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<110> Univeristy of Massachusetts

<120> TRANSACTIVADORES DE PROTEÍNAS DE DEDOS DE CINC Y USOS DE ESTOS

<130> U0120.70106W000

<140> Sin asignar

<141> Simultáneamente con la presente

<150> US 62/810,005

<151> 2019-02-25

<160> 121

<170> PatentIn versión 3.5

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 <212> PRT
 <213> Homo sapiens

<400> 50

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Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

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

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

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
180 185 190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
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Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
225 230 235 240

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
245 250 255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
370 375 380

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

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
450 455 460

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
465 470 475 480

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
545 550 555 560

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
565 570 575

Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
580 585 590

Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
595 600 605

Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
610 615 620

Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
625 630 635 640

Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
645 650 655

Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
660 665 670

Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
675 680 685

Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
690 695 700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
705 710 715 720

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
725 730 735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
755 760 765

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
770 775 780

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
805 810 815

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
965 970 975

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
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Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Ala Glu
1055 1060 1065

Ile Gly Lys Asp Leu Asp Tyr Leu Lys Asp Val Asn Gly Thr Thr
1070 1075 1080

Ser Gly Ile Gly Thr Gly Ser Ser Val Glu Lys Tyr Ile Ile Asp
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Glu Ser Asp Tyr Met Ser Phe Ile Asn Asn Pro Ser Leu Thr Val
1100 1105 1110

Thr Val Pro Ile Ala Val Gly Glu Ser Asp Phe Glu Asn Leu Asn
1115 1120 1125

Thr Glu Asp Phe Ser Ser Glu Ser Asp Leu Glu Glu Ser Lys Glu
1130 1135 1140

Lys Leu Asn Glu Ser Ser Ser Ser Ser Glu Gly Ser Thr Val Asp
1145 1150 1155

Ile Gly Ala Pro Val Glu Glu Gln Pro Val Val Glu Pro Glu Glu
1160 1165 1170

Thr Leu Glu Pro Glu Ala Cys Phe Thr Glu Gly Cys Val Gln Arg
1175 1180 1185

Phe Lys Cys Cys Gln Ile Asn Val Glu Glu Gly Arg Gly Lys Gln
1190 1195 1200

Trp Trp Asn Leu Arg Arg Thr Cys Phe Arg Ile Val Glu His Asn
1205 1210 1215

Trp Phe Glu Thr Phe Ile Val Phe Met Ile Leu Leu Ser Ser Gly
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Ala Leu Ala Phe Glu Asp Ile Tyr Ile Asp Gln Arg Lys Thr Ile
1235 1240 1245

Lys Thr Met Leu Glu Tyr Ala Asp Lys Val Phe Thr Tyr Ile Phe
1250 1255 1260

Ile Leu Glu Met Leu Leu Lys Trp Val Ala Tyr Gly Tyr Gln Thr
1265 1270 1275

Tyr Phe Thr Asn Ala Trp Cys Trp Leu Asp Phe Leu Ile Val Asp
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Val Ser Leu Val Ser Leu Thr Ala Asn Ala Leu Gly Tyr Ser Glu
1295 1300 1305

Leu Gly Ala Ile Lys Ser Leu Arg Thr Leu Arg Ala Leu Arg Pro
1310 1315 1320

Leu Arg Ala Leu Ser Arg Phe Glu Gly Met Arg Val Val Val Asn
1325 1330 1335

Ala Leu Leu Gly Ala Ile Pro Ser Ile Met Asn Val Leu Leu Val
1340 1345 1350

Cys Leu Ile Phe Trp Leu Ile Phe Ser Ile Met Gly Val Asn Leu
1355 1360 1365

Phe Ala Gly Lys Phe Tyr His Cys Ile Asn Thr Thr Thr Gly Asp
1370 1375 1380

Arg Phe Asp Ile Glu Asp Val Asn Asn His Thr Asp Cys Leu Lys
1385 1390 1395

Leu Ile Glu Arg Asn Glu Thr Ala Arg Trp Lys Asn Val Lys Val
1400 1405 1410

Asn Phe Asp Asn Val Gly Phe Gly Tyr Leu Ser Leu Leu Gln Val
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Ala Thr Phe Lys Gly Trp Met Asp Ile Met Tyr Ala Ala Val Asp
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Ser Arg Asn Val Glu Leu Gln Pro Lys Tyr Glu Glu Ser Leu Tyr
1445 1450 1455

Met Tyr Leu Tyr Phe Val Ile Phe Ile Ile Phe Gly Ser Phe Phe
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Thr Leu Asn Leu Phe Ile Gly Val Ile Ile Asp Asn Phe Asn Gln
1475 1480 1485

Gln Lys Lys Lys Phe Gly Gly Gln Asp Ile Phe Met Thr Glu Glu
1490 1495 1500

Gln Lys Lys Tyr Tyr Asn Ala Met Lys Lys Leu Gly Ser Lys Lys
1505 1510 1515

Pro Gln Lys Pro Ile Pro Arg Pro Gly Asn Lys Phe Gln Gly Met
1520 1525 1530

Val Phe Asp Phe Val Thr Arg Gln Val Phe Asp Ile Ser Ile Met
1535 1540 1545

Ile Leu Ile Cys Leu Asn Met Val Thr Met Met Val Glu Thr Asp
1550 1555 1560

Asp Gln Ser Glu Tyr Val Thr Thr Ile Leu Ser Arg Ile Asn Leu
1565 1570 1575

Val Phe Ile Val Leu Phe Thr Gly Glu Cys Val Leu Lys Leu Ile
1580 1585 1590

Ser Leu Arg His Tyr Tyr Phe Thr Ile Gly Trp Asn Ile Phe Asp
1595 1600 1605

Phe Val Val Val Ile Leu Ser Ile Val Gly Met Phe Leu Ala Glu
1610 1615 1620

Leu Ile Glu Lys Tyr Phe Val Ser Pro Thr Leu Phe Arg Val Ile
1625 1630 1635

Arg Leu Ala Arg Ile Gly Arg Ile Leu Arg Leu Ile Lys Gly Ala
1640 1645 1650

Lys Gly Ile Arg Thr Leu Leu Phe Ala Leu Met Met Ser Leu Pro
1655 1660 1665

Ala Leu Phe Asn Ile Gly Leu Leu Leu Phe Leu Val Met Phe Ile
1670 1675 1680

Tyr Ala Ile Phe Gly Met Ser Asn Phe Ala Tyr Val Lys Arg Glu
1685 1690 1695

Val Gly Ile Asp Asp Met Phe Asn Phe Glu Thr Phe Gly Asn Ser
1700 1705 1710

Met Ile Cys Leu Phe Gln Ile Thr Thr Ser Ala Gly Trp Asp Gly
1715 1720 1725

Leu Leu Ala Pro Ile Leu Asn Ser Lys Pro Pro Asp Cys Asp Pro
1730 1735 1740

Asn Lys Val Asn Pro Gly Ser Ser Val Lys Gly Asp Cys Gly Asn
1745 1750 1755

Pro Ser Val Gly Ile Phe Phe Phe Val Ser Tyr Ile Ile Ile Ser
1760 1765 1770

Phe Leu Val Val Val Asn Met Tyr Ile Ala Val Ile Leu Glu Asn
1775 1780 1785

Phe Ser Val Ala Thr Glu Glu Ser Ala Glu Pro Leu Ser Glu Asp
1790 1795 1800

Asp Phe Glu Met Phe Tyr Glu Val Trp Glu Lys Phe Asp Pro Asp
1805 1810 1815

Ala Thr Gln Phe Met Glu Phe Glu Lys Leu Ser Gln Phe Ala Ala
1820 1825 1830

Ala Leu Glu Pro Pro Leu Asn Leu Pro Gln Pro Asn Lys Leu Gln
1835 1840 1845

Leu Ile Ala Met Asp Leu Pro Met Val Ser Gly Asp Arg Ile His
1850 1855 1860

Cys Leu Asp Ile Leu Phe Ala Phe Thr Lys Arg Val Leu Gly Glu
1865 1870 1875

Ser Gly Glu Met Asp Ala Leu Arg Ile Gln Met Glu Glu Arg Phe
1880 1885 1890

Met Ala Ser Asn Pro Ser Lys Val Ser Tyr Gln Pro Ile Thr Thr
1895 1900 1905

Thr Leu Lys Arg Lys Gln Glu Glu Val Ser Ala Val Ile Ile Gln
1910 1915 1920

Arg Ala Tyr Arg Arg His Leu Leu Lys Arg Thr Val Lys Gln Ala
1925 1930 1935

Ser Phe Thr Tyr Asn Lys Asn Lys Ile Lys Gly Gly Ala Asn Leu
1940 1945 1950

Leu Ile Lys Glu Asp Met Ile Ile Asp Arg Ile Asn Glu Asn Ser
1955 1960 1965

Ile Thr Glu Lys Thr Asp Leu Thr Met Ser Thr Ala Ala Cys Pro
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2000 2005

