

LISTADO DE SECUENCIAS

<110> Saiba GmbH

Bachmann, Martin

Pumpens, Paul

Zeltins, Andris

<120> Partículas Tipo Virus Modificadas de CMV

<130> P3295PC00

<150> EP14189897.3

<151> 2014-10-22

<150> EP15184192.1

<151> 2015-09-08

<160> 65

<170> PatentIn versión 3.5

<210> 1

<211> 218

<212> PRT

<213> virus del mosaico del pepino

<400> 1

Met Asp Lys Ser Glu Ser Thr Ser Ala Gly Arg Ser Arg Arg Arg Arg

1 5 10 15

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

Arg Val Leu Ser Gln Gln Leu Ser Arg Leu Asn Lys Thr Leu Ala Ala
35 40 45

Gly Arg Pro Thr Ile Asn His Pro Thr Phe Val Gly Ser Glu Arg Cys
50 55 60

Lys Pro Gly Tyr Thr Phe Thr Ser Ile Thr Leu Lys Pro Pro Lys Ile
65 70 75 80

Asp Arg Gly Ser Tyr Tyr Gly Lys Arg Leu Leu Leu Pro Asp Ser Val
 85 90 95

Thr Glu Tyr Asp Lys Lys Leu Val Ser Arg Ile Gln Ile Arg Val Asn
 100 105 110

Pro Leu Pro Lys Phe Asp Ser Thr Val Trp Val Thr Val Arg Lys Val
115 120 125

Pro Ala Ser Ser Asp Leu Ser Val Ala Ala Ile Ser Ala Met Phe Ala

130 135 140

Asp Gly Ala Ser Pro Val Leu Val Tyr Gln Tyr Ala Ala Ser Gly Val

145 150 155 160

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

165 170 175

Ile Gly Asp Met Arg Lys Tyr Ala Val Leu Val Tyr Ser Lys Asp Asp

180 185 190

Ala Leu Glu Thr Asp Glu Leu Val Leu His Val Asp Val Glu His Gln

195 200 205

Arg Ile Pro Thr Ser Gly Val Leu Pro Val

210 215

<210> 2

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<213> virus del mosaico del pepino

<400> 2

Asp Lys Ser Glu Ser Thr Ser Ala Gly Arg Asn Arg Arg Arg Arg Pro

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Arg Arg Gly Ser Arg Ser Ala Ser Ser Ser Ala Asp Ala Asn Phe Arg

20 25 30

Val Leu Ser Gln Gln Leu Ser Arg Leu Asn Lys Thr Leu Ala Ala Gly

35 40 45

Arg Pro Thr Ile Asn His Pro Thr Phe Val Gly Ser Glu Arg Cys Lys

50 55 60

Pro Gly Tyr Thr Phe Ser Ser Ile Thr Leu Lys Pro Pro Lys Ile Asp

65 70 75 80

Arg Gly Ser Tyr Tyr Gly Lys Arg Leu Leu Leu Pro Asp Ser Val Thr

85 90 95

Glu Phe Asp Lys Lys Leu Val Ser Arg Ile Gln Ile Arg Val Asn Pro

100 105 110

Leu Pro Lys Phe Asp Ser Thr Val Trp Val Thr Val Arg Lys Val Pro

115 120 125

Ala Ser Ser Asp Leu Ser Val Ala Ala Ile Ser Ala Met Phe Ala Asp

130 135 140

Gly Ala Ser Pro Val Leu Val Tyr Gln Tyr Ala Ala Ser Gly Val Gln

145 150 155 160

Ala Asn Asn Lys Leu Leu Tyr Asp Leu Ser Ala Met Arg Ala Asp Ile

165 170 175

Gly Asp Met Arg Lys Tyr Ala Val Leu Val Tyr Ser Lys Asp Asp Ala

180 185 190

Leu Glu Thr Asp Glu Leu Val Leu His Val Asp Ile Glu His Gln Arg

195 200 205

Ile Pro Thr Ser Gly Val Leu Pro Val

210 215

<210> 3

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<213> virus del mosaico del pepino

