

LISTADO DE SECUENCIAS

<110> Icosavax, Inc.

<120> PROTEÍNA G ANTIRRÁBICA Y SUS USOS

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<160> 186

<170> PatentIn versión 3.5

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Glu Gly Met Asp Pro Leu Ala Val Leu Ala Glu Ser Arg Leu Leu Pro

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Leu Leu Thr Val Arg Gly Gly Glu Asp Leu Ala Gly Leu Ala Thr Val

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Leu Glu Leu Met Gly Val Gly Ala Leu Glu Ile Thr Leu Arg Thr Glu

35

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Lys Gly Leu Glu Ala Leu Lys Ala Leu Arg Lys Ser Gly Leu Leu Leu

50

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60

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

65

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75

80

Ala Gly Ala Ala Phe Leu Val Ser Pro Gly Leu Leu Glu Glu Val Ala

85

90

95

Ala Leu Ala Gln Ala Arg Gly Val Pro Tyr Leu Pro Gly Val Leu Thr

100

105

110

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

115 120 125

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

130 135 140

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

145 150 155 160

Glu Glu His Leu Pro His Tyr Ala Ala Leu Pro Asn Leu Leu Ala Val

165 170 175

Gly Gly Ser Trp Leu Leu Gln Gly Asp Leu Ala Ala Val Met Lys Lys

180 185 190

Val Lys Ala Ala Lys Ala Leu Leu Ser Pro Gln Ala Pro Gly

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Thr Lys Lys Val Gly Ile Val Asp Thr Thr Phe Ala Arg Val Asp Met

1 5 10 15

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

20 25 30

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

35 40 45

Lys Lys Leu Leu Glu Glu Glu Gly Cys Asp Ile Val Met Ala Leu Gly

50 55 60

Met Pro Gly Lys Ala Glu Lys Asp Lys Val Cys Ala His Glu Ala Ser

65 70 75 80

Leu Gly Leu Met Leu Ala Gln Leu Met Thr Asn Lys His Ile Ile Glu

85 90 95

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

100

105

110

Leu Ala Leu Val Arg Ala Ile Glu His Ala Ala Asn Val Tyr Tyr Leu

115

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125

Leu Phe Lys Pro Glu Tyr Leu Thr Arg Met Ala Gly Lys Gly Leu Arg

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Gln Gly Arg Glu Asp Ala Gly Pro Ala Arg Glu

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Thr Lys Lys Val Gly Ile Val Asp Thr Thr Phe Ala Arg Val Asp Met

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

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

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Lys Lys Leu Leu Glu Glu Glu Gly Cys Asp Ile Val Met Ala Leu Gly

50

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Met Pro Gly Lys Ala Glu Lys Asp Lys Val Cys Ala His Glu Ala Ser

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80

Leu Gly Leu Met Leu Ala Gln Leu Met Thr Asn Lys His Ile Ile Glu

85

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

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Leu Ala Ala Arg Arg Ala Ile Glu His Ala Leu Asn Val Tyr Tyr Leu

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Leu Phe Lys Pro Glu Tyr Leu Thr Arg Met Ala Gly Lys Gly Leu Arg

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Gln Gly Phe Glu Asp Ala Gly Pro Ala Arg Glu

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Ser Thr Ile Asn Asn Gln Leu Lys Ala Leu Lys Val Ile Pro Val Ile

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

20

25

30

Glu Asn Gly Leu Pro Ala Ala Glu Ile Thr Phe Arg Ser Ser Ala Ala

35

40

45

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

50 55 60

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

65 70 75 80

Ala Gly Ala Thr Phe Val Val Ser Pro Gly Phe Asn Pro Asn Thr Val

85 90 95

Arg Ala Cys Gln Ile Ile Gly Ile Asp Ile Val Pro Gly Val Asn Asn

100 105 110

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

115 120 125

Phe Phe Pro Ala Glu Ala Ser Gly Gly Ile Ser Met Val Lys Ser Leu

130 135 140

Val Gly Pro Tyr Gly Asp Ile Arg Leu Met Pro Thr Gly Gly Ile Thr

145 150 155 160

Pro Ser Asn Ile Asp Asn Tyr Leu Ala Ile Pro Gln Val Leu Ala Cys

165

170

175

Gly Gly Thr Trp Met Val Asp Lys Lys Leu Val Thr Asn Gly Glu Trp

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

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Pro Ile Phe Thr Leu Asn Thr Asn Ile Lys Ala Thr Asp Val Pro Ser