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<400> 52

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Ala	Ala	Pro	Pro	Leu	Tyr	Ala	Thr	Gly	Arg	Leu	Ser	Gln	Ala	Gln	Leu
		35					40					45			

Met	Pro	Ser	Pro	Pro	Met	Pro	Val	Pro	Pro	Ala	Ala	Leu	Phe	Asn	Arg
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Leu Asp Thr Trp Asn Glu Asp Leu Phe Ser Ala Leu Pro Thr Asn Ala
85 90 95

Asp Leu Tyr Arg Glu Cys Lys Phe Leu Ser Thr Leu Pro Ser Asp Val
100 105 110

Val Glu Trp Gly Asp Ala Tyr Val Pro Glu Arg Thr Gln Ile Asp Ile
115 120 125

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

Gly Leu Gly Leu Tyr Tyr Glu Ala Leu Ser Arg Phe Phe His Ala Glu
145 150 155 160

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

Ser Ala Leu Tyr Arg Tyr Leu Arg Ala Ser Val Arg Gln Leu His Arg
180 185 190

Gln Ala His Met Arg Gly Arg Asp Arg Asp Leu Gly Glu Met Leu Arg
195 200 205

Ala Thr Ile Ala Asp Arg Tyr Tyr Arg Glu Thr Ala Arg Leu Ala Arg
210 215 220

Val Leu Phe Leu His Leu Tyr Leu Phe Leu Thr Arg Glu Ile Leu Trp
225 230 235 240

Ala Ala Tyr Ala Glu Gln Met Met Arg Pro Asp Leu Phe Asp Cys Leu
245 250 255

Cys Cys Asp Leu Glu Ser Trp Arg Gln Leu Ala Gly Leu Phe Gln Pro
260 265 270

Phe Met Phe Val Asn Gly Ala Leu Thr Val Arg Gly Val Pro Ile Glu
275 280 285

Ala Arg Arg Leu Arg Glu Leu Asn His Ile Arg Glu His Leu Asn Leu
290 295 300

Pro Leu Val Arg Ser Ala Ala Thr Glu Glu Pro Gly Ala Pro Leu Thr
305 310 315 320

Thr Pro Pro Thr Leu His Gly Asn Gln Ala Arg Ala Ser Gly Tyr Phe
325 330 335

Met Val Leu Ile Arg Ala Lys Leu Asp Ser Tyr Ser Ser Phe Thr Thr
340 345 350

Ser Pro Ser Glu Ala Val Met Arg Glu His Ala Tyr Ser Arg Ala Arg
355 360 365

Thr Lys Asn Asn Tyr Gly Ser Thr Ile Glu Gly Leu Leu Asp Leu Pro
370 375 380

Asp Asp Asp Ala Pro Glu Glu Ala Gly Leu Ala Ala Pro Arg Leu Ser
385 390 395 400

Phe Leu Pro Ala Gly His Thr Arg Arg Leu Ser Thr Ala Pro Pro Thr
405 410 415

Asp Val Ser Leu Gly Asp Glu Leu His Leu Asp Gly Glu Asp Val Ala
420 425 430

Met Ala His Ala Asp Ala Leu Asp Asp Phe Asp Leu Asp Met Leu Gly
435 440 445

Asp Gly Asp Ser Pro Gly Pro Gly Phe Thr Pro His Asp Ser Ala Pro
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Tyr Gly Ala Leu Asp Met Ala Asp Phe Glu Phe Glu Gln Met Phe Thr
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Asp Ala Leu Gly Ile Asp Glu Tyr Gly Gly
485 490

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gctcagcttc tgtccccaag ccagcaccac agccctatcc ctttacgtca tccctgagca 1200
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cggccttggc cccggcccct cccaagtcc tgccccaggc tccagcccct gccctgctc 1320
cagccatggg atcagctctg gccaggccc cagcccctgt ccagtccta gcccaggcc 1380

ctcctcaggc tgtggcccca cctgccccca agccccacca ggctggggaa ggaacgctgt	1440
cagaggccct gctgcagctg cagtttgatg atgaagacct gggggccttg cttggcaaca	1500
gcacagaccc agctgtgttc acagacctgg catccgtcga caactccgag tttcagcagc	1560
tgctgaacca gggcatacct gtggccccc acacaactga gcccattgctg atggagtacc	1620
ctgaggctat aactcgccta gtgacagggg cccagaggcc ccccgaccca gctcctgctc	1680
cactgggggc cccggggctc cccaatggcc tcctttcagg agatgaagac ttctcctcca	1740
ttgcggacat ggactttctca gccctgctga gtcagatcag ctcctaaggg ggtgacgcct	1800
gccctcccca gagcactggg ttgcagggga ttgaagccct ccaaaagcac ttacggattc	1860
tggtggggtg tgttccaact gcccccaact ttgtggatgt cttccttgga ggggggagcc	1920
atattttatt cttttattgt cagtatctgt atctctctct ctttttgagc gtgcttaagc	1980
agaagcatta acttctctgg aaagggggga gctggggaaa ctcaaacttt tcccctgtcc	2040
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ttatcaagtg tcttccatca tggattcatt acagcttaat caaaataacg ccccagatac	2220
cagcccctgt atggcactgg cattgtccct gtgcctaaca ccagcgtttg aggggctggc	2280
cttcctgccc tacagaggtc tctgccggct ctttccttgc tcaaccatgg ctgaaggaaa	2340
ccagtgaac agcactggct ctctccagga tccagaaggg gtttggtctg ggacttcctt	2400
gctctccctc ttctcaagtg ccttaatagt agggttaagt gttaagagtg ggggagagca	2460
ggctggcagc tctccagtca ggaggcatag tttttactga acaatcaaag cacttggact	2520
cttgctcttt ctactctgaa ctaataaatc tgttgccaag ctggctagaa	2570

<210> 54
 <211> 548
 <212> PRT
 <213> Homo sapiens

<400> 54

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Gln Ile Ser Ser
545

<210> 55
<211> 1815
<212> ADN
<213> Homo sapiens

<400> 55
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cagctgggca gcctggtgag cgattattgc aacgtgctga acaaagaatt taccgcgggc 120
agcgtggaaa ttaccctgcg cagctataaa atttgcaaag cgtttattaa cgaagcgaag 180
gcgcatggcc gcgaatgggg cggcctgatg gcgaccctga acatttgcaa cttttgggcg 240
attctgcgca acaaccgcgt gcgccgccgc gcggaaaacg cgggcaacga tgcgtgcagc 300
attgcgtgcc cgattgtgat gcgctatgtg ctggatcatc tgattgtggt gaccgatcgc 360
ttttttattc aggcgccgag caaccgcgtg atgattccgg cgaccattgg caccgcgatg 420
tataaactgc tgaacatag ccgcgtgcgc gcgtatacct atagcaaagt gctgggctg 480
gatcgcgagg cgattatggc gagcggcaaa caggtggtgg aacatctgaa ccgcatggaa 540
aaagaaggcc tgctgagcag caaatttaaa gcgttttgca aatgggtggt tacctatccg 600
gtgctggaag aaatgtttca gaccatggtg agcagcaaaa ccggccatct gaccgatgat 660