<400> 3

Met Asp Lys Ser Glu Ser Pro Asn Ala Ser Arg Thr Ser Arg Arg Arg

1 5 10 15

Arg Pro Arg Arg Gly Ser Arg Ser Ala Ser Gly Ala Asp Ala Gly Leu

20 25 30

Arg Ala Leu Thr Gln Gln Met Leu Lys Leu Asn Lys Thr Leu Ala Ile

35 40 45

Gly Arg Pro Thr Leu Asn His Pro Thr Phe Val Gly Ser Ala Ser Cys

50 55 60

Lys Pro Gly Tyr Thr Phe Thr Ser Ile Thr Leu Lys Pro Pro Glu Ile

65 70 75 80

Glu Lys Gly Ser Tyr Phe Gly Arg Arg Leu Ser Leu Pro Asp Ser Val

85

90

95

Thr Asp Tyr Asp Lys Lys Leu Val Ser Arg Ile Gln Ile Arg Ile Asn

100

105

110

Pro Leu Pro Lys Phe Asp Ser Thr Val Trp Val Thr Val Arg Lys Val

115

120

125

Pro Ser Ser Ser Asp Leu Ser Val Ala Thr Ile Ser Ala Met Phe Gly

130

135

140

Asp Gly Asn Ser Pro Val Leu Val Tyr Gln Tyr Thr Ala Ser Gly Val

145

150

155

160

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

165

170

175

Ile Gly Asp Met Arg Lys Tyr Ala Val Leu Val Tyr Ser Lys Asp Asp

180

185

190

Lys Leu Glu Glu Asp Glu Ile Val Leu His Val Asp Val Glu His Gln

195 200 205

Arg Ile Pro Ile Ser Arg Met Leu Pro Thr

210 215

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

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<223> PADRE

<400> 5

Ala Lys Phe Val Ala Ala Trp Thr Leu Lys Ala Ala Ala

1 5 10

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<211> 222

<212> PRT

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<223> CMV-Ntt830

<400> 6

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

1 5 10 15

Arg Arg Arg Arg Pro Arg Arg Gly Ser Arg Ser Ala Pro Ser Ser Ala

20 25 30

Asp Ala Asn Phe Arg Val Leu Ser Gln Gln Leu Ser Arg Leu Asn Lys

35 40 45

Thr Leu Ala Ala Gly Arg Pro Thr Ile Asn His Pro Thr Phe Val Gly

50

55

60

Ser Glu Arg Cys Lys Pro Gly Tyr Thr Phe Thr Ser Ile Thr Leu Lys

65

70

75

80

Pro Pro Lys Ile Asp Arg Gly Ser Tyr Tyr Gly Lys Arg Leu Leu Leu

85

90

95

Pro Asp Ser Val Thr Glu Tyr Asp Lys Lys Leu Val Ser Arg Ile Gln

100

105

110

Ile Arg Val Asn Pro Leu Pro Lys Phe Asp Ser Thr Val Trp Val Thr

115

120

125

Val Arg Lys Val Pro Ala Ser Ser Asp Leu Ser Val Ala Ala Ile Ser

130

135

140

Ala Met Phe Ala Asp Gly Ala Ser Pro Val Leu Val Tyr Gln Tyr Ala

145

150

155

160

Ala Ser Gly Val Gln Ala Asn Asn Lys Leu Leu Tyr Asp Leu Ser Ala

165

170

175

Met Arg Ala Asp Ile Gly Asp Met Arg Lys Tyr Ala Val Leu Val Tyr

180 185 190

Ser Lys Asp Asp Ala Leu Glu Thr Asp Glu Leu Val Leu His Val Asp

195 200 205

Val Glu His Gln Arg Ile Pro Thr Ser Gly Val Leu Pro Val

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<223> CMV-Npadr

<400> 7

Met Ala Lys Phe Val Ala Ala Trp Thr Leu Lys Ala Ala Ala Arg Arg

1 5 10 15

Arg Arg Pro Arg Arg Gly Ser Arg Ser Ala Pro Ser Ser Ala Asp Ala

20

25

30

Asn Phe Arg Val Leu Ser Gln Gln Leu Ser Arg Leu Asn Lys Thr Leu

35

40

45

Ala Ala Gly Arg Pro Thr Ile Asn His Pro Thr Phe Val Gly Ser Glu

50

55

60

Arg Cys Lys Pro Gly Tyr Thr Phe Thr Ser Ile Thr Leu Lys Pro Pro

65

70

75

80

Lys Ile Asp Arg Gly Ser Tyr Tyr Gly Lys Arg Leu Leu Leu Pro Asp

85

90

95

Ser Val Thr Glu Tyr Asp Lys Lys Leu Val Ser Arg Ile Gln Ile Arg

100

105

110

Val Asn Pro Leu Pro Lys Phe Asp Ser Thr Val Trp Val Thr Val Arg

115

120

125

Lys Val Pro Ala Ser Ser Asp Leu Ser Val Ala Ala Ile Ser Ala Met

130

135

140

Phe Ala Asp Gly Ala Ser Pro Val Leu Val Tyr Gln Tyr Ala Ala Ser

145 150 155 160

Gly Val Gln Ala Asn Asn Lys Leu Leu Tyr Asp Leu Ser Ala Met Arg

165 170 175

Ala Asp Ile Gly Asp Met Arg Lys Tyr Ala Val Leu Val Tyr Ser Lys

180 185 190

Asp Asp Ala Leu Glu Thr Asp Glu Leu Val Leu His Val Asp Val Glu

195 200 205

His Gln Arg Ile Pro Thr Ser Gly Val Leu Pro Val

210 215 220

<210> 8

<211> 34

<212> DNA

<213>secuencia artificial

<220>

<223>cebador CMcpF

<400> 8

caccatggac aaatctgaat caaccagtgc tggc 34

<210> 9

<211> 37

<212> DNA

<213>secuencia artificial

<220>

<223>cebador CMcpR

<400> 9

caaagcttat caaactggga gcaccccaga tgtggga 37

<210> 10

<211> 660

<212> DNA

<213> virus del mosaico del pepino

<400> 10

atggacaaat ctgaatcaac cagtgcctgt cgtagccgtc gacgtcgtcc gcgtcgtggt 60

tccgctccg cccctcctc cgcggatgct aacttagag tcttgtcga gcagctttcg 120

cgacttaata agacgttagc agctggctgt ccaactatta accaccaac cttttaggg 180

agtgaacgct gtaaactgg gtacacgttc acatctatca ccctaaagcc accaaaaata 240

gaccgtgggt cttattatgg taaaagggtg ttattacctg attcagtcac ggaatatgat 300

aagaaacttg tttcgcgcat tcaaattcga gttaatcctt tgccgaaatt tgattcaacc 360

gtgtgggtga cagtccgtaa agttcctgcc tcttcggact tatccgttgc cgccatttct 420

gctatgtttg cggacggagc ctaccggta ctggtttatc agtacgtgc atctggagtc 480

caagctaaca acaaactgtt gtatgatctt tcggcgatgc gcgctgatat aggcgacatg 540

agaaagtacg ccgtcctcgt gtattcaaaa gacgatgcac tcgagacaga cgagttagta 600

cttcatgttg acgtcgagca ccaacgtatt cccacatctg gggtgctccc agtttgataa 660

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<223> cebador pET-220

<400> 11

agcaccgccg ccgcaaggaa

<210> 12

<211> 52

<212> DNA

<213> secuencia artificial

<220>

<223>cebador CMV-tt83-1R

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atttgaggtt ggccttaata tactggcca tggatatct cttcttaaa gt 52

<210> 13

<211> 52

<212> DNA

<213>secuencia artificial

<220>

<223>cebador CMV-tt83Sal-R2

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gacgtcgacg ctcgtaatc ccgataaatt tggagttggc cttatatac tg 52

<210> 14

<211> 672

<212> DNA

<213>secuencia artificial

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<223> ADNc que codifica CMV-Ntt830

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atgggccagt atattaaggc caactccaaa ttatcggga ttaccgagcg tcgacgtcgt 60

ccgcgtcgtg gttcccgctc cgccccctcc tccgcggatg ctaactttag agtcttgctg 120

cagcagcttt cgcgacttaa taagacgtta gcagctgggc gtccaactat taaccacca 180

acctttgtag ggagtgaacg ctgtaaacct gggtacacgt tcacatctat caccctaaag 240

ccacaaaaaa tagaccgtgg gtcttattat ggtaaaaggt tgttattacc tgattcagtc 300

acggaatatg ataagaaact tgtttcgcgc attcaaattc gagttaatcc ttgccgaaa 360

tttgattcaa ccgtgtgggt gacagtccgt aaagttcctg cctcttcgga cttatccgtt 420

gccgccattt ctgctatgtt tgcggacgga gcctcaccgg tactggttta tcagtacgct 480

gcatctggag tccaagctaa caacaaactg ttgtatgac ttcggcgat gcgcgctgat 540

ataggcgaca tgagaaagta cgccgtcctc gtgtattcaa aagacgatgc actcgagaca 600

gacgagttag tacttcatgt tgacgtcgag caccaacgta ttccacatc tggggtgctc 660

ccagtttgat aa

672

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<212> DNA

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gacgtcgacg cgcggccgcc ttgagggtcc acgcggccac aaatttcgcc atggt 55

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<223> ADNc que codifica CMV-Npadr

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atggcgaaat ttgtggccgc gtggaccctc aaggcggccg cgcgtcgacg tcgtccgcgt 60

cgtggttccc gtcgccccc ctctccgcg gatgctaact ttagagtctt gtcgcagcag 120

ctttcgcgac ttaataagac gtagcagct ggtcgtcaa ctattaacca cccaaccttt 180

gtagggagtg aacgtgtaa acctgggtac acgttcacat ctatcacctt aaagccacca 240

aaaatagacc gtgggtctta ttatggtaaa aggttggtat tacctgattc agtcacggaa 300

tatgataaga aacttgtttc gcgcattcaa attcgagtta atcctttgcc gaaatttgat 360

tcaaccgtgt gggtgacagt ccgtaaagtt cctgcctctt cggacttata cggtgccgcc 420

atttctgcta tgtttgcgga cggagcctca ccggtactgg ttatcagta cgctgcatct 480

ggagtccaag ctaacaaca actgttgat gatctttcgg cgatgcgcgc tgatataggc 540

gacatgagaa agtacgccgt cctcgtgtat tcaaaagacg atgcactga gacagacgag 600

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tgataa 666

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Val Lys Met Ala Glu Thr Cys Pro Ile Phe Tyr Asp Val Phe Phe Ala

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Val Ala Asn Gly Asn Glu Leu Leu Leu Asp Leu Ser Leu Thr Lys Val
20 25 30

Asn Ala Thr Glu Pro Glu Arg Thr Ala Met Lys Lys Ile Gln Asp Cys
35 40 45

Tyr Val Glu Asn Gly Leu Ile Ser Arg Val Leu Asp Gly Leu Val Met
50 55 60

Thr Thr Ile Ser Ser Ser Lys Asp Cys Met Gly Glu Ala Val Gln Asn
65 70 75 80

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

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Cys Glu Ile Cys Pro
100 105 110