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

20

25

30

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

35

40

45

Phe Gly Gly Ser Thr Asn Pro Ala Ala Phe Gly Thr Leu Met Ser Ile

50

55

60

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

65

70

75

80

Asp His Leu Asn Ala Met Leu Gly Ile Pro Lys Asn Arg Met Tyr Ile

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His Phe Val Asn Leu Asn Gly Asp Asp Val Gly Trp Asn Gly Thr Thr

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Phe

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Asn Gln His Ser His Lys Asp Tyr Glu Thr Val Arg Ile Ala Val Val

1 5 10 15

Arg Ala Arg Trp His Ala Asp Ile Val Asp Ala Cys Val Glu Ala Phe

20 25 30

Glu Ile Ala Met Ala Ala Ile Gly Gly Asp Arg Phe Ala Val Asp Val

35 40 45

Phe Asp Val Pro Gly Ala Tyr Glu Ile Pro Leu His Ala Arg Thr Leu

50 55 60

Ala Glu Thr Gly Arg Tyr Gly Ala Val Leu Gly Thr Ala Phe Val Val

65 70 75 80

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

85

90

95

Gly Met Met Asn Val Gln Leu Ser Thr Gly Val Pro Val Leu Ser Ala

100

105

110

Val Leu Thr Pro His Arg Tyr Arg Asp Ser Ala Glu His His Arg Phe

115

120

125

Phe Ala Ala His Phe Ala Val Lys Gly Val Glu Ala Ala Arg Ala Cys

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Ile Glu Ile Leu Ala Ala Arg Glu Lys Ile Ala Ala

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Met Glu Glu Leu Phe Lys Lys His Lys Ile Val Ala Val Leu Arg Ala

1 5 10 15

Asn Ser Val Glu Glu Ala Ile Glu Lys Ala Val Ala Val Phe Ala Gly

20 25 30

Gly Val His Leu Ile Glu Ile Thr Phe Thr Val Pro Asp Ala Asp Thr

35 40 45

Val Ile Lys Ala Leu Ser Val Leu Lys Glu Lys Gly Ala Ile Ile Gly

50 55 60

Ala Gly Thr Val Thr Ser Val Glu Gln Cys Arg Lys Ala Val Glu Ser

65 70 75 80

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

85 90 95

Phe Cys Lys Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met Thr Pro

100 105 110

Thr Glu Leu Val Lys Ala Met Lys Leu Gly His Thr Ile Leu Lys Leu

115

120

125

Phe Pro Gly Glu Val Val Gly Pro Gln Phe Val Lys Ala Met Lys Gly

130

135

140

Pro Phe Pro Asn Val Lys Phe Val Pro Thr Gly Gly Val Asn Leu Asp

145

150

155

160

Asn Val Cys Glu Trp Phe Lys Ala Gly Val Leu Ala Val Gly Val Gly

165

170

175

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

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Ala Phe Val Glu Lys Ile Arg Gly Cys Thr Glu

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Asn Gln His Ser His Lys Asp Tyr Glu Thr Val Arg Ile Ala Val Val

1 5 10 15

Arg Ala Arg Trp His Ala Glu Ile Val Asp Ala Cys Val Ser Ala Phe

20 25 30

Glu Ala Ala Met Ala Asp Ile Gly Gly Asp Arg Phe Ala Val Asp Val

35 40 45

Phe Asp Val Pro Gly Ala Tyr Glu Ile Pro Leu His Ala Arg Thr Leu

50 55 60

Ala Glu Thr Gly Arg Tyr Gly Ala Val Leu Gly Thr Ala Phe Val Val

65 70 75 80

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

85 90 95

Gly Met Met Asn Val Gln Leu Ser Thr Gly Val Pro Val Leu Ser Ala

100

105

110

Val Leu Thr Pro His Arg Tyr Arg Asp Ser Asp Ala His Thr Leu Leu

115

120

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Phe Leu Ala Leu Phe Ala Val Lys Gly Met Glu Ala Ala Arg Ala Cys

