cys Cys Tyr Gly Asp Leu Leu Asn Tyr Leu Arg
 690 695 700

Ser Lys Arg Glu Lys Phe His Arg Thr Trp Thr Glu Ile Phe Lys Glu
 705 710 715 720

His Asn Phe Ser Phe Tyr Pro Thr Phe Gln Ser His Pro Asn Ser Ser
 725 730 735

Met Pro Gly Ser Arg Glu Val Gln Ile His Pro Asp Ser Asp Gln Ile
 740 745 750

Ser Gly Leu His Gly Asn Ser Phe His Ser Glu Asp Glu Ile Glu Tyr
 755 760 765

Glu Asn Gln Lys Arg Leu Glu Glu Glu Glu Asp Leu Asn Val Leu Thr
 770 775 780

Phe Glu Asp Leu Leu Cys Phe Ala Tyr Gln Val Ala Lys Gly Met Glu
 785 790 795 800

Phe Leu Glu Phe Lys Ser Cys Val His Arg Asp Leu Ala Ala Arg Asn
 805 810 815

Val Leu Val Thr His Gly Lys Val Val Lys Ile Cys Asp Phe Gly Leu
 820 825 830

Ala Arg Asp Ile Met Ser Asp Ser Asn Tyr Val Val Arg Gly Asn Ala
 835 840 845

Arg Leu Pro Val Lys Trp Met Ala Pro Glu Ser Leu Phe Glu Gly Ile
 850 855 860

Tyr Thr Ile Lys Ser Asp Val Trp Ser Tyr Gly Ile Leu Leu Trp Glu
 865 870 875 880

Ile Phe Ser Leu Gly Val Asn Pro Tyr Pro Gly Ile Pro Val Asp Ala
 885 890 895

Asn Phe Tyr Lys Leu Ile Gln Asn Gly Phe Lys Met Asp Gln Pro Phe
 900 905 910

Tyr Ala Thr Glu Glu Ile Tyr Ile Ile Met Gln Ser Cys Trp Ala Phe
 915 920 925

Asp Ser Arg Lys Arg Pro Ser Phe Pro Asn Leu Thr Ser Phe Leu Gly
 930 935 940

Cys Gln Leu Ala Asp Ala Glu Glu Ala Met Tyr Gln Asn Val Asp Gly
 945 950 955 960

Arg Val Ser Glu Cys Pro His Thr Tyr Gln Asn Arg Arg Pro Phe Ser
 965 970 975

Arg Glu Met Asp Leu Gly Leu Leu Ser Pro Gln Ala Gln Val Glu Asp
 980 985 990

Ser

<210> 86

<211> 63

<212> ADN

<213> Homo sapiens

<400> 86

atggcactcc ccgtaactgc tctgctgctg ccgttggcat tgctcctgca cgccgcacgc 60

ccg 63

<210> 87

<211> 21

<212> PRT

<213> Homo sapiens

<400> 87

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu

1 5 10 15

His Ala Ala Arg Pro

20

<210> 88

<211> 45

<212> ADN

<213> Homo sapiens

<400> 88

ggcgggtggag gctccggagg gggggggctct ggcggaggggg gctcc 45

<210> 89

<211> 15

<212> PRT

<213> Homo sapiens

<400> 89

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser

1 5 10 15

<210> 90

<211> 54

<212> ADN

<213> Homo sapiens

<400> 90

gggtctacat ccggctccgg gaagcccgga agtggcgaag gtagtacaaa gggg 54

<210> 91

<211> 18
 <212> PRT
 <213> Homo sapiens

<400> 91

Gly Ser Thr Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr
 1 5 10 15

Lys Gly

<210> 92
 <211> 126
 <212> PRT
 <213> Homo sapiens

<400> 92

Ala Ala Gly Cys Gly Cys Gly Gly Cys Ala Gly Gly Ala Ala Gly Ala
 1 5 10 15

Ala Gly Cys Thr Cys Cys Thr Cys Thr Ala Cys Ala Thr Thr Thr Thr
 20 25 30

Thr Ala Ala Gly Cys Ala Gly Cys Cys Thr Thr Thr Thr Ala Thr Gly
 35 40 45

Ala Gly Gly Cys Cys Cys Gly Thr Ala Cys Ala Gly Ala Cys Ala Ala
 50 55 60

Cys Ala Cys Ala Gly Gly Ala Gly Gly Ala Ala Gly Ala Thr Gly Gly
 65 70 75 80

Cys Thr Gly Thr Ala Gly Cys Thr Gly Cys Ala Gly Ala Thr Thr Thr
 85 90 95

Cys Cys Cys Gly Ala Gly Gly Ala Gly Gly Ala Gly Gly Ala Ala Gly
 100 105 110

Gly Thr Gly Gly Gly Thr Gly Cys Gly Ala Gly Cys Thr Gly

115 120 125

<210> 93

<211> 42

<212> PRT

<213> Homo sapiens

<400> 93

Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe Lys Gln Pro Phe Met
1 5 10 15

Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly Cys Ser Cys Arg Phe
20 25 30

Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu
35 40

<210> 94

<211> 37

<212> PRT

<213> Homo sapiens

<400> 94

Arg Arg Asp Gln Arg Leu Pro Pro Asp Ala His Lys Pro Pro Gly Gly
1 5 10 15

Gly Ser Phe Arg Thr Pro Ile Gln Glu Glu Gln Ala Asp Ala His Ser
20 25 30

Thr Leu Ala Lys Ile
35

<210> 95

<211> 6762

<212> ADN

<213> Secuencia artificial

<220>

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