Ala Val Lys Arg Asp Val Asp Leu Phe Leu Thr Gly Thr Pro Asp Glu
115 120 125

Tyr Val Glu Gln Val Ala Gln Tyr Lys Ala Leu Pro Val Val Leu Glu

130 135 140

Asn Ala Arg Ile Leu Lys Asn Cys Val Asp Ala Lys Met Thr Glu Glu

145 150 155 160

Asp Lys Glu Asn Ala Leu Ser Val Leu Asp Lys Ile Tyr Thr Ser Pro

165 170 175

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<213>secuencia artificial

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<223> rFel-1-G3-2

<400> 18

Cys Glu Ile Cys Pro Ala Val Lys Arg Asp Val Asp Leu Phe Leu Thr

1 5 10 15

Gly Thr Pro Asp Glu Tyr Val Glu Gln Val Ala Gln Tyr Lys Ala Leu

20 25 30

Pro Val Val Leu Glu Asn Ala Arg Ile Leu Lys Asn Cys Val Asp Ala

35 40 45

Lys Met Thr Glu Glu Asp Lys Glu Asn Ala Leu Ser Val Leu Asp Lys

50 55 60

Ile Tyr Thr Ser Pro Gly Gly Gly Gly Ser Gly Gly Gly Ser Gly

65 70 75 80

Gly Gly Gly Ser Val Lys Met Ala Glu Thr Cys Pro Ile Phe Tyr Asp

85 90 95

Val Phe Phe Ala Val Ala Asn Gly Asn Glu Leu Leu Leu Asp Leu Ser

100 105 110

Leu Thr Lys Val Asn Ala Thr Glu Pro Glu Arg Thr Ala Met Lys Lys

115 120 125

Ile Gln Asp Cys Tyr Val Glu Asn Gly Leu Ile Ser Arg Val Leu Asp

130 135 140

Gly Leu Val Met Thr Thr Ile Ser Ser Ser Lys Asp Cys Met Gly Glu

145 150 155 160

Ala Val Gln Asn Thr Val Glu Asp Leu Lys Leu Asn Thr Leu Gly Arg

165 170 175

<210> 19

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<212> PRT

<213>secuencia artificial

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<223> péptido de alfa-sinucleína - GGC

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Lys Asn Glu Glu Gly Ala Pro Gly Gly Cys

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<210> 20

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<212> PRT

<213>secuencia artificial

<220>

<223>proteína IL17A murina

<400> 20

Ala Ala Ile Ile Pro Gln Ser Ser Ala Cys Pro Asn Thr Glu Ala Lys

1 5 10 15

Asp Phe Leu Gln Asn Val Lys Val Asn Leu Lys Val Phe Asn Ser Leu

20 25 30

Gly Ala Lys Val Ser Ser Arg Arg Pro Ser Asp Tyr Leu Asn Arg Ser

35 40 45

Thr Ser Pro Trp Thr Leu His Arg Asn Glu Asp Pro Asp Arg Tyr Pro

50 55 60

Ser Val Ile Trp Glu Ala Gln Cys Arg His Gln Arg Cys Val Asn Ala

65 70 75 80

Glu Gly Lys Leu Asp His His Met Asn Ser Val Leu Ile Gln Gln Glu

85 90 95

Ile Leu Val Leu Lys Arg Glu Pro Glu Ser Cys Pro Phe Thr Phe Arg

100 105 110

Val Glu Lys Met Leu Val Gly Val Gly Cys Thr Cys Val Ala Ser Ile

115 120 125

Val Arg Gln Ala Ala Gly Gly Gly Gly Gly Cys

130 135

<210> 21

<211> 27

<212> PRT

<213>secuencia artificial

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<223> aa 2-27 of SEQ ID NO:1

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Asp Lys Ser Glu Ser Thr Ser Ala Gly Arg Ser Arg Arg Arg Arg Pro

1 5 10 15

Arg Arg Gly Ser Arg Ser Ala Pro Ser Ser Ala

20 25

<210> 22

<211> 11

<212> PRT

<213>secuencia artificial

<220>

<223>péptido de alfa-sinucleína - GGC

<400> 22

Met Asp Val Phe Met Lys Gly Leu Gly Gly Cys

1 5 10

<210> 23

<211> 132

<212> PRT

<213>secuencia artificial

<220>

<223> m-IL-5

<400> 23

Met Glu Ile Pro Met Ser Thr Val Val Lys Glu Thr Leu Thr Gln Leu

1 5 10 15

Ser Ala His Arg Ala Leu Leu Thr Ser Asn Glu Thr Met Arg Leu Pro

20 25 30

Val Pro Thr His Lys Asn His Gln Leu Cys Ile Gly Glu Ile Phe Gln

35 40 45

Gly Leu Asp Ile Leu Lys Asn Gln Thr Val Arg Gly Gly Thr Val Glu

50 55 60

Met Leu Phe Gln Asn Leu Ser Leu Ile Lys Lys Tyr Ile Asp Arg Gln

65 70 75 80

Lys Glu Lys Cys Gly Glu Glu Arg Arg Arg Thr Arg Gln Phe Leu Asp

85 90 95

Tyr Leu Gln Glu Phe Leu Gly Val Met Ser Thr Glu Trp Ala Met Glu

100 105 110

Gly Leu Glu Pro Lys Ser Thr Pro Pro Gly Ser Ser Gly Gly Ala Pro

115 120 125

Gly Gly Cys Gly

130

<210> 24

<211> 24

<212> PRT

<213>secuencia artificial

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<223>péptido de Influenza M2

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Ser Leu Leu Thr Glu Val Glu Thr Pro Ile Arg Asn Glu Trp Gly Cys