gtgaaagatg tgcgcgcgct gattaaaacc ctgccgcgcg cgagctatag cagccatgcg	720
ggccagcgca gctatgtgag cggcgtgctg ccggcgtgcc tgctgagcac caaaagcaaa	780
gcggtggaaa ccccgattct ggtgagcggc gcggatcgca tggatgaaga actgatgggc	840
aacgatggcg gcgcgagcca taccgaagcg cgctatagcg aaagcggcca gtttcatgcg	900
tttaccgatg aactggaaag cctgccgagc ccgaccatgc cgctgaaacc gggcgcgcag	960
agcgcggatt gcggcgatag cagcagcagc agcagcgata gcggcaacag cgataccgaa	1020
cagagcgaac gcgaagaagc gcgcgcggaa gcgccgcgcc tgcgcgcgcc gaaaagccgc	1080
cgcaccagcc gcccgaaccg cggccagacc ccgtgcccga gcaacgcggc ggaaccggaa	1140
cagccgtgga ttgcggcgggt gcatcaggaa agcgatgaac gcccgatattt tccgcatccg	1200
agcaaaccga cttttctgcc gccggtgaaa cgcaaaaaag gcctgcgcga tagccgcgaa	1260
ggcatgtttc tgccgaaacc ggaagcgggc agcgcgatta gcgatgtgtt tgaaggccgc	1320
gaagtgtgcc agccgaaacg cattcgcccg tttcatccgc cgggcagccc gtgggcgaac	1380
cgcccgtgc cggcgagcct ggcgccgacc ccgaccggcc cggatgcatga accggtgggc	1440
agcctgacct cggcgccgggt gccgcagccg ctggatccgg cgccggcgggt gaccccgaa	1500
gcgagccatc tgctggaaga tccggatgaa gaaaccagcc aggcggtgaa agcgctgcgc	1560
gaaatggcgg ataccgtgat tccgcagaaa gaagaagcgg cgatttgcgg ccagatggat	1620
ctgagccatc cgccgccgcg cggccatctg gatgaactga ccaccaccct ggaaagcatg	1680
accgaagatc tgaacctgga tagcccgtg accccggaac tgaacgaaat tctggatacc	1740
tttctgaacg atgaatgcct gctgcatgcg atgcatatta gcaccggcct gagcattttt	1800
gataccagcc tgttt	1815

<210> 56
 <211> 605
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintética

<400> 56

Met	Arg	Pro	Lys	Lys	Asp	Gly	Leu	Glu	Asp	Phe	Leu	Arg	Leu	Thr	Pro
1				5					10					15	

Glu Ile Lys Lys Gln Leu Gly Ser Leu Val Ser Asp Tyr Cys Asn Val
20 25 30

Leu Asn Lys Glu Phe Thr Ala Gly Ser Val Glu Ile Thr Leu Arg Ser
35 40 45

Tyr Lys Ile Cys Lys Ala Phe Ile Asn Glu Ala Lys Ala His Gly Arg
50 55 60

Glu Trp Gly Gly Leu Met Ala Thr Leu Asn Ile Cys Asn Phe Trp Ala
65 70 75 80

Ile Leu Arg Asn Asn Arg Val Arg Arg Arg Ala Glu Asn Ala Gly Asn
85 90 95

Asp Ala Cys Ser Ile Ala Cys Pro Ile Val Met Arg Tyr Val Leu Asp
100 105 110

His Leu Ile Val Val Thr Asp Arg Phe Phe Ile Gln Ala Pro Ser Asn
115 120 125

Arg Val Met Ile Pro Ala Thr Ile Gly Thr Ala Met Tyr Lys Leu Leu
130 135 140

Lys His Ser Arg Val Arg Ala Tyr Thr Tyr Ser Lys Val Leu Gly Val
145 150 155 160

Asp Arg Ala Ala Ile Met Ala Ser Gly Lys Gln Val Val Glu His Leu
165 170 175

Asn Arg Met Glu Lys Glu Gly Leu Leu Ser Ser Lys Phe Lys Ala Phe
180 185 190

Cys Lys Trp Val Phe Thr Tyr Pro Val Leu Glu Glu Met Phe Gln Thr
195 200 205

Met Val Ser Ser Lys Thr Gly His Leu Thr Asp Asp Val Lys Asp Val
210 215 220

Arg Ala Leu Ile Lys Thr Leu Pro Arg Ala Ser Tyr Ser Ser His Ala

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

Arg Pro Phe His Pro Pro Gly Ser Pro Trp Ala Asn Arg Pro Leu Pro
450 455 460

Ala Ser Leu Ala Pro Thr Pro Thr Gly Pro Val His Glu Pro Val Gly
465 470 475 480

Ser Leu Thr Pro Ala Pro Val Pro Gln Pro Leu Asp Pro Ala Pro Ala
485 490 495

Val Thr Pro Glu Ala Ser His Leu Leu Glu Asp Pro Asp Glu Glu Thr
500 505 510

Ser Gln Ala Val Lys Ala Leu Arg Glu Met Ala Asp Thr Val Ile Pro
515 520 525

Gln Lys Glu Glu Ala Ala Ile Cys Gly Gln Met Asp Leu Ser His Pro
530 535 540

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

Thr Glu Asp Leu Asn Leu Asp Ser Pro Leu Thr Pro Glu Leu Asn Glu
565 570 575

Ile Leu Asp Thr Phe Leu Asn Asp Glu Cys Leu Leu His Ala Met His
580 585 590

Ile Ser Thr Gly Leu Ser Ile Phe Asp Thr Ser Leu Phe
595 600 605

<210> 57
<211> 172
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintética

<400> 57

Arg Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Gln Arg Gly
1 5 10 15

Asn Leu Val Arg His Ile Arg Thr His Thr Gly Glu Lys Pro Phe Ala
20 25 30

Cys Asp Ile Cys Gly Lys Lys Phe Ala Leu Ser Phe Asn Leu Thr Arg
35 40 45

His Thr Lys Ile His Thr Gly Ser Gln Lys Pro Phe Gln Cys Arg Ile
50 55 60

Cys Met Arg Asn Phe Ser Arg Ser Asp Asn Leu Thr Arg His Ile Arg
65 70 75 80

Thr His Thr Gly Glu Lys Pro Phe Ala Cys Asp Ile Cys Gly Lys Lys
85 90 95

Phe Ala Asp Arg Ser His Leu Ala Arg His Thr Lys Ile His Thr Gly
100 105 110

Ser Gln Lys Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Gln
115 120 125

Lys Ala His Leu Thr Ala His Ile Arg Thr His Thr Gly Glu Lys Pro
130 135 140

Phe Ala Cys Asp Ile Cys Gly Arg Lys Phe Ala Arg Ser Asp Asn Leu
145 150 155 160

Thr Arg His Thr Lys Ile His Leu Arg Gln Lys Asp
165 170

<210> 58
<211> 516
<212> ADN
<213> Secuencia artificial

<220>
<223> Sintética

<400> 58
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catatccgca cccacacggg agagaagcct ttgcctgcg atatttgtgg aaagaagttt 120

gctctgagct tcaatctaac cagacacacc aagattcata ctgggtccca gaaaccgttc	180
cagtgtagga tatgcatgag gaatttctct cggagtgaca acttaacgcg gcatataagg	240
acgcacacag gtgaaaaacc atttgcacgc gacatctgtg gcaaaaagtt tgcggaccgg	300
tctcaccttg cccgacacac aaaaatccat accggcagtc aaaagccctt tcaatgtcgc	360
atttgcacgc gaaacttctc acagaaggcc catttgactg cccatattcg tactcatact	420
ggcgagaaac ctttcgcttg cgatatatgt ggctgtaagt ttgcacggtc ggacaacctc	480
acacgccaca ctaagataca cctgcggcag aaggac	516

<210> 59
 <211> 172
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintética

<400> 59

Arg	Pro	Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Arg	Ser	Ser
1				5					10					15	

Asn	Leu	Thr	Arg	His	Ile	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Phe	Ala
			20					25					30		

Cys	Asp	Ile	Cys	Gly	Lys	Lys	Phe	Ala	Asp	Lys	Arg	Thr	Leu	Ile	Arg
		35					40					45			

His	Thr	Lys	Ile	His	Thr	Gly	Ser	Gln	Lys	Pro	Phe	Gln	Cys	Arg	Ile
	50					55					60				

Cys	Met	Arg	Asn	Phe	Ser	Gln	Arg	Gly	Asn	Leu	Val	Arg	His	Ile	Arg
65					70				75					80	