130

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Val Glu Ile Leu Ala Ala Arg Glu Lys Ile Ala Ala

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Phe Thr Lys Ser Gly Asp Asp Gly Asn Thr Asn Val Ile Asn Lys Arg

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

20

25

30

Leu Asn Ser Phe Ile Gly Phe Ala Ile Ser Lys Ile Pro Trp Glu Asp

35

40

45

Met Lys Lys Asp Leu Glu Arg Val Gln Val Glu Leu Phe Glu Ile Gly

50

55

60

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

65

70

75

80

Val Leu Trp Leu Leu Ala Ala Thr Ala Ile Tyr Arg Ile Glu Ser Gly

85

90

95

Pro Val Lys Leu Phe Val Ile Pro Gly Gly Ser Glu Glu Ala Ser Val

100

105

110

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

115

120

125

Lys Tyr Thr Lys Glu Leu Pro Glu Ile Asn Arg Met Ile Ile Val Tyr

130

135

140

Leu Asn Arg Leu Ser Ser Leu Leu Phe Ala Met Ala Leu Val Ala Asn

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Lys Arg Arg Asn Gln Ser Glu Lys Ile Tyr Glu Ile Gly Lys Ser Trp

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Asn Gln His Ser His Lys Asp Tyr Glu Thr Val Arg Ile Ala Val Val

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Arg Ala Arg Trp His Ala Asp Ile Val Asp Gln Cys Val Arg Ala Phe

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25

30

Glu Glu Ala Met Ala Asp Ala Gly Gly Asp Arg Phe Ala Val Asp Val

35

40

45

Phe Asp Val Pro Gly Ala Tyr Glu Ile Pro Leu His Ala Arg Thr Leu

50

55

60

Ala Glu Thr Gly Arg Tyr Gly Ala Val Leu Gly Thr Ala Phe Val Val

65

70

75

80

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

85

90

95

Gly Met Met Asn Val Gln Leu Ser Thr Gly Val Pro Val Leu Ser Ala

100

105

110

Val Leu Thr Pro His Arg Tyr Arg Ser Ser Arg Glu His His Glu Phe

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Phe Arg Glu His Phe Met Val Lys Gly Val Glu Ala Ala Ala Ala Cys

130 135 140

Ile Thr Ile Leu Ala Ala Arg Glu Lys Ile Ala Ala

145 150 155

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Gly His Thr Lys Gly Pro Thr Pro Gln Gln His Asp Gly Ser Ala Leu

1 5 10 15

Arg Ile Gly Ile Val His Ala Arg Trp Asn Lys Thr Ile Ile Met Pro

20 25 30

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

35 40 45

Ser Asn Ile Val Val Gln Ser Val Pro Gly Ser Trp Glu Leu Pro Ile

50 55 60

Ala Val Gln Arg Leu Tyr Ser Ala Ser Gln Leu Gln Thr Pro Ser Ser

65 70 75 80

Gly Pro Ser Leu Ser Ala Gly Asp Leu Leu Gly Ser Ser Thr Thr Asp

85 90 95

Leu Thr Ala Leu Pro Thr Thr Thr Ala Ser Ser Thr Gly Pro Phe Asp

100 105 110

Ala Leu Ile Ala Ile Gly Val Leu Ile Lys Gly Glu Thr Met His Phe

115 120 125

Glu Tyr Ile Ala Asp Ser Val Ser His Gly Leu Met Arg Val Gln Leu

130 135 140

Asp Thr Gly Val Pro Val Ile Phe Gly Val Leu Thr Val Leu Thr Asp

145 150 155 160

Asp Gln Ala Lys Ala Arg Ala Gly Val Ile Glu Gly Ser His Asn His

165

170

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Gly Glu Asp Trp Gly Leu Ala Ala Val Glu Met Gly Val Arg Arg Arg