1 5 10 15

Arg Cys Asn Asp Ser Ser Asp Gly

20

<210> 25

<211> 9

<212> PRT

<213>secuencia artificial

<220>

<223> Ab1-6-GGC

<400> 25

Asp Ala Gly Phe Arg His Gly Gly Cys

1 5

<210> 26

<211> 13

<212> PRT

<213>secuencia artificial

<220>

<223> HA 307-319

<400> 26

Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr

1 5 10

<210> 27

<211> 20

<212> PRT

<213>secuencia artificial

<220>

<223> HBVnc 50-69

<400> 27

Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu

1 5 10 15

Met Thr Leu Ala

20

<210> 28

<211> 21

<212> PRT

<213>secuencia artificial

<220>

<223> CS 378-398

<400> 28

Asp Ile Glu Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser Val Phe

1 5 10 15

Asn Val Val Asn Ser

20

<210> 29

<211> 16

<212> PRT

<213> secuencia artificial

<220>

<223> MT 17-31

<400> 29

Tyr Ser Gly Pro Leu Lys Ala Glu Ile Ala Gln Arg Leu Glu Asp Val

1 5 10 15

<210> 30

<211> 21

<212> PRT

<213>secuencia artificial

<220>

<223> tt 947-967

<400> 30

Phe Asn Asn Phe Thr Val Ser Phe Trp Leu Arg Val Pro Lys Val Ser

1 5 10 15

Ala Ser His Leu Glu

20

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<212> DNA

<213>secuencia artificial

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<223> CpG palindrómico

<400> 31

gacgatcgtc

10

<210> 32

<211> 8

<212> PRT

<213>secuencia artificial

<220>

<223>péptido de alfa sinucleína

<400> 32

Met Asp Val Phe Met Lys Gly Leu

1 5

<210> 33

<211> 7

<212> PRT

<213>secuencia artificial

<220>

<223>péptido de alfa sinucleína

<400> 33

Lys Asn Glu Glu Gly Ala Pro

1 5

<210> 34

<211> 10

<212> PRT

<213>secuencia artificial

<220>

<223>péptido de alfa sinucleína

<400> 34

Glu Gly Tyr Gln Asp Tyr Glu Pro Glu Ala

1 5 10

<210> 35

<211> 11

<212> PRT

<213>secuencia artificial

<220>

<223>vinculador de etiqueta Plus His

<400> 35

Leu Glu His His His His His His Gly Gly Cys

1 5 10

<210> 36

<211> 30

<212> DNA

<213>secuencia artificial

<220>

<223> CpG oligonucleotide

<400> 36

gggggggggg gacgatcgtc gggggggggg 30

<210> 37

<211> 70

<212> PRT

<213> Felis domesticus

<400> 37

Glu Ile Cys Pro Ala Val Lys Arg Asp Val Asp Leu Phe Leu Thr Gly

1 5 10 15

Thr Pro Asp Glu Tyr Val Glu Gln Val Ala Gln Tyr Lys Ala Leu Pro

20 25 30

Val Val Leu Glu Asn Ala Arg Ile Leu Lys Asn Cys Val Asp Ala Lys

35 40 45

Met Thr Glu Glu Asp Lys Glu Asn Ala Leu Ser Leu Leu Asp Lys Ile

50 55 60

Tyr Thr Ser Pro Leu Cys

65 70

<210> 38

<211> 92

<212> PRT

<213> Felis domesticus

<400> 38

Val Lys Met Ala Glu Thr Cys Pro Ile Phe Tyr Asp Val Phe Phe Ala

1 5 10 15

Val Ala Asn Gly Asn Glu Leu Leu Leu Asp Leu Ser Leu Thr Lys Val
20 25 30

Asn Ala Thr Glu Pro Glu Arg Thr Ala Met Lys Lys Ile Gln Asp Cys
35 40 45

Tyr Val Glu Asn Gly Leu Ile Ser Arg Val Leu Asp Gly Leu Val Met
50 55 60

Thr Thr Ile Ser Ser Ser Lys Asp Cys Met Gly Glu Ala Val Gln Asn
65 70 75 80

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

<210> 39

<211> 90

<212> PRT

<213> Felis domesticus

<400> 39

Val Lys Met Ala Glu Thr Cys Pro Ile Phe Tyr Asp Val Phe Phe Ala

1 5 10 15

Val Ala Asn Gly Asn Glu Leu Leu Leu Asp Leu Ser Leu Thr Lys Val

20 25 30

Asn Ala Thr Glu Pro Glu Arg Thr Ala Met Lys Lys Ile Gln Asp Cys

35 40 45

Tyr Val Glu Asn Gly Leu Ile Ser Arg Val Leu Asp Gly Leu Val Met

50 55 60

Ile Ala Ile Asn Glu Tyr Cys Met Gly Glu Ala Val Gln Asn Thr Val

65 70 75 80

Glu Asp Leu Lys Leu Asn Thr Leu Gly Arg

85 90

<210> 40

<211> 78

<212> PRT

<213> Felis domesticus

<400> 40

Val Lys Met Ala Glu Thr Cys Pro Ile Phe Tyr Asp Val Phe Phe Ala

1 5 10 15

Val Ala Asn Gly Asn Glu Leu Leu Leu Asp Leu Ser Leu Thr Lys Val

20 25 30

Asn Ala Thr Glu Pro Glu Arg Thr Ala Met Lys Lys Ile Gln Asp Cys

35 40 45

Tyr Val Glu Asn Gly Leu Ile Ser Arg Val Leu Asp Gly Leu Val Met

50 55 60

Pro Ser Thr Asn Ile Ala Trp Val Lys Gln Phe Arg Thr Pro

65 70 75

<210> 41

<211> 115

<212> PRT

<213> Homo sapiens

<400> 41

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

1 5 10 15

Leu Leu Ser Thr His Arg Thr Leu Leu Ile Ala Asn Glu Thr Leu Arg

20 25 30

Ile Pro Val Pro Val His Lys Asn His Gln Leu Cys Thr Glu Glu Ile

35 40 45

Phe Gln Gly Ile Gly Thr Leu Glu Ser Gln Thr Val Gln Gly Gly Thr

50 55 60

Val Glu Arg Leu Phe Lys Asn Leu Ser Leu Ile Lys Lys Tyr Ile Asp

65 70 75 80

Gly Gln Lys Lys Lys Cys Gly Glu Glu Arg Arg Arg Val Asn Gln Phe

85 90 95

Leu Asp Tyr Leu Gln Glu Phe Leu Gly Val Met Asn Thr Glu Trp Ile

100 105 110

Ile Glu Ser

115

<210> 42

<211> 132

<212> PRT

<213> Homo sapiens

<400> 42

Gly Ile Thr Ile Pro Arg Asn Pro Gly Cys Pro Asn Ser Glu Asp Lys

1 5 10 15

Asn Phe Pro Arg Thr Val Met Val Asn Leu Asn Ile His Asn Arg Asn

20 25 30

Thr Asn Thr Asn Pro Lys Arg Ser Ser Asp Tyr Tyr Asn Arg Ser Thr

35 40 45

Ser Pro Trp Asn Leu His Arg Asn Glu Asp Pro Glu Arg Tyr Pro Ser

50 55 60

Val Ile Trp Glu Ala Lys Cys Arg His Leu Gly Cys Ile Asn Ala Asp

65 70 75 80

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

85

90

95

Leu Val Leu Arg Arg Glu Pro Pro His Cys Pro Asn Ser Phe Arg Leu

100

105

110

Glu Lys Ile Leu Val Ser Val Gly Cys Thr Cys Val Thr Pro Ile Val

115

120

125

His His Val Ala

130

<210> 43

<211> 141

<212> PRT

<213> Homo sapiens

<400> 43

Ser His Thr Leu Pro Val Arg Leu Leu Arg Pro Ser Asp Asp Val Gln

1

5

10

15

Lys Ile Val Glu Glu Leu Gln Ser Leu Ser Lys Met Leu Leu Lys Asp