Thr	His	Thr	Gly	Glu	Lys	Pro	Phe	Ala	Cys	Asp	Ile	Cys	Gly	Lys	Lys
			85						90				95		

Phe	Ala	Leu	Ser	Phe	Asn	Leu	Thr	Arg	His	Thr	Lys	Ile	His	Thr	Gly
		100						105					110		

Ser	Gln	Lys	Pro	Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Arg
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

115

120

125

Ser Asp Asn Leu Thr Arg His Ile Arg Thr His Thr Gly Glu Lys Pro
 130 135 140

Phe Ala Cys Asp Ile Cys Gly Arg Lys Phe Ala Asp Arg Ser His Leu
 145 150 155 160

Ala Arg His Thr Lys Ile His Leu Arg Gln Lys Asp
 165 170

<210> 60
 <211> 516
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintética

<400> 60
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 catatccgca cccacacggg agagaagcct ttgcctgcm atatttgtgg aaagaagttt 120
 gctgacaagc ggaccttaat ccgccacacc aagattcata ctgggtccca gaaaccgttc 180
 cagtgtagga tatgcatgag gaatttctct cagcggggaa atctagtgcg acatataagg 240
 acgcacacag gtgaaaaacc atttgcatgc gacatctgtg gcaaaaagtt tgcgctgagc 300
 ttcaacttga ctcgtcacac aaaaatccat accggcagtc aaaagccctt tcaatgtcgc 360
 atttgcatgc gaaacttctc acggagtgc aatcttacga gacatattcg tactcatact 420
 ggcgagaaac ctttcgcttg cgatatatgt ggtcgtaagt ttgcagaccg gagccactta 480
 gccaggcaca ctaagataca cctgcggcag aaggac 516

<210> 61
 <211> 172
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintética

<400> 61

Arg Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Asp Arg Ser

1	5	10	15
Ala	Leu	Ala	Arg
	20		
His	Ile	Arg	Thr
		25	
His	Thr	Gly	Glu
			Lys
Pro	Phe	Ala	
		30	
Cys	Asp	Ile	Cys
	35		
Gly	Lys	Lys	Phe
		40	
Ala	Arg	Ser	Asp
			45
Asn	Leu	Thr	Arg
His	Thr	Lys	Ile
	50		
His	Thr	Gly	Ser
		55	
Gln	Lys	Pro	Phe
			60
Gln	Cys	Arg	Ile
Cys	Met	Arg	Asn
	65		
Phe	Ser	Gln	Ser
	70		
Gly	Asp	Leu	Thr
		75	
Arg	His	Ile	Arg
			80
Thr	His	Thr	Gly
			85
Glu	Lys	Pro	Phe
Ala	Cys	Asp	Ile
	90		
Cys	Gly	Lys	Lys
		95	
Phe	Ala	Val	Arg
		100	
Gln	Thr	Leu	Lys
Gln	His	Thr	Lys
			105
Ile	His	Thr	Gly
			110
Ser	Gln	Lys	Pro
	115		
Phe	Gln	Cys	Arg
			120
Ile	Cys	Met	Arg
			125
Asn	Phe	Ser	Ala
Ala	Gly	Asn	Leu
	130		
Thr	Arg	His	Ile
		135	
Arg	Thr	His	Thr
			140
Gly	Glu	Lys	Pro
Phe	Ala	Cys	Asp
Ile	Cys	Gly	Arg
	150		
Lys	Phe	Ala	Arg
		155	
Ser	Asp	Asn	Leu
			160
Thr	Arg	His	Thr
Lys	Ile	His	Leu
	165		
Arg	Gln	Lys	Asp
		170	

<210> 62
 <211> 516
 <212> ADN
 <213> Secuencia artificial

<220>
 <223> Sintética

<400> 62
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catatccgca cccacacggg agagaagcct tttgcctgcg atatttgtgg aaagaagttt	120
gctcgaagtg acaacttaac gcgccacacc aagattcata ctgggtccca gaaaccgttc	180
cagtgtagga tatgcatgag gaatttctct cagtcagggg acctcactcg tcatataagg	240
acgcacacag gtgaaaaacc atttgcattgc gacatctgtg gcaaaaagtt tgcggtacga	300
cagacgctta aacaacacac aaaaatccat accggcagtc aaaagccctt tcaatgtcgc	360
atttgcattgc gaaacttctc agccgctggg aacttgacac gacatattcg tactcatact	420
ggcgagaaac ctttcgcttg cgatatatgt ggctgtaagt ttgcaagatc tgataatcta	480
acgcgtcaca ctaagatata cctgcggcag aaggac	516

<210> 63
 <211> 28
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintética

<400> 63

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Gln	Arg	Gly	Asn	Leu
1				5				10						15	

Val	Arg	His	Ile	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro
			20					25			

<210> 64
 <211> 29
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Sintética

<400> 64

Phe	Ala	Cys	Asp	Ile	Cys	Gly	Lys	Lys	Phe	Ala	Leu	Ser	Phe	Asn	Leu
1				5					10					15	

Thr	Arg	His	Thr	Lys	Ile	His	Thr	Gly	Ser	Gln	Lys	Pro
			20					25				

<210> 65

<211> 28
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintética

<400> 65

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Arg	Ser	Asp	Asn	Leu
1				5					10					15	

Thr	Arg	His	Ile	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro
			20					25			

<210> 66
<211> 29
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintética

<400> 66

Phe	Ala	Cys	Asp	Ile	Cys	Gly	Lys	Lys	Phe	Ala	Asp	Arg	Ser	His	Leu
1				5					10					15	

Ala	Arg	His	Thr	Lys	Ile	His	Thr	Gly	Ser	Gln	Lys	Pro
			20					25				

<210> 67
<211> 28
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintética

<400> 67

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Gln	Lys	Ala	His	Leu
1				5					10					15	

Thr	Ala	His	Ile	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro
			20					25			

<210> 68

<211> 28
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintética

<400> 68

Phe	Ala	Cys	Asp	Ile	Cys	Gly	Arg	Lys	Phe	Ala	Arg	Ser	Asp	Asn	Leu
1				5					10					15	

Thr	Arg	His	Thr	Lys	Ile	His	Leu	Arg	Gln	Lys	Asp
			20					25			

<210> 69
<211> 28
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintética

<400> 69

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Arg	Ser	Ser	Asn	Leu
1				5					10					15	

Thr	Arg	His	Ile	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro
			20					25			

<210> 70
<211> 29
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintética

<400> 70

Phe	Ala	Cys	Asp	Ile	Cys	Gly	Lys	Lys	Phe	Ala	Asp	Lys	Arg	Thr	Leu
1				5					10					15	

Ile	Arg	His	Thr	Lys	Ile	His	Thr	Gly	Ser	Gln	Lys	Pro
			20					25				

<210> 71

<211> 28
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintética

<400> 71

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Gln	Arg	Gly	Asn	Leu
1				5					10					15	

Val	Arg	His	Ile	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro
			20					25			

<210> 72
<211> 29
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintética

<400> 72

Phe	Ala	Cys	Asp	Ile	Cys	Gly	Lys	Lys	Phe	Ala	Leu	Ser	Phe	Asn	Leu
1				5					10					15	

Thr	Arg	His	Thr	Lys	Ile	His	Thr	Gly	Ser	Gln	Lys	Pro
			20					25				

<210> 73
<211> 28
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintética

<400> 73

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Arg	Ser	Asp	Asn	Leu
1				5					10					15	

Thr	Arg	His	Ile	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro
			20					25			

<210> 74

<211> 28
<212> PRT
<213> Secuencia artificial

<220>
<223> Sintética

<400> 74

Phe	Ala	Cys	Asp	Ile	Cys	Gly	Arg	Lys	Phe	Ala	Asp	Arg	Ser	His	Leu
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Ala	Arg	His	Thr	Lys	Ile	His	Leu	Arg	Gln	Lys	Asp
			20					25			

<210> 75
<211> 28
<212> PRT
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<220>
<223> Sintética

<400> 75

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Asp	Arg	Ser	Ala	Leu
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Ala	Arg	His	Ile	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro
			20					25			

<210> 76
<211> 29
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<220>
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<400> 76