180

185

190

Asp Trp Ala Ala Gly Lys Thr Glu

195

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Tyr Glu Val Asp His Ala Asp Val Tyr Asp Leu Phe Tyr Leu Gly Arg

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

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25

30

Ser Arg Thr Pro Glu Ala Ser Ser Leu Leu Asp Val Ala Cys Gly Thr

35

40

45

Gly Thr His Leu Glu His Phe Thr Lys Glu Phe Gly Asp Thr Ala Gly

50

55

60

Leu Glu Leu Ser Glu Asp Met Leu Thr His Ala Arg Lys Arg Leu Pro

65

70

75

80

Asp Ala Thr Leu His Gln Gly Asp Met Arg Asp Phe Gln Leu Gly Arg

85

90

95

Lys Phe Ser Ala Val Val Ser Met Phe Ser Ser Val Gly Tyr Leu Lys

100

105

110

Thr Val Ala Glu Leu Gly Ala Ala Val Ala Ser Phe Ala Glu His Leu

115

120

125

Glu Pro Gly Gly Val Val Val Val Glu Pro Trp Trp Phe Pro Glu Thr

130

135

140

Phe Ala Asp Gly Trp Val Ser Ala Asp Val Val Arg Arg Asp Gly Arg

145 150 155 160

Thr Val Ala Arg Val Ser His Ser Val Arg Glu Gly Asn Ala Thr Arg

165 170 175

Met Glu Val His Phe Thr Val Ala Asp Pro Gly Lys Gly Val Arg His

180 185 190

Phe Ser Asp Val His Leu Ile Thr Leu Phe His Gln Arg Glu Tyr Glu

195 200 205

Ala Ala Phe Met Ala Ala Gly Leu Arg Val Glu Tyr Leu Glu Gly Gly

210 215 220

Pro Ser Gly Arg Gly Leu Phe Val Gly Val Pro Ala

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Gly Met Lys Glu Lys Phe Val Leu Ile Ile Thr His Gly Asp Phe Gly

1 5 10 15

Lys Gly Leu Leu Ser Gly Ala Glu Val Ile Ile Gly Lys Gln Glu Asn

20 25 30

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

35 40 45

Lys Glu Val Met Arg Ile Ile Ile Ala Lys Leu Ala Glu Asp Lys Glu

50 55 60

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

65 70 75 80

Leu Glu Met Met Lys Thr Phe Asp Val Lys Val Ile Thr Gly Ile Asn

85 90 95

Met Pro Met Leu Val Glu Leu Leu Thr Ser Ile Asn Val Tyr Asp Thr

100

105

110

Thr Glu Leu Leu Glu Asn Ile Ser Lys Ile Gly Lys Asp Gly Ile Lys

115

120

125

Val Ile Glu Lys Ser Ser Leu Lys Met

130

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Lys Tyr Asp Gly Ser Lys Leu Arg Ile Gly Ile Leu His Ala Arg Trp