20 25 30

Val Glu Glu Glu Lys Gly Val Leu Val Ser Gln Asn Tyr Thr Leu Pro

35 40 45

Cys Leu Ser Pro Asp Ala Gln Pro Pro Asn Asn Ile His Ser Pro Ala

50 55 60

Ile Arg Ala Tyr Leu Lys Thr Ile Arg Gln Leu Asp Asn Lys Ser Val

65 70 75 80

Ile Asp Glu Ile Ile Glu His Leu Asp Lys Leu Ile Phe Gln Asp Ala

85 90 95

Pro Glu Thr Asn Ile Ser Val Pro Thr Asp Thr His Glu Cys Lys Arg

100 105 110

Phe Ile Leu Thr Ile Ser Gln Gln Phe Ser Glu Cys Met Asp Leu Ala

115 120 125

Leu Lys Ser Leu Thr Ser Gly Ala Gln Gln Ala Thr Thr

130 135 140

<210> 44

<211> 136

<212> PRT

<213>secuencia artificial

<220>

<223> IL-31 canino

<400> 44

Ser His Met Ala Pro Thr His Gln Leu Pro Pro Ser Asp Val Arg Lys

1 5 10 15

Ile Ile Leu Glu Leu Gln Pro Leu Ser Arg Gly Leu Leu Glu Asp Tyr

20 25 30

Gln Lys Lys Glu Thr Gly Val Pro Glu Ser Asn Arg Thr Leu Leu Leu

35 40 45

Cys Leu Thr Ser Asp Ser Gln Pro Pro Arg Leu Asn Ser Ser Ala Ile

50 55 60

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

65 70 75 80

Asp Lys Ile Ile Glu Gln Leu Asp Lys Leu Lys Phe Gln His Glu Pro

85 90 95

Glu Thr Glu Ile Ser Val Pro Ala Asp Thr Phe Glu Cys Lys Ser Phe

100 105 110

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

115 120 125

Lys Ser Leu Asn Ser Gly Pro Gln

130 135

<210> 45

<211> 129

<212> PRT

<213> Homo sapiens

<400> 45

His Lys Cys Asp Ile Thr Leu Gln Glu Ile Ile Lys Thr Leu Asn Ser

1 5 10 15

Leu Thr Glu Gln Lys Thr Leu Cys Thr Glu Leu Thr Val Thr Asp Ile

20

25

30

Phe Ala Ala Ser Lys Asn Thr Thr Glu Lys Glu Thr Phe Cys Arg Ala

35

40

45

Ala Thr Val Leu Arg Gln Phe Tyr Ser His His Glu Lys Asp Thr Arg

50

55

60

Cys Leu Gly Ala Thr Ala Gln Gln Phe His Arg His Lys Gln Leu Ile

65

70

75

80

Arg Phe Leu Lys Arg Leu Asp Arg Asn Leu Trp Gly Leu Ala Gly Leu

85

90

95

Asn Ser Cys Pro Val Lys Glu Ala Asn Gln Ser Thr Leu Glu Asn Phe

100

105

110

Leu Glu Arg Leu Lys Thr Ile Met Arg Glu Lys Tyr Ser Lys Cys Ser

115

120

125

Ser

<210> 46

<211> 122

<212> PRT

<213> Homo sapiens

<400> 46

Leu Thr Cys Leu Gly Gly Phe Ala Ser Pro Gly Pro Val Pro Pro Ser

1 5 10 15

Thr Ala Leu Arg Glu Leu Ile Glu Glu Leu Val Asn Ile Thr Gln Asn

20 25 30

Gln Lys Ala Pro Leu Cys Asn Gly Ser Met Val Trp Ser Ile Asn Leu

35 40 45

Thr Ala Gly Met Tyr Cys Ala Ala Leu Glu Ser Leu Ile Asn Val Ser

50 55 60

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

65 70 75 80

Pro His Lys Val Ser Ala Gly Gln Phe Ser Ser Leu His Val Arg Asp

85

90

95

Thr Lys Ile Glu Val Ala Gln Phe Val Lys Asp Leu Leu Leu His Leu

100

105

110

Lys Lys Leu Phe Arg Glu Gly Arg Phe Asn

115

120

<210> 47

<211> 15

<212> PRT

<213>secuencia artificial

<220>

<223> 15 aa spacer

<400> 47

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

1

5

10

15

<210> 48

<211> 9

<212> PRT

<213>secuencia artificial

<220>

<223>vinculador de etiqueta Plus His

<400> 48

His His His His His His Gly Gly Cys

1 5

<210> 49

<211> 579

<212> DNA

<213>secuencia artificial

<220>

<223> F12H6GGC

<400> 49

catatggaaa ttgtccggc agttaaacgt gatgttgacc tgtttctgac cggtacaccg 60

gatgaatatg tggaacaggt tgcacagtat aaagcactgc cggttgttct ggaaaatgca 120

cgtattctga aaaattgcgt ggatgccaaa atgaccgaag aggataaaga aaatgccctg 180

agcgttctgg ataaaatcta taccagtccg ctgtgcggtg gtggtggtag tggtaggcgt 240

ggttcaggcg gtggcggtag cgttaaaatg gcagaaacct gtccgatctt ttatgatgtt 300

ttttttgccg tggccaatgg caatgaactg ctgctggatc tgagcctgac caaagttaat 360

gcaaccgaac cggaacgtac cgcaatgaaa aaaatccagg attgctatgt ggaaaacggt 420

ctgattagcc gtgttctgga tggctctggt atgaccacca ttagcagcag caaagattgt 480

atgggtgaag cagtcagaa taccgtgaa gatctgaaac tgaataccct gggtcgtcat 540

catcatcacc atcatggtgg ttgttaataa ctcgagtaa 579

<210> 50

<211> 187

<212> PRT

<213>secuencia artificial

<220>

<223> F12H6GGC

<400> 50

Met Glu Ile Cys Pro Ala Val Lys Arg Asp Val Asp Leu Phe Leu Thr

1 5 10 15

Gly Thr Pro Asp Glu Tyr Val Glu Gln Val Ala Gln Tyr Lys Ala Leu

20 25 30

Pro Val Val Leu Glu Asn Ala Arg Ile Leu Lys Asn Cys Val Asp Ala

35 40 45

Lys Met Thr Glu Glu Asp Lys Glu Asn Ala Leu Ser Val Leu Asp Lys

50 55 60

Ile Tyr Thr Ser Pro Leu Cys Gly Gly Gly Gly Ser Gly Gly Gly Gly

65 70 75 80

Ser Gly Gly Gly Gly Ser Val Lys Met Ala Glu Thr Cys Pro Ile Phe

85 90 95

Tyr Asp Val Phe Phe Ala Val Ala Asn Gly Asn Glu Leu Leu Leu Asp

100 105 110

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

115 120 125

Lys Lys Ile Gln Asp Cys Tyr Val Glu Asn Gly Leu Ile Ser Arg Val

130 135 140

145 150 155 160

165 170 175

180 185

<213>secuencia artificial

<223>Cebador Fel_BglF

tgaagatctg aaactgaata ccctgggt 28

<212> PRT

<213>secuencia artificial

<220>

<223> FELD1-15aa

<400> 52

Met Val Lys Met Ala Glu Thr Cys Pro Ile Phe Tyr Asp Val Phe Phe

1 5 10 15

Ala Val Ala Asn Gly Asn Glu Leu Leu Leu Asp Leu Ser Leu Thr Lys

20 25 30

Val Asn Ala Thr Glu Pro Glu Arg Thr Ala Met Lys Lys Ile Gln Asp

35 40 45

Cys Tyr Val Glu Asn Gly Leu Ile Ser Arg Val Leu Asp Gly Leu Val

50 55 60

Met Thr Thr Ile Ser Ser Ser Lys Asp Cys Met Gly Glu Ala Val Gln

65 70 75 80

Asn Thr Val Glu Asp Leu Lys Leu Asn Thr Leu Gly Arg Gly Gly Gly

85 90 95

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Ile Cys Pro

100 105 110

Ala Val Lys Arg Asp Val Asp Leu Phe Leu Thr Gly Thr Pro Asp Glu

115 120 125

Tyr Val Glu Gln Val Ala Gln Tyr Lys Ala Leu Pro Val Val Leu Glu