Phe	Ala	Cys	Asp	Ile	Cys	Gly	Lys	Lys	Phe	Ala	Arg	Ser	Asp	Asn	Leu
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Thr	Arg	His	Thr	Lys	Ile	His	Thr	Gly	Ser	Gln	Lys	Pro
			20					25				

<210> 77

<211> 28
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<400> 77

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Gln	Ser	Gly	Asp	Leu
1				5					10					15	

Thr	Arg	His	Ile	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro
			20					25			

<210> 78
<211> 29
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<400> 78

Phe	Ala	Cys	Asp	Ile	Cys	Gly	Lys	Lys	Phe	Ala	Val	Arg	Gln	Thr	Leu
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Lys	Gln	His	Thr	Lys	Ile	His	Thr	Gly	Ser	Gln	Lys	Pro
			20					25				

<210> 79
<211> 28
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<220>
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<400> 79

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Ala	Ala	Gly	Asn	Leu
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Thr	Arg	His	Ile	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro
			20					25			

<210> 80

<211> 28
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<220>
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<400> 80

Phe	Ala	Cys	Asp	Ile	Cys	Gly	Arg	Lys	Phe	Ala	Arg	Ser	Asp	Asn	Leu
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Thr	Arg	His	Thr	Lys	Ile	His	Leu	Arg	Gln	Lys	Asp
			20				25				

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<220>
<223> Sintética

<400> 82

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

Gly Ala Leu Leu Phe Asp Ser Gly Glu Thr Ala Glu Ala Thr Arg Leu
50 55 60

Lys Arg Thr Ala Arg Arg Arg Tyr Thr Arg Arg Lys Asn Arg Ile Cys
65 70 75 80

Tyr Leu Gln Glu Ile Phe Ser Asn Glu Met Ala Lys Val Asp Asp Ser
85 90 95

Phe Phe His Arg Leu Glu Glu Ser Phe Leu Val Glu Glu Asp Lys Lys
100 105 110

His Glu Arg His Pro Ile Phe Gly Asn Ile Val Asp Glu Val Ala Tyr
115 120 125

His Glu Lys Tyr Pro Thr Ile Tyr His Leu Arg Lys Lys Leu Val Asp
130 135 140

Ser Thr Asp Lys Ala Asp Leu Arg Leu Ile Tyr Leu Ala Leu Ala His
145 150 155 160

Met Ile Lys Phe Arg Gly His Phe Leu Ile Glu Gly Asp Leu Asn Pro

165

170

175

Asp Asn Ser Asp Val Asp Lys Leu Phe Ile Gln Leu Val Gln Thr Tyr
 180 185 190

Asn Gln Leu Phe Glu Glu Asn Pro Ile Asn Ala Ser Gly Val Asp Ala
 195 200 205

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

Leu Ile Ala Gln Leu Pro Gly Glu Lys Lys Asn Gly Leu Phe Gly Asn
 225 230 235 240

Leu Ile Ala Leu Ser Leu Gly Leu Thr Pro Asn Phe Lys Ser Asn Phe
 245 250 255

Asp Leu Ala Glu Asp Ala Lys Leu Gln Leu Ser Lys Asp Thr Tyr Asp
 260 265 270

Asp Asp Leu Asp Asn Leu Leu Ala Gln Ile Gly Asp Gln Tyr Ala Asp
 275 280 285

Leu Phe Leu Ala Ala Lys Asn Leu Ser Asp Ala Ile Leu Leu Ser Asp
 290 295 300

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

Met Ile Lys Arg Tyr Asp Glu His His Gln Asp Leu Thr Leu Leu Lys
 325 330 335

Ala Leu Val Arg Gln Gln Leu Pro Glu Lys Tyr Lys Glu Ile Phe Phe
 340 345 350

Asp Gln Ser Lys Asn Gly Tyr Ala Gly Tyr Ile Asp Gly Gly Ala Ser
 355 360 365

Gln Glu Glu Phe Tyr Lys Phe Ile Lys Pro Ile Leu Glu Lys Met Asp
 370 375 380

Gly Thr Glu Glu Leu Leu Val Lys Leu Asn Arg Glu Asp Leu Leu Arg
385 390 395 400

Lys Gln Arg Thr Phe Asp Asn Gly Ser Ile Pro His Gln Ile His Leu
405 410 415

Gly Glu Leu His Ala Ile Leu Arg Arg Gln Glu Asp Phe Tyr Pro Phe
420 425 430

Leu Lys Asp Asn Arg Glu Lys Ile Glu Lys Ile Leu Thr Phe Arg Ile
435 440 445

Pro Tyr Tyr Val Gly Pro Leu Ala Arg Gly Asn Ser Arg Phe Ala Trp
450 455 460

Met Thr Arg Lys Ser Glu Glu Thr Ile Thr Pro Trp Asn Phe Glu Glu
465 470 475 480

Val Val Asp Lys Gly Ala Ser Ala Gln Ser Phe Ile Glu Arg Met Thr
485 490 495

Asn Phe Asp Lys Asn Leu Pro Asn Glu Lys Val Leu Pro Lys His Ser
500 505 510

Leu Leu Tyr Glu Tyr Phe Thr Val Tyr Asn Glu Leu Thr Lys Val Lys
515 520 525

Tyr Val Thr Glu Gly Met Arg Lys Pro Ala Phe Leu Ser Gly Glu Gln
530 535 540

Lys Lys Ala Ile Val Asp Leu Leu Phe Lys Thr Asn Arg Lys Val Thr
545 550 555 560

Val Lys Gln Leu Lys Glu Asp Tyr Phe Lys Lys Ile Glu Cys Phe Asp
565 570 575

Ser Val Glu Ile Ser Gly Val Glu Asp Arg Phe Asn Ala Ser Leu Gly
580 585 590

Thr Tyr His Asp Leu Leu Lys Ile Ile Lys Asp Lys Asp Phe Leu Asp

595

600

605

Asn Glu Glu Asn Glu Asp Ile Leu Glu Asp Ile Val Leu Thr Leu Thr
 610 615 620

Leu Phe Glu Asp Arg Glu Met Ile Glu Glu Arg Leu Lys Thr Tyr Ala
 625 630 635 640

His Leu Phe Asp Asp Lys Val Met Lys Gln Leu Lys Arg Arg Arg Tyr
 645 650 655

Thr Gly Trp Gly Arg Leu Ser Arg Lys Leu Ile Asn Gly Ile Arg Asp
 660 665 670

Lys Gln Ser Gly Lys Thr Ile Leu Asp Phe Leu Lys Ser Asp Gly Phe
 675 680 685

Ala Asn Arg Asn Phe Met Gln Leu Ile His Asp Asp Ser Leu Thr Phe
 690 695 700

Lys Glu Asp Ile Gln Lys Ala Gln Val Ser Gly Gln Gly Asp Ser Leu
 705 710 715 720

His Glu His Ile Ala Asn Leu Ala Gly Ser Pro Ala Ile Lys Lys Gly
 725 730 735

Ile Leu Gln Thr Val Lys Val Val Asp Glu Leu Val Lys Val Met Gly
 740 745 750

Arg His Lys Pro Glu Asn Ile Val Ile Glu Met Ala Arg Glu Asn Gln
 755 760 765

Thr Thr Gln Lys Gly Gln Lys Asn Ser Arg Glu Arg Met Lys Arg Ile
 770 775 780

Glu Glu Gly Ile Lys Glu Leu Gly Ser Gln Ile Leu Lys Glu His Pro
 785 790 795 800

Val Glu Asn Thr Gln Leu Gln Asn Glu Lys Leu Tyr Leu Tyr Tyr Leu
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Gln Asn Gly Arg Asp Met Tyr Val Asp Gln Glu Leu Asp Ile Asn Arg
820 825 830