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

20

25

30

Gln Glu Phe Gly Val Lys Ala Glu Asn Ile Ile Ile Glu Thr Val Pro

35

40

45

Gly Ser Phe Glu Leu Pro Tyr Gly Ser Lys Leu Phe Val Glu Lys Gln

50

55

60

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

65

70

75

80

Ile Lys Gly Ser Thr Met His Phe Glu Tyr Ile Cys Asp Ser Thr Thr

85

90

95

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

100

105

110

Gly Val Leu Thr Cys Leu Thr Asp Glu Gln Ala Glu Ala Arg Ala Gly

115

120

125

Leu Ile Glu Gly Lys Met His Asn His Gly Glu Asp Trp Gly Ala Ala

130 135 140

Ala Val Glu Met Ala Thr Lys Phe Asn

145 150

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

1 5 10 15

Leu Arg Ile Gly Ile Leu His Ala Arg Trp Asn Arg Lys Ile Ile Leu

20 25 30

Ala Leu Val Ala Gly Ala Val Leu Arg Leu Leu Glu Phe Gly Val Lys

35 40 45

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

50 55 60

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

65 70 75 80

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

85 90 95

His Phe Glu Tyr Ile Cys Asp Ser Thr Thr His Gln Leu Met Lys Leu

100 105 110

Asn Phe Glu Leu Gly Ile Pro Val Ile Phe Gly Val Leu Thr Cys Leu

115 120 125

Thr Asp Glu Gln Ala Glu Ala Arg Ala Gly Leu Ile Glu Gly Lys Met

130 135 140

His Asn His Gly Glu Asp Trp Gly Ala Ala Ala Val Glu Met Ala Thr

145 150 155 160

Lys Phe Asn

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<213> construcción sintética

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Gly Ala Asn Trp Tyr Leu Asp Asn Glu Ser Ser Arg Leu Ser Phe Thr

1 5 10 15

Ser Thr Lys Asn Ala Asp Ile Ala Glu Val His Arg Phe Leu Val Leu

20 25 30

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

35 40 45

Glu Ser Ile Ser Thr Gly Ile Pro Leu Arg Asp Met Leu Leu Arg Val

50 55 60

Leu Val Phe Gln Val Ser Lys Phe Pro Val Ala Gln Ile Asn Ala Gln

65 70 75 80

Leu Asp Met Arg Pro Ile Asn Asn Leu Ala Pro Gly Ala Gln Leu Glu

85 90 95

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

100 105 110

Asn Ala Glu Leu Leu Ala Thr Arg Leu Asp Glu Arg Arg Phe Gln Val

115 120 125

Val Thr Leu Glu Pro Leu Val Ile His Ala Gln Asp Phe Asp Met Val

130 135 140

Arg Ala Phe Asn Ala Leu Arg Leu Val Ala Gly Leu Ser Ala Val Ser

145 150 155 160

Leu Ser Val Pro Val Gly Ala Val Leu Ile Phe Thr Ala Arg

165 170

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Thr Asp Tyr Ile Arg Asp Gly Ser Ala Ile Lys Ala Leu Ser Phe Ala

1 5 10 15

Ile Ile Leu Ala Glu Ala Asp Leu Arg His Ile Pro Gln Asp Leu Gln

20 25 30

Arg Leu Ala Val Arg Val Ile His Ala Cys Gly Met Val Asp Val Ala

35 40 45

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

50 55 60

Leu Leu Ala Gly Ala Pro Ile Leu Cys Asp Ala Arg Met Val Ala Glu

65 70 75 80

Gly Ile Thr Arg Ser Arg Leu Pro Ala Asp Asn Arg Val Ile Tyr Thr

85

90

95

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

100

105

110

Arg Ser Ala Ala Ala Leu Asp Leu Trp Leu Pro His Ile Glu Gly Ser

115

120

125

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

130

135

140

Leu Leu Asp Ala Gly Ala Pro Lys Pro Ala Leu Ile Ile Gly Met Pro

145

150

155

160

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

165

170

175

Ser Arg Gly Val Pro Tyr Val Ile Val Arg Gly Arg Arg Gly Gly Ser

180

185

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

195

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<213> construcción sintética

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Ile Thr Val Phe Gly Leu Lys Ser Lys Leu Ala Pro Arg Arg Glu Lys

1

5

10

15

Leu Ala Glu Val Ile Tyr Ser Ser Leu His Leu Gly Leu Asp Ile Pro

20

25

30

Lys Gly Lys His Ala Ile Arg Phe Leu Cys Leu Glu Lys Glu Asp Phe

35

40

45

Tyr Tyr Pro Phe Asp Arg Ser Asp Asp Tyr Thr Val Ile Glu Ile Asn

50

55

60

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

65 70 75 80

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

85 90 95

Glu Ile Thr Ile Lys Glu Gln Pro Ala His Cys Trp Gly Phe Arg Gly

100 105 110

Arg Thr Gly Asp Ser Ala Arg Asp Leu Asp Tyr Asp Ile Tyr Val

115 120 125

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Gly Ser Asp Leu Gln Lys Leu Gln Arg Phe Ser Thr Cys Asp Ile Ser