130 135 140

Asn Ala Arg Ile Leu Lys Asn Cys Val Asp Ala Lys Met Thr Glu Glu

145 150 155 160

Asp Lys Glu Asn Ala Leu Ser Leu Leu Asp Lys Ile Tyr Thr Ser Pro

165 170 175

Leu Cys Leu Glu

180

<210> 53

<211> 48

<212> DNA

<213>secuencia artificial

<220>

<223>Cebadorinverso Feld-dHR

<400> 53

tactcgagtt attacaacc accacgaccc aggtattca gtttcaga 48

<210> 54

<211> 371

<212> PRT

<213>secuencia artificial

<220>

<223>Proteína Madura Amb a1

<400> 54

Ala Glu Asp Leu Gln Glu Ile Leu Pro Val Asn Glu Thr Arg Arg Leu

1 5 10 15

Thr Thr Ser Gly Ala Tyr Asn Ile Ile Asp Gly Cys Trp Arg Gly Lys

20 25 30

Ala Asp Trp Ala Glu Asn Arg Lys Ala Leu Ala Asp Cys Ala Gln Gly

35 40 45

Phe Gly Lys Gly Thr Val Gly Gly Lys Asp Gly Asp Ile Tyr Thr Val

50 55 60

Thr Ser Asp Leu Asp Asp Asp Val Ala Asn Pro Lys Glu Gly Thr Leu

65 70 75 80

Arg Phe Gly Ala Ala Gln Asn Arg Pro Leu Trp Ile Ile Phe Glu Arg

85 90 95

Asp Met Val Ile Arg Leu Asp Lys Glu Met Val Val Asn Ser Asp Lys

100 105 110

Thr Ile Asp Gly Arg Gly Ala Lys Val Glu Ile Ile Asn Ala Gly Phe

115 120 125

Thr Leu Asn Gly Val Lys Asn Val Ile Ile His Asn Ile Asn Met His

130 135 140

Asp Val Lys Val Asn Pro Gly Gly Leu Ile Lys Ser Asn Asp Gly Pro

145 150 155 160

Ala Ala Pro Arg Ala Gly Ser Asp Gly Asp Ala Ile Ser Ile Ser Gly

165 170 175

Ser Ser Gln Ile Trp Ile Asp His Cys Ser Leu Ser Lys Ser Val Asp

180 185 190

Gly Leu Val Asp Ala Lys Leu Gly Thr Thr Arg Leu Thr Val Ser Asn

195 200 205

Ser Leu Phe Thr Gln His Gln Phe Val Leu Leu Phe Gly Ala Gly Asp

210 215 220

Glu Asn Ile Glu Asp Arg Gly Met Leu Ala Thr Val Ala Phe Asn Thr

225 230 235 240

Phe Thr Asp Asn Val Asp Gln Arg Met Pro Arg Cys Arg His Gly Phe

245 250 255

Phe Gln Val Val Asn Asn Asn Tyr Asp Lys Trp Gly Ser Tyr Ala Ile

260 265 270

Gly Gly Ser Ala Ser Pro Thr Ile Leu Ser Gln Gly Asn Arg Phe Cys

275

280

285

Ala Pro Asp Glu Arg Ser Lys Lys Asn Val Leu Gly Arg His Gly Glu

290

295

300

Ala Ala Ala Glu Ser Met Lys Trp Asn Trp Arg Thr Asn Lys Asp Val

305

310

315

320

Leu Glu Asn Gly Ala Ile Phe Val Ala Ser Gly Val Asp Pro Val Leu

325

330

335

Thr Pro Glu Gln Ser Ala Gly Met Ile Pro Ala Glu Pro Gly Glu Ser

340

345

350

Ala Leu Ser Leu Thr Ser Ser Ala Gly Val Leu Ser Cys Gln Pro Gly

355

360

365

Ala Pro Cys

370

<210> 55

<211> 514

<212> PRT

<213>secuencia artificial

<220>

<223> Cry J2

<400> 55

Met Ala Met Lys Phe Ile Ala Pro Met Ala Phe Val Ala Met Gln Leu

1 5 10 15

Ile Ile Met Ala Ala Ala Glu Asp Gln Ser Ala Gln Ile Met Leu Asp

20 25 30

Ser Asp Ile Glu Gln Tyr Leu Arg Ser Asn Arg Ser Leu Arg Lys Val

35 40 45

Glu His Ser Arg His Asp Ala Ile Asn Ile Phe Asn Val Glu Lys Tyr

50 55 60

Gly Ala Val Gly Asp Gly Lys His Asp Cys Thr Glu Ala Phe Ser Thr

65 70 75 80

Ala Trp Gln Ala Ala Cys Lys Lys Pro Ser Ala Met Leu Leu Val Pro

85 90 95

Gly Asn Lys Lys Phe Val Val Asn Asn Leu Phe Phe Asn Gly Pro Cys

100 105 110

Gln Pro His Phe Thr Phe Lys Val Asp Gly Ile Ile Ala Ala Tyr Gln

115 120 125

Asn Pro Ala Ser Trp Lys Asn Asn Arg Ile Trp Leu Gln Phe Ala Lys

130 135 140

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

145 150 155 160

Lys Gln Trp Trp Ala Gly Gln Cys Lys Trp Val Asn Gly Arg Glu Ile

165 170 175

Cys Asn Asp Arg Asp Arg Pro Thr Ala Ile Lys Phe Asp Phe Ser Thr

180 185 190

Gly Leu Ile Ile Gln Gly Leu Lys Leu Met Asn Ser Pro Glu Phe His

195 200 205

Leu Val Phe Gly Asn Cys Glu Gly Val Lys Ile Ile Gly Ile Ser Ile

210 215 220

Thr Ala Pro Arg Asp Ser Pro Asn Thr Asp Gly Ile Asp Ile Phe Ala

225 230 235 240

Ser Lys Asn Phe His Leu Gln Lys Asn Thr Ile Gly Thr Gly Asp Asp

245 250 255

Cys Val Ala Ile Gly Thr Gly Ser Ser Asn Ile Val Ile Glu Asp Leu

260 265 270

Ile Cys Gly Pro Gly His Gly Ile Ser Ile Gly Ser Leu Gly Arg Glu

275 280 285

Asn Ser Arg Ala Glu Val Ser Tyr Val His Val Asn Gly Ala Lys Phe

290 295 300

Ile Asp Thr Gln Asn Gly Leu Arg Ile Lys Thr Trp Gln Gly Gly Ser

305 310 315 320

Gly Met Ala Ser His Ile Ile Tyr Glu Asn Val Glu Met Ile Asn Ser

325 330 335

Glu Asn Pro Ile Leu Ile Asn Gln Phe Tyr Cys Thr Ser Ala Ser Ala

340 345 350

Cys Gln Asn Gln Arg Ser Ala Val Gln Ile Gln Asp Val Thr Tyr Lys

355 360 365

Asn Ile Arg Gly Thr Ser Ala Thr Ala Ala Ala Ile Gln Leu Lys Cys

370 375 380

Ser Asp Ser Met Pro Cys Lys Asn Ile Asn Leu Ser Asp Ile Ser Leu

385 390 395 400

Lys Leu Thr Ser Gly Lys Ile Ala Ser Cys Leu Asn Asp Asn Ala Asn

405 410 415

Gly Tyr Phe Ser Gly His Val Ile Pro Ala Cys Lys Asn Leu Ser Pro

420 425 430

Ser Ala Lys Arg Lys Glu Ser Lys Ser His Lys His Pro Lys Thr Val

435 440 445

Met Val Glu Asn Met Gly Ala Tyr Asp Lys Gly Asn Arg Thr Arg Ile

450 455 460

Leu Leu Gly Ser Arg Pro Pro Asn Cys Thr Asn Lys Cys His Gly Cys

465 470 475 480

Ser Pro Cys Lys Ala Lys Leu Val Ile Val His Arg Ile Met Pro Gln

485 490 495

Glu Tyr Tyr Pro Gln Arg Trp Met Cys Ser Cys His Gly Lys Ile Tyr

500 505 510

His Pro

<210> 56

<211> 181

<212> PRT

<213>secuencia artificial

<220>

<223> F12GGC

<400> 56

Met Glu Ile Cys Pro Ala Val Lys Arg Asp Val Asp Leu Phe Leu Thr

1 5 10 15

Gly Thr Pro Asp Glu Tyr Val Glu Gln Val Ala Gln Tyr Lys Ala Leu

20 25 30

Pro Val Val Leu Glu Asn Ala Arg Ile Leu Lys Asn Cys Val Asp Ala

35 40 45

Lys Met Thr Glu Glu Asp Lys Glu Asn Ala Leu Ser Val Leu Asp Lys

50 55 60

Ile Tyr Thr Ser Pro Leu Cys Gly Gly Gly Gly Ser Gly Gly Gly Gly