Leu Ser Asp Tyr Asp Val Asp Ala Ile Val Pro Gln Ser Phe Leu Lys
835 840 845

Asp Asp Ser Ile Asp Asn Lys Val Leu Thr Arg Ser Asp Lys Asn Arg
850 855 860

Gly Lys Ser Asp Asn Val Pro Ser Glu Glu Val Val Lys Lys Met Lys
865 870 875 880

Asn Tyr Trp Arg Gln Leu Leu Asn Ala Lys Leu Ile Thr Gln Arg Lys
885 890 895

Phe Asp Asn Leu Thr Lys Ala Glu Arg Gly Gly Leu Ser Glu Leu Asp
900 905 910

Lys Ala Gly Phe Ile Lys Arg Gln Leu Val Glu Thr Arg Gln Ile Thr
915 920 925

Lys His Val Ala Gln Ile Leu Asp Ser Arg Met Asn Thr Lys Tyr Asp
930 935 940

Glu Asn Asp Lys Leu Ile Arg Glu Val Lys Val Ile Thr Leu Lys Ser
945 950 955 960

Lys Leu Val Ser Asp Phe Arg Lys Asp Phe Gln Phe Tyr Lys Val Arg
965 970 975

Glu Ile Asn Asn Tyr His His Ala His Asp Ala Tyr Leu Asn Ala Val
980 985 990

Val Gly Thr Ala Leu Ile Lys Lys Tyr Pro Lys Leu Glu Ser Glu Phe
995 1000 1005

Val Tyr Gly Asp Tyr Lys Val Tyr Asp Val Arg Lys Met Ile Ala
1010 1015 1020

Lys Ser Glu Gln Glu Ile Gly Lys Ala Thr Ala Lys Tyr Phe Phe

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

Asn Phe Leu Tyr Leu Ala Ser His Tyr Glu Lys Leu Lys Gly Ser
 1235 1240 1245

Pro Glu Asp Asn Glu Gln Lys Gln Leu Phe Val Glu Gln His Lys
 1250 1255 1260

His Tyr Leu Asp Glu Ile Ile Glu Gln Ile Ser Glu Phe Ser Lys
 1265 1270 1275

Arg Val Ile Leu Ala Asp Ala Asn Leu Asp Lys Val Leu Ser Ala
 1280 1285 1290

Tyr Asn Lys His Arg Asp Lys Pro Ile Arg Glu Gln Ala Glu Asn
 1295 1300 1305

Ile Ile His Leu Phe Thr Leu Thr Asn Leu Gly Ala Pro Ala Ala
 1310 1315 1320

Phe Lys Tyr Phe Asp Thr Thr Ile Asp Arg Lys Arg Tyr Thr Ser
 1325 1330 1335

Thr Lys Glu Val Leu Asp Ala Thr Leu Ile His Gln Ser Ile Thr
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<211> 21

<212> ADN

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<211> 99

<212> ADN

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<400> 87

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<211> 99

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<220>
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<210> 90
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<220>
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<400> 90
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<210> 91
 <211> 100
 <212> ADN
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<220>
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 <213> Secuencia artificial

<220>
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<212> ADN
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<210> 94
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<220>
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gtgtctgcac tggctcaggc accagcaccg gtgcctgtgc tggctcctgg acctccacag	600
gctgtggctc caccagcccc taaacctaca caggccggcg agggcacact gtctgaagct	660
ctgctgcagc tgcagttcga cgacgaggat ctgggagccc tgctgggaaa cagcaccgat	720
cctgccgtgt tcaccgacct ggccagcgtg gacaacagcg agttccagca gctgctgaac	780
cagggcatcc ctgtggcccc tcacaccacc gagcccatgc tgatggaata ccccagggcc	840
atcaccggc tcgtgacagg cgctcagagg cctcctgata cagctcctgc ccctctggga	900
gcaccaggcc tgcctaattg actgctgtct ggcgacgagg acttcagctc tatcgccgat	960
atggatttct cagccttgct gggctctggc agcggcagcc gggattccag ggaagggatg	1020
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tgccagccaa aacgaatccg gccatttcat cctccaggaa gtccatgggc caaccgcca	1140
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accccgccac cagtccctca gccactggat ccagcgcccg cagtgactcc cgaggccagt	1260
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catccgcccc caaggggcca tctggatgag ctgacaacca cacttgagtc catgaccgag	1440
gatctgaacc tggactcacc cctgaccccg gaattgaacg agattctgga taccttctg	1500
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Asp Leu Asp Met Leu Gly Ser Asp Ala Leu Asp Asp Phe Asp Leu Asp
35 40 45

Met Leu Ile Asn Ser Arg Ser Ser Gly Ser Pro Lys Lys Lys Arg Lys
50 55 60

Val Gly Ser Gln Tyr Leu Pro Asp Thr Asp Asp Arg His Arg Ile Glu
65 70 75 80

Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys Lys
85 90 95

Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg Pro Pro Pro Arg Arg Ile
100 105 110

Ala Val Pro Ser Arg Ser Ser Ala Ser Val Pro Lys Pro Ala Pro Gln
115 120 125

Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu Phe
130 135 140

Pro Thr Met Val Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala Leu
145 150 155 160

Ala Pro Ala Pro Pro Gln Val Leu Pro Gln Ala Pro Ala Pro Ala Pro
165 170 175

Ala Pro Ala Met Val Ser Ala Leu Ala Gln Ala Pro Ala Pro Val Pro
180 185 190

Val Leu Ala Pro Gly Pro Pro Gln Ala Val Ala Pro Pro Ala Pro Lys
195 200 205

Pro Thr Gln Ala Gly Glu Gly Thr Leu Ser Glu Ala Leu Leu Gln Leu
210 215 220

Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu Leu Gly Asn Ser Thr Asp

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Pro	Ala	Val	Phe	Thr	Asp	Leu	Ala	Ser	Val	Asp	Asn	Ser	Glu	Phe	Gln
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Gln	Leu	Leu	Asn	Gln	Gly	Ile	Pro	Val	Ala	Pro	His	Thr	Thr	Glu	Pro
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Met	Leu	Met	Glu	Tyr	Pro	Glu	Ala	Ile	Thr	Arg	Leu	Val	Thr	Gly	Ala
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Gln	Arg	Pro	Pro	Asp	Pro	Ala	Pro	Ala	Pro	Leu	Gly	Ala	Pro	Gly	Leu
	290					295					300				
Pro	Asn	Gly	Leu	Leu	Ser	Gly	Asp	Glu	Asp	Phe	Ser	Ser	Ile	Ala	Asp
305					310					315					320
Met	Asp	Phe	Ser	Ala	Leu	Leu	Gly	Ser	Gly	Ser	Gly	Ser	Arg	Asp	Ser
			325						330					335	
Arg	Glu	Gly	Met	Phe	Leu	Pro	Lys	Pro	Glu	Ala	Gly	Ser	Ala	Ile	Ser
			340					345					350		
Asp	Val	Phe	Glu	Gly	Arg	Glu	Val	Cys	Gln	Pro	Lys	Arg	Ile	Arg	Pro
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Phe	His	Pro	Pro	Gly	Ser	Pro	Trp	Ala	Asn	Arg	Pro	Leu	Pro	Ala	Ser
	370					375					380				
Leu	Ala	Pro	Thr	Pro	Thr	Gly	Pro	Val	His	Glu	Pro	Val	Gly	Ser	Leu
385					390					395					400
Thr	Pro	Ala	Pro	Val	Pro	Gln	Pro	Leu	Asp	Pro	Ala	Pro	Ala	Val	Thr
			405						410					415	
Pro	Glu	Ala	Ser	His	Leu	Leu	Glu	Asp	Pro	Asp	Glu	Glu	Thr	Ser	Gln
			420					425					430		
Ala	Val	Lys	Ala	Leu	Arg	Glu	Met	Ala	Asp	Thr	Val	Ile	Pro	Gln	Lys
		435					440					445			

Glu Glu Ala Ala Ile Cys Gly Gln Met Asp Leu Ser His Pro Pro Pro
450 455 460

Arg Gly His Leu Asp Glu Leu Thr Thr Thr Leu Glu Ser Met Thr Glu
465 470 475 480

Asp Leu Asn Leu Asp Ser Pro Leu Thr Pro Glu Leu Asn Glu Ile Leu
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Lys Val Leu Gly Asn Thr Asp Arg His Ser Ile Lys Lys Asn Leu Ile
35 40 45