1 5 10 15

Asp Gly Leu Leu Asn Val Tyr Asn Ile Pro Thr Gly Gly Tyr Phe Pro

20

25

30

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

35

40

45

Ala Tyr Thr Val Leu Phe Ala Pro Ile Asp Asp Pro Arg Pro Ala Val

50

55

60

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

65

70

75

80

Glu Pro His Leu Gln Ser Gln Phe His Pro Phe Ile Lys Ile Thr Gln

85

90

95

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

100

105

110

Asn Gly Thr Val Val Phe Gly Arg Ile Arg Asp Val Asp Glu His Arg

115 120 125

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

130 135 140

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

145 150 155 160

Thr Ser Asp Gly Val Thr Gln Thr Ile Cys Pro Gly Asp Tyr Ile Ala

165 170 175

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

180 185 190

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

195 200 205

Val Ser Glu Ala Ile Lys Asn Gly Leu Pro Ala Lys Ala Ala Gln Thr

210 215 220

Ala Arg Arg Met Val Leu Lys Asp Tyr Ile

225

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<213> construcción sintética

<400> 20

Ser Gly Met Arg Val Tyr Leu Gly Ala Asp His Ala Gly Tyr Glu Leu

1

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15

Lys Gln Ala Ile Ile Ala Phe Leu Lys Met Thr Gly His Glu Pro Ile

20

25

30

Asp Cys Gly Ala Leu Arg Tyr Asp Ala Asp Asp Asp Tyr Pro Ala Phe

35

40

45

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

50

55

60

Ile Val Leu Gly Gly Ser Gly Asn Gly Glu Gln Ile Ala Ala Asn Lys

65 70 75 80

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

85 90 95

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

100 105 110

Met His Thr Leu Glu Glu Ala Leu Arg Ile Val Lys Ala Phe Val Thr

115 120 125

Thr Pro Trp Ser Lys Ala Gln Arg His Gln Arg Arg Ile Asp Ile Leu

130 135 140

Ala Glu Tyr Glu Arg Thr His Glu Ala Pro Pro Val Pro Gly Ala Pro

145 150 155 160

Ala

<210> 21

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<213> construcción sintética

<400> 21

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

1 5 10 15

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

20 25 30

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

35 40 45

Leu Cys Ile Pro Gly His Ala Ala Ile Thr Glu Asp His Leu Leu Arg

50 55 60

Leu Ala Leu Trp Leu Val His Tyr Asn Gly Gln Leu Pro Pro Leu Glu

65 70 75 80

Glu Phe Ile Leu Pro Gly Gly Ala Arg Gly Ala Ala Leu Ala His Val

85

90

95

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

100

105

110

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

115

120

125

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

130

135

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Gly Ala Asp Val Leu Trp Asp Arg Thr Arg Ala His

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<210> 22

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<213> construcción sintética

<400> 22

Ile Leu Ser Ala Glu Gln Ser Phe Thr Leu Arg His Pro His Gly Gln

1 5 10 15

Ala Ala Ala Leu Ala Phe Val Arg Glu Pro Ala Ala Ala Leu Ala Gly

20 25 30

Val Gln Arg Leu Arg Gly Leu Asp Ser Asp Gly Glu Gln Val Trp Gly

35 40 45

Glu Leu Leu Val Arg Val Pro Leu Leu Gly Glu Val Asp Leu Pro Phe

50 55 60

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

65 70 75 80

Thr Leu Thr Gly Glu Arg Ala Trp Val Ala Val Ser Gly Gln Ala Thr

85 90 95

Ala Ala Glu Gly Gly Glu Met Ala Phe Ala Phe Gln Phe Gln Ala His

100 105 110

Leu Ala Thr Pro Glu Ala Glu Gly Glu Gly Gly Ala Ala Phe Glu Val

115

120

125

Met Val Gln Ala Ala Ala Gly Val Thr Leu Leu Leu Val Ala Met Ala

130

135

140

Leu Pro Gln Gly Leu Ala Ala Gly Leu Pro Pro Ala

145

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<210> 23

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<213> construcción sintética