65 70 75 80

Ser Gly Gly Gly Gly Ser Val Lys Met Ala Glu Thr Cys Pro Ile Phe

85 90 95

Tyr Asp Val Phe Phe Ala Val Ala Asn Gly Asn Glu Leu Leu Leu Asp

100 105 110

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

115 120 125

Lys Lys Ile Gln Asp Cys Tyr Val Glu Asn Gly Leu Ile Ser Arg Val

130 135 140

Leu Asp Gly Leu Val Met Thr Thr Ile Ser Ser Ser Lys Asp Cys Met

145 150 155 160

Gly Glu Ala Val Gln Asn Thr Val Glu Asp Leu Lys Leu Asn Thr Leu

165 170 175

Gly Arg Gly Gly Cys

180

<210> 57

<211> 144

<212> PRT

<213> secuencia artificial

<220>

<223> Ara h6

<400> 57

Ala Lys Ser Thr Ile Leu Val Ala Leu Leu Ala Leu Val Leu Val Ala

1 5 10 15

His Ala Ser Ala Met Arg Arg Glu Arg Gly Arg Gln Gly Asp Ser Ser

20 25 30

Ser Cys Glu Arg Gln Val Asp Arg Val Asn Leu Lys Pro Cys Glu Gln

35 40 45

His Ile Met Gln Arg Ile Met Gly Glu Gln Glu Gln Tyr Asp Ser Tyr

50 55 60

Asp Ile Arg Ser Thr Arg Ser Ser Asp Gln Gln Gln Arg Cys Cys Asp

65 70 75 80

Glu Leu Asn Glu Met Glu Asn Thr Gln Arg Cys Met Cys Glu Ala Leu

85 90 95

Gln Gln Ile Met Glu Asn Gln Cys Asp Arg Leu Gln Asp Arg Gln Met

100

105

110

Val Gln Gln Phe Lys Arg Glu Leu Met Asn Leu Pro Gln Gln Cys Asn

115

120

125

Phe Arg Ala Pro Gln Arg Cys Asp Leu Asp Val Ser Gly Gly Arg Cys

130

135

140

<210> 58

<211> 4

<212> PRT

<213>secuencia artificial

<220>

<223>secuencia vinculadora

<400> 58

Gly Gly Cys Gly

1

<210> 59

<211> 178

<212> PRT

<213>secuencia artificial

<220>

<223> F12

<400> 59

Met Glu Ile Cys Pro Ala Val Lys Arg Asp Val Asp Leu Phe Leu Thr

1 5 10 15

Gly Thr Pro Asp Glu Tyr Val Glu Gln Val Ala Gln Tyr Lys Ala Leu

20 25 30

Pro Val Val Leu Glu Asn Ala Arg Ile Leu Lys Asn Cys Val Asp Ala

35 40 45

Lys Met Thr Glu Glu Asp Lys Glu Asn Ala Leu Ser Val Leu Asp Lys

50 55 60

Ile Tyr Thr Ser Pro Leu Cys Gly Gly Gly Gly Ser Gly Gly Gly Gly

65 70 75 80

Ser Gly Gly Gly Gly Ser Val Lys Met Ala Glu Thr Cys Pro Ile Phe

85 90 95

Tyr Asp Val Phe Phe Ala Val Ala Asn Gly Asn Glu Leu Leu Leu Asp

100 105 110

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

115 120 125

Lys Lys Ile Gln Asp Cys Tyr Val Glu Asn Gly Leu Ile Ser Arg Val

130 135 140

Leu Asp Gly Leu Val Met Thr Thr Ile Ser Ser Ser Lys Asp Cys Met

145 150 155 160

Gly Glu Ala Val Gln Asn Thr Val Glu Asp Leu Lys Leu Asn Thr Leu

165 170 175

Gly Arg

<210> 60

<211> 153

<212> PRT

<213> Homo sapiens

<400> 60

Ala Pro Val Arg Ser Leu Asn Cys Thr Leu Arg Asp Ser Gln Gln Lys

1 5 10 15

Ser Leu Val Met Ser Gly Pro Tyr Glu Leu Lys Ala Leu His Leu Gln

20 25 30

Gly Gln Asp Met Glu Gln Gln Val Val Phe Ser Met Ser Phe Val Gln

35 40 45

Gly Glu Glu Ser Asn Asp Lys Ile Pro Val Ala Leu Gly Leu Lys Glu

50 55 60

Lys Asn Leu Tyr Leu Ser Cys Val Leu Lys Asp Asp Lys Pro Thr Leu

65 70 75 80

Gln Leu Glu Ser Val Asp Pro Lys Asn Tyr Pro Lys Lys Lys Met Glu

85 90 95

Lys Arg Phe Val Phe Asn Lys Ile Glu Ile Asn Asn Lys Leu Glu Phe

100 105 110

Glu Ser Ala Gln Phe Pro Asn Trp Tyr Ile Ser Thr Ser Gln Ala Glu

115 120 125

Asn Met Pro Val Phe Leu Gly Gly Thr Lys Gly Gly Gln Asp Ile Thr

130 135 140

Asp Phe Thr Met Gln Phe Val Ser Ser

145 150

<210> 61

<211> 114

<212> PRT

<213>secuencia artificial

<220>

<223>proteína Madura cIL-5

<400> 61

Ala Val Glu Asn Pro Met Asn Arg Leu Val Ala Glu Thr Leu Thr Leu

1 5 10 15

Leu Ser Thr His Arg Thr Trp Leu Ile Gly Asp Gly Asn Leu Met Ile

20

25

30

Pro Thr Pro Glu Asn Lys Asn His Gln Leu Cys Ile Lys Glu Val Phe

35

40

45

Gln Gly Ile Asp Thr Leu Lys Asn Gln Thr Ala His Gly Glu Ala Val

50

55

60

Asp Lys Leu Phe Gln Asn Leu Ser Leu Ile Lys Glu His Ile Glu Arg

65

70

75

80

Gln Lys Lys Arg Cys Ala Gly Glu Arg Trp Arg Val Thr Lys Phe Leu

85

90

95

Asp Tyr Leu Gln Val Phe Leu Gly Val Ile Asn Thr Glu Trp Thr Pro

100

105

110

Glu Ser

<210> 62

<211> 109

<212> PRT

<213> secuencia artificial

<220>

<223>proteína Madura cIL-4

<400> 62

Gly His Asn Phe Asn Ile Thr Ile Lys Glu Ile Ile Lys Met Leu Asn

1 5 10 15

Ile Leu Thr Ala Arg Asn Asp Ser Cys Met Glu Leu Thr Val Lys Asp

20 25 30

Val Phe Thr Ala Pro Lys Asn Thr Ser Asp Lys Glu Ile Phe Cys Arg

35 40 45

Ala Ala Thr Val Leu Arg Gln Ile Tyr Thr His Asn Cys Ser Asn Arg

50 55 60

Tyr Leu Arg Gly Leu Tyr Arg Asn Leu Ser Ser Met Ala Asn Lys Thr

65 70 75 80

Cys Ser Met Asn Glu Ile Lys Lys Ser Thr Leu Lys Asp Phe Leu Glu

85

90

95

Arg Leu Lys Val Ile Met Gln Lys Lys Tyr Tyr Arg His

100

105

<210> 63

<211> 113

<212> PRT

<213>secuencia artificial

<220>

<223>proteína Madura cIL-13

<400> 63

Ser Pro Ser Pro Val Thr Pro Ser Pro Thr Leu Lys Glu Leu Ile Glu

1

5

10

15

Glu Leu Val Asn Ile Thr Gln Asn Gln Ala Ser Leu Cys Asn Gly Ser

20

25

30

Met Val Trp Ser Val Asn Leu Thr Ala Gly Met Tyr Cys Ala Ala Leu

35

40

45

Glu Ser Leu Ile Asn Val Ser Asp Cys Ser Ala Ile Gln Arg Thr Gln

50 55 60

Arg Met Leu Lys Ala Leu Cys Ser Gln Lys Pro Ala Ala Gly Gln Ile

65 70 75 80

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

85 90 95

Lys Asn Leu Leu Thr Tyr Val Arg Gly Val Tyr Arg His Gly Asn Phe

100 105 110

Arg

<210> 64

<211> 601

<212> PRT

<213>secuencia artificial

<220>

<223>proteína Madura Ara h1

<400> 64

Lys Ser Ser Pro Tyr Gln Lys Lys Thr Glu Asn Pro Cys Ala Gln Arg

1 5 10 15

Cys Leu Gln Ser Cys Gln Gln Glu Pro Asp Asp Leu Lys Gln Lys Ala

20 25 30