Gly Ala Leu Leu Phe Asp Ser Gly Glu Thr Ala Glu Ala Thr Arg Leu
50 55 60

Lys Arg Thr Ala Arg Arg Arg Tyr Thr Arg Arg Lys Asn Arg Ile Cys
65 70 75 80

Tyr Leu Gln Glu Ile Phe Ser Asn Glu Met Ala Lys Val Asp Asp Ser
85 90 95

Phe Phe His Arg Leu Glu Glu Ser Phe Leu Val Glu Glu Asp Lys Lys
100 105 110

His Glu Arg His Pro Ile Phe Gly Asn Ile Val Asp Glu Val Ala Tyr
115 120 125

His Glu Lys Tyr Pro Thr Ile Tyr His Leu Arg Lys Lys Leu Val Asp
130 135 140

Ser Thr Asp Lys Ala Asp Leu Arg Leu Ile Tyr Leu Ala Leu Ala His
145 150 155 160

Met Ile Lys Phe Arg Gly His Phe Leu Ile Glu Gly Asp Leu Asn Pro
165 170 175

Asp Asn Ser Asp Val Asp Lys Leu Phe Ile Gln Leu Val Gln Thr Tyr
180 185 190

Asn Gln Leu Phe Glu Glu Asn Pro Ile Asn Ala Ser Gly Val Asp Ala
195 200 205

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

Leu Ile Ala Gln Leu Pro Gly Glu Lys Lys Asn Gly Leu Phe Gly Asn
225 230 235 240

Leu Ile Ala Leu Ser Leu Gly Leu Thr Pro Asn Phe Lys Ser Asn Phe
245 250 255

Asp Leu Ala Glu Asp Ala Lys Leu Gln Leu Ser Lys Asp Thr Tyr Asp
260 265 270

Asp Asp Leu Asp Asn Leu Leu Ala Gln Ile Gly Asp Gln Tyr Ala Asp
275 280 285

Leu Phe Leu Ala Ala Lys Asn Leu Ser Asp Ala Ile Leu Leu Ser Asp
290 295 300

Ile Leu Arg Val Asn Thr Glu Ile Thr Lys Ala Pro Leu Ser Ala Ser

305		310		315		320									
Met	Ile	Lys	Arg	Tyr	Asp	Glu	His	His	Gln	Asp	Leu	Thr	Leu	Leu	Lys
				325					330					335	
Ala	Leu	Val	Arg	Gln	Gln	Leu	Pro	Glu	Lys	Tyr	Lys	Glu	Ile	Phe	Phe
			340					345					350		
Asp	Gln	Ser	Lys	Asn	Gly	Tyr	Ala	Gly	Tyr	Ile	Asp	Gly	Gly	Ala	Ser
		355					360					365			
Gln	Glu	Glu	Phe	Tyr	Lys	Phe	Ile	Lys	Pro	Ile	Leu	Glu	Lys	Met	Asp
	370					375					380				
Gly	Thr	Glu	Glu	Leu	Leu	Val	Lys	Leu	Asn	Arg	Glu	Asp	Leu	Leu	Arg
385					390					395					400
Lys	Gln	Arg	Thr	Phe	Asp	Asn	Gly	Ser	Ile	Pro	His	Gln	Ile	His	Leu
				405					410					415	
Gly	Glu	Leu	His	Ala	Ile	Leu	Arg	Arg	Gln	Glu	Asp	Phe	Tyr	Pro	Phe
			420					425					430		
Leu	Lys	Asp	Asn	Arg	Glu	Lys	Ile	Glu	Lys	Ile	Leu	Thr	Phe	Arg	Ile
		435					440					445			
Pro	Tyr	Tyr	Val	Gly	Pro	Leu	Ala	Arg	Gly	Asn	Ser	Arg	Phe	Ala	Trp
	450					455					460				
Met	Thr	Arg	Lys	Ser	Glu	Glu	Thr	Ile	Thr	Pro	Trp	Asn	Phe	Glu	Glu
465					470					475					480
Val	Val	Asp	Lys	Gly	Ala	Ser	Ala	Gln	Ser	Phe	Ile	Glu	Arg	Met	Thr
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Asn	Phe	Asp	Lys	Asn	Leu	Pro	Asn	Glu	Lys	Val	Leu	Pro	Lys	His	Ser
			500					505					510		
Leu	Leu	Tyr	Glu	Tyr	Phe	Thr	Val	Tyr	Asn	Glu	Leu	Thr	Lys	Val	Lys
		515					520					525			