<400> 23

Thr Lys Lys Val Gly Ile Val Asp Thr Thr Phe Ala Arg Val Asp Met

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5

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15

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

20

25

30

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

35

40

45

Lys Lys Leu Leu Glu Glu Glu Gly Cys Asp Ile Val Met Ala Leu Gly

50

55

60

Met Pro Gly Lys Lys Glu Lys Asp Lys Val Cys Ala His Glu Ala Ser

65

70

75

80

Leu Gly Leu Met Leu Ala Gln Leu Met Thr Asn Lys His Ile Ile Glu

85

90

95

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

100

105

110

Leu Ala Ala Arg Arg Ala Ile Glu His Ala Leu Asn Val Tyr Tyr Leu

115

120

125

Leu Phe Lys Pro Glu Tyr Leu Thr Arg Met Ala Gly Lys Gly Leu Arg

130 135 140

Gln Gly Phe Glu Asp Ala Gly Pro Ala Arg Glu

145 150 155

<210> 24

<211> 208

<212> PRT

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

1 5 10 15

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

20 25 30

Glu Asn Gly Leu Pro Ala Ala Glu Ile Thr Phe Arg Ser Ser Ala Ala

35 40 45

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

50 55 60

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

65 70 75 80

Ala Gly Ala Asp Phe Val Val Ser Pro Gly Phe Asn Pro Asn Thr Val

85 90 95

Arg Ala Cys Gln Ile Ile Gly Ile Asp Ile Val Pro Gly Val Asn Asn

100 105 110

Pro Ser Thr Val Glu Gln Ala Leu Glu Met Gly Leu Thr Thr Leu Lys

115 120 125

Phe Phe Pro Ala Glu Ala Ser Gly Gly Ile Ser Met Val Lys Ser Leu

130 135 140

Val Gly Pro Tyr Gly Asp Ile Arg Leu Met Pro Thr Gly Gly Ile Thr

145 150 155 160

Pro Asp Asn Ile Asp Asn Tyr Leu Ala Ile Pro Gln Val Leu Ala Cys

165

170

175

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

180

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

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Pro Ile Phe Thr Leu Asn Thr Asn Ile Lys Ala Asp Asp Val Pro Ser

1

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15

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

20

25

30

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

35

40

45

Phe Gly Gly Ser Thr Asn Pro Ala Ala Phe Gly Thr Leu Met Ser Ile

50

55

60

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

65

70

75

80

Asp His Leu Asn Ala Met Leu Gly Ile Pro Lys Asn Arg Met Tyr Ile

85

90

95

His Phe Val Asn Leu Asn Gly Asp Asp Val Gly Trp Asn Gly Thr Thr

100

105

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Phe

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<212> PRT

<213> construcción sintética

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Pro Ile Phe Thr Leu Asn Thr Asn Ile Lys Ala Asp Asp Val Pro Ser

1 5 10 15

Asp Phe Leu Ser Leu Thr Ser Arg Leu Val Gly Leu Ile Leu Ser Glu

20 25 30

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

35 40 45

Phe Gly Gly Ser Thr Asn Pro Ala Ala Phe Gly Thr Leu Met Ser Ile

50 55 60

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

65 70 75 80

Asp His Leu Asn Ala Met Leu Gly Ile Pro Lys Asn Arg Met Tyr Ile

85 90 95

His Phe Val Asp Leu Asp Gly Asp Asp Val Gly Trp Asn Gly Thr Thr

100

105

110

Phe

<210> 27

<211> 156

<212> PRT

<213> construcción sintética

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Asn Gln His Ser His Lys Asp His Glu Thr Val Arg Ile Ala Val Val

1

5

10

15

Arg Ala Arg Trp His Ala Asp Ile Val Asp Ala Cys Val Glu Ala Phe

20

25

30

Glu Ile Ala Met Ala Ala Ile Gly Gly Asp Arg Phe Ala Val Asp Val

35

40

45

Phe Asp Val Pro Gly Ala Tyr Glu Ile Pro Leu His