Cys Glu Ser Arg Cys Thr Lys Leu Glu Tyr Asp Pro Arg Cys Val Tyr

35 40 45

Asp Pro Arg Gly His Thr Gly Thr Thr Asn Gln Arg Ser Pro Pro Gly

50 55 60

Glu Arg Thr Arg Gly Arg Gln Pro Gly Asp Tyr Asp Asp Asp Arg Arg

65 70 75 80

Gln Pro Arg Arg Glu Glu Gly Gly Arg Trp Gly Pro Ala Gly Pro Arg

85 90 95

Glu Arg Glu Arg Glu Glu Asp Trp Arg Gln Pro Arg Glu Asp Trp Arg

100 105 110

Arg Pro Ser His Gln Gln Pro Arg Lys Ile Arg Pro Glu Gly Arg Glu

115 120 125

Gly Glu Gln Glu Trp Gly Thr Pro Gly Ser His Val Arg Glu Glu Thr

130 135 140

Ser Arg Asn Asn Pro Phe Tyr Phe Pro Ser Arg Arg Phe Ser Thr Arg

145 150 155 160

Tyr Gly Asn Gln Asn Gly Arg Ile Arg Val Leu Gln Arg Phe Asp Gln

165 170 175

Arg Ser Arg Gln Phe Gln Asn Leu Gln Asn His Arg Ile Val Gln Ile

180 185 190

Glu Ala Lys Pro Asn Thr Leu Val Leu Pro Lys His Ala Asp Ala Asp

195 200 205

Asn Ile Leu Val Ile Gln Gln Gly Gln Ala Thr Val Thr Val Ala Asn

210 215 220

Gly Asn Asn Arg Lys Ser Phe Asn Leu Asp Glu Gly His Ala Leu Arg

225 230 235 240

Ile Pro Ser Gly Phe Ile Ser Tyr Ile Leu Asn Arg His Asp Asn Gln

245 250 255

Asn Leu Arg Val Ala Lys Ile Ser Met Pro Val Asn Thr Pro Gly Gln

260 265 270

Phe Glu Asp Phe Phe Pro Ala Ser Ser Arg Asp Gln Ser Ser Tyr Leu

275 280 285

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

290 295 300

Asn Glu Ile Arg Arg Val Leu Leu Glu Glu Asn Ala Gly Gly Glu Gln

305 310 315 320

Glu Glu Arg Gly Gln Arg Arg Trp Ser Thr Arg Ser Ser Glu Asn Asn

325 330 335

Glu Gly Val Ile Val Lys Val Ser Lys Glu His Val Glu Glu Leu Thr

340

345

350

Lys His Ala Lys Ser Val Ser Lys Lys Gly Ser Glu Glu Glu Gly Asp

355

360

365

Ile Thr Asn Pro Ile Asn Leu Arg Glu Gly Glu Pro Asp Leu Ser Asn

370

375

380

Asn Phe Gly Lys Leu Phe Glu Val Lys Pro Asp Lys Lys Asn Pro Gln

385

390

395

400

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

405

410

415

Ala Leu Met Leu Pro His Phe Asn Ser Lys Ala Met Val Ile Val Val

420

425

430

Val Asn Lys Gly Thr Gly Asn Leu Glu Leu Val Ala Val Arg Lys Glu

435

440

445

Gln Gln Gln Arg Gly Arg Arg Glu Glu Glu Glu Asp Glu Asp Glu Glu

450 455 460

Glu Glu Gly Ser Asn Arg Glu Val Arg Arg Tyr Thr Ala Arg Leu Lys

465 470 475 480

Glu Gly Asp Val Phe Ile Met Pro Ala Ala His Pro Val Ala Ile Asn

485 490 495

Ala Ser Ser Glu Leu His Leu Leu Gly Phe Gly Ile Asn Ala Glu Asn

500 505 510

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

515 520 525

Ile Glu Lys Gln Ala Lys Asp Leu Ala Phe Pro Gly Ser Gly Glu Gln

530 535 540

Val Glu Lys Leu Ile Lys Asn Gln Lys Glu Ser His Phe Val Ser Ala

545 550 555 560

Arg Pro Gln Ser Gln Ser Gln Ser Pro Ser Ser Pro Glu Lys Glu Ser

565 570 575

Pro Glu Lys Glu Asp Gln Glu Glu Glu Asn Gln Gly Gly Lys Gly Pro
580 585 590

Leu Leu Ser Ile Leu Lys Ala Phe Asn
595 600

<210> 65

<211> 511

<212> PRT

<213> secuencia artificial

<220>

<223> Ara h3

<400> 65

Met Ala Lys Leu Leu Ala Leu Ser Leu Cys Phe Cys Val Leu Val Leu
1 5 10 15

Gly Ala Ser Ser Val Thr Phe Arg Gln Gly Gly Glu Glu Asn Glu Cys
20 25 30

Gln Phe Gln Arg Leu Asn Ala Gln Arg Pro Asp Asn Arg Ile Glu Ser

35 40 45

Glu Gly Gly Tyr Ile Glu Thr Trp Asn Pro Asn Asn Gln Glu Phe Gln

50 55 60

Cys Ala Gly Val Ala Leu Ser Arg Thr Val Leu Arg Arg Asn Ala Leu

65 70 75 80

Arg Arg Pro Phe Tyr Ser Asn Ala Pro Leu Glu Ile Tyr Val Gln Gln

85 90 95

Gly Ser Gly Tyr Phe Gly Leu Ile Phe Pro Gly Cys Pro Ser Thr Tyr

100 105 110

Glu Glu Pro Ala Gln Glu Gly Arg Arg Tyr Gln Ser Gln Lys Pro Ser

115 120 125

Arg Arg Phe Gln Val Gly Gln Asp Asp Pro Ser Gln Gln Gln Gln Asp

130 135 140

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

145 150 155 160

Pro Thr Gly Val Ala Phe Trp Met Tyr Asn Asp Glu Asp Thr Asp Val

165 170 175

Val Thr Val Thr Leu Ser Asp Thr Ser Ser Ile His Asn Gln Leu Asp

180 185 190

Gln Phe Pro Arg Arg Phe Tyr Leu Ala Gly Asn Gln Glu Gln Glu Phe

195 200 205

Leu Arg Tyr Gln Gln Gln Gln Gly Ser Arg Pro His Tyr Arg Gln Ile

210 215 220

Ser Pro Arg Val Arg Gly Asp Glu Gln Glu Asn Glu Gly Ser Asn Ile

225 230 235 240

Phe Ser Gly Phe Ala Gln Glu Phe Leu Gln His Ala Phe Gln Val Asp

245 250 255

Arg Gln Thr Val Glu Asn Leu Arg Gly Glu Asn Glu Arg Glu Glu Gln

260 265 270

Gly Ala Ile Val Thr Val Lys Gly Gly Leu Arg Ile Leu Ser Pro Asp

275 280 285

Glu Glu Asp Glu Ser Ser Arg Ser Pro Pro Asn Arg Arg Glu Glu Phe

290 295 300

Asp Glu Asp Arg Ser Arg Pro Gln Gln Arg Gly Lys Tyr Asp Glu Asn

305 310 315 320

Arg Arg Gly Tyr Lys Asn Gly Ile Glu Glu Thr Ile Cys Ser Ala Ser

325 330 335

Val Lys Lys Asn Leu Gly Arg Ser Ser Asn Pro Asp Ile Asn Pro Gln

340 345 350

Ala Gly Ser Leu Arg Ser Val Asn Glu Leu Asp Leu Pro Ile Leu Gly

355 360 365

Trp Leu Gly Leu Ser Ala Gln His Gly Thr Ile Tyr Arg Asn Ala Met

370 375 380

Phe Val Pro His Tyr Thr Leu Asn Ala His Thr Ile Val Val Ala Leu

385 390 395 400

Asn Gly Arg Ala His Val Gln Val Val Asp Ser Asn Gly Asn Arg Val

405 410 415

Tyr Asp Glu Glu Leu Gln Glu Gly His Val Leu Val Val Pro Gln Asn

420 425 430

Phe Ala Val Ala Ala Lys Ala Gln Ser Glu Asn Tyr Glu Tyr Leu Ala

435 440 445

Phe Lys Thr Asp Ser Arg Pro Ser Ile Ala Asn Gln Ala Gly Glu Asn

450 455 460

Ser Ile Ile Asp Asn Leu Pro Glu Glu Val Val Ala Asn Ser Tyr Arg

465 470 475 480

Leu Pro Arg Glu Gln Ala Arg Gln Leu Lys Asn Asn Asn Pro Phe Lys

485 490 495

Phe Phe Val Pro Pro Phe Asp His Gln Ser Met Arg Glu Val Ala

500

505

510