Tyr Val Thr Glu Gly Met Arg Lys Pro Ala Phe Leu Ser Gly Glu Gln
530 535 540

Lys Lys Ala Ile Val Asp Leu Leu Phe Lys Thr Asn Arg Lys Val Thr
545 550 555 560

Val Lys Gln Leu Lys Glu Asp Tyr Phe Lys Lys Ile Glu Cys Phe Asp
565 570 575

Ser Val Glu Ile Ser Gly Val Glu Asp Arg Phe Asn Ala Ser Leu Gly
580 585 590

Thr Tyr His Asp Leu Leu Lys Ile Ile Lys Asp Lys Asp Phe Leu Asp
595 600 605

Asn Glu Glu Asn Glu Asp Ile Leu Glu Asp Ile Val Leu Thr Leu Thr
610 615 620

Leu Phe Glu Asp Arg Glu Met Ile Glu Glu Arg Leu Lys Thr Tyr Ala
625 630 635 640

His Leu Phe Asp Asp Lys Val Met Lys Gln Leu Lys Arg Arg Arg Tyr
645 650 655

Thr Gly Trp Gly Arg Leu Ser Arg Lys Leu Ile Asn Gly Ile Arg Asp
660 665 670

Lys Gln Ser Gly Lys Thr Ile Leu Asp Phe Leu Lys Ser Asp Gly Phe
675 680 685

Ala Asn Arg Asn Phe Met Gln Leu Ile His Asp Asp Ser Leu Thr Phe
690 695 700

Lys Glu Asp Ile Gln Lys Ala Gln Val Ser Gly Gln Gly Asp Ser Leu
705 710 715 720

His Glu His Ile Ala Asn Leu Ala Gly Ser Pro Ala Ile Lys Lys Gly
725 730 735

Ile Leu Gln Thr Val Lys Val Val Asp Glu Leu Val Lys Val Met Gly

740

745

750

Arg His Lys Pro Glu Asn Ile Val Ile Glu Met Ala Arg Glu Asn Gln
 755 760 765

Thr Thr Gln Lys Gly Gln Lys Asn Ser Arg Glu Arg Met Lys Arg Ile
 770 775 780

Glu Glu Gly Ile Lys Glu Leu Gly Ser Gln Ile Leu Lys Glu His Pro
 785 790 795 800

Val Glu Asn Thr Gln Leu Gln Asn Glu Lys Leu Tyr Leu Tyr Tyr Leu
 805 810 815

Gln Asn Gly Arg Asp Met Tyr Val Asp Gln Glu Leu Asp Ile Asn Arg
 820 825 830

Leu Ser Asp Tyr Asp Val Asp Ala Ile Val Pro Gln Ser Phe Leu Lys
 835 840 845

Asp Asp Ser Ile Asp Asn Lys Val Leu Thr Arg Ser Asp Lys Asn Arg
 850 855 860

Gly Lys Ser Asp Asn Val Pro Ser Glu Glu Val Val Lys Lys Met Lys
 865 870 875 880

Asn Tyr Trp Arg Gln Leu Leu Asn Ala Lys Leu Ile Thr Gln Arg Lys
 885 890 895

Phe Asp Asn Leu Thr Lys Ala Glu Arg Gly Gly Leu Ser Glu Leu Asp
 900 905 910

Lys Ala Gly Phe Ile Lys Arg Gln Leu Val Glu Thr Arg Gln Ile Thr
 915 920 925

Lys His Val Ala Gln Ile Leu Asp Ser Arg Met Asn Thr Lys Tyr Asp
 930 935 940

Glu Asn Asp Lys Leu Ile Arg Glu Val Lys Val Ile Thr Leu Lys Ser
 945 950 955 960

Lys Leu Val Ser Asp Phe Arg Lys Asp Phe Gln Phe Tyr Lys Val Arg
965 970 975

Glu Ile Asn Asn Tyr His His Ala His Asp Ala Tyr Leu Asn Ala Val
980 985 990

Val Gly Thr Ala Leu Ile Lys Lys Tyr Pro Lys Leu Glu Ser Glu Phe
995 1000 1005

Val Tyr Gly Asp Tyr Lys Val Tyr Asp Val Arg Lys Met Ile Ala
1010 1015 1020

Lys Ser Glu Gln Glu Ile Gly Lys Ala Thr Ala Lys Tyr Phe Phe
1025 1030 1035

Tyr Ser Asn Ile Met Asn Phe Phe Lys Thr Glu Ile Thr Leu Ala
1040 1045 1050

Asn Gly Glu Ile Arg Lys Arg Pro Leu Ile Glu Thr Asn Gly Glu
1055 1060 1065

Thr Gly Glu Ile Val Trp Asp Lys Gly Arg Asp Phe Ala Thr Val
1070 1075 1080

Arg Lys Val Leu Ser Met Pro Gln Val Asn Ile Val Lys Lys Thr
1085 1090 1095

Glu Val Gln Thr Gly Gly Phe Ser Lys Glu Ser Ile Leu Pro Lys
1100 1105 1110

Arg Asn Ser Asp Lys Leu Ile Ala Arg Lys Lys Asp Trp Asp Pro
1115 1120 1125

Lys Lys Tyr Gly Gly Phe Asp Ser Pro Thr Val Ala Tyr Ser Val
1130 1135 1140

Leu Val Val Ala Lys Val Glu Lys Gly Lys Ser Lys Lys Leu Lys
1145 1150 1155

Ser Val Lys Glu Leu Leu Gly Ile Thr Ile Met Glu Arg Ser Ser

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Glu Val Lys Lys Asp Leu Ile 1190 1195	Ile Lys Leu Pro Lys 1200	Tyr Ser Leu
Phe Glu Leu Glu Asn Gly Arg 1205 1210	Lys Arg Met Leu Ala 1215	Ser Ala Gly
Glu Leu Gln Lys Gly Asn Glu 1220 1225	Leu Ala Leu Pro Ser 1230	Lys Tyr Val
Asn Phe Leu Tyr Leu Ala Ser 1235 1240	His Tyr Glu Lys Leu 1245	Lys Gly Ser
Pro Glu Asp Asn Glu Gln Lys 1250 1255	Gln Leu Phe Val Glu 1260	Gln His Lys
His Tyr Leu Asp Glu Ile Ile 1265 1270	Glu Gln Ile Ser Glu 1275	Phe Ser Lys
Arg Val Ile Leu Ala Asp Ala 1280 1285	Asn Leu Asp Lys Val 1290	Leu Ser Ala
Tyr Asn Lys His Arg Asp Lys 1295 1300	Pro Ile Arg Glu Gln 1305	Ala Glu Asn
Ile Ile His Leu Phe Thr Leu 1310 1315	Thr Asn Leu Gly Ala 1320	Pro Ala Ala
Phe Lys Tyr Phe Asp Thr Thr 1325 1330	Ile Asp Arg Lys Arg 1335	Tyr Thr Ser
Thr Lys Glu Val Leu Asp Ala 1340 1345	Thr Leu Ile His Gln 1350	Ser Ile Thr
Gly Leu Tyr Glu Thr Arg Ile 1355 1360	Asp Leu Ser Gln Leu 1365	Gly Gly Asp

Gly Thr Gly Gly Pro Pro Lys Lys Lys Arg Lys Val Ala Ala Ala
1370 1375 1380

Ser Arg Tyr Pro Arg Gly Asp Ala Leu Asp Asp Phe Asp Leu Asp
1385 1390 1395

Met Leu Gly Ser Asp Ala Leu Asp Asp Phe Asp Leu Asp Met Leu
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Gly Ser Asp Ala Leu Asp Asp Phe Asp Leu Asp Met Leu Gly Ser
1415 1420 1425

Asp Ala Leu Asp Asp Phe Asp Leu Asp Met Leu Ile Asn Ser Arg
1430 1435 1440

Ser Ser Gly Ser Pro Lys Lys Lys Arg Lys Val Gly Ser Gln Tyr
1445 1450 1455

Leu Pro Asp Thr Asp Asp Arg His Arg Ile Glu Glu Lys Arg Lys
1460 1465 1470

Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys Lys Ser Pro Phe
1475 1480 1485

Ser Gly Pro Thr Asp Pro Arg Pro Pro Pro Arg Arg Ile Ala Val
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Pro Ser Arg Ser Ser Ala Ser Val Pro Lys Pro Ala Pro Gln Pro
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Tyr Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu Phe
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Pro Thr Met Val Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala
1535 1540 1545

Leu Ala Pro Ala Pro Pro Gln Val Leu Pro Gln Ala Pro Ala Pro
1550 1555 1560

Ala Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln Ala Pro Ala

1565					1570						1575			
Pro	Val	Pro	Val	Leu	Ala	Pro	Gly	Pro	Pro	Gln	Ala	Val	Ala	Pro
1580						1585					1590			
Pro	Ala	Pro	Lys	Pro	Thr	Gln	Ala	Gly	Glu	Gly	Thr	Leu	Ser	Glu
1595						1600					1605			
Ala	Leu	Leu	Gln	Leu	Gln	Phe	Asp	Asp	Glu	Asp	Leu	Gly	Ala	Leu
1610						1615					1620			
Leu	Gly	Asn	Ser	Thr	Asp	Pro	Ala	Val	Phe	Thr	Asp	Leu	Ala	Ser
1625						1630					1635			
Val	Asp	Asn	Ser	Glu	Phe	Gln	Gln	Leu	Leu	Asn	Gln	Gly	Ile	Pro
1640						1645					1650			
Val	Ala	Pro	His	Thr	Thr	Glu	Pro	Met	Leu	Met	Glu	Tyr	Pro	Glu
1655						1660					1665			
Ala	Ile	Thr	Arg	Leu	Val	Thr	Gly	Ala	Gln	Arg	Pro	Pro	Asp	Pro
1670						1675					1680			
Ala	Pro	Ala	Pro	Leu	Gly	Ala	Pro	Gly	Leu	Pro	Asn	Gly	Leu	Leu
1685						1690					1695			
Ser	Gly	Asp	Glu	Asp	Phe	Ser	Ser	Ile	Ala	Asp	Met	Asp	Phe	Ser
1700						1705					1710			
Ala	Leu	Leu	Gly	Ser	Gly	Ser	Gly	Ser	Arg	Asp	Ser	Arg	Glu	Gly
1715						1720					1725			
Met	Phe	Leu	Pro	Lys	Pro	Glu	Ala	Gly	Ser	Ala	Ile	Ser	Asp	Val
1730						1735					1740			
Phe	Glu	Gly	Arg	Glu	Val	Cys	Gln	Pro	Lys	Arg	Ile	Arg	Pro	Phe
1745						1750					1755			
His	Pro	Pro	Gly	Ser	Pro	Trp	Ala	Asn	Arg	Pro	Leu	Pro	Ala	Ser
1760						1765					1770			

Leu Ala Pro Thr Pro Thr Gly Pro Val His Glu Pro Val Gly Ser
1775 1780 1785

Leu Thr Pro Ala Pro Val Pro Gln Pro Leu Asp Pro Ala Pro Ala
1790 1795 1800

Val Thr Pro Glu Ala Ser His Leu Leu Glu Asp Pro Asp Glu Glu
1805 1810 1815

Thr Ser Gln Ala Val Lys Ala Leu Arg Glu Met Ala Asp Thr Val
1820 1825 1830

Ile Pro Gln Lys Glu Glu Ala Ala Ile Cys Gly Gln Met Asp Leu
1835 1840 1845

Ser His Pro Pro Pro Arg Gly His Leu Asp Glu Leu Thr Thr Thr
1850 1855 1860

Leu Glu Ser Met Thr Glu Asp Leu Asn Leu Asp Ser Pro Leu Thr
1865 1870 1875

Pro Glu Leu Asn Glu Ile Leu Asp Thr Phe Leu Asn Asp Glu Cys
1880 1885 1890

Leu Leu His Ala Met His Ile Ser Thr Gly Leu Ser Ile Phe Asp
1895 1900 1905

Thr Ser Leu Phe Pro Lys Lys Lys Arg Lys Val Arg Ser Lys Arg
1910 1915 1920

Pro Ala Ala Thr Lys Lys Ala Gly Gln Ala Lys Lys Lys Lys Leu
1925 1930 1935

Asp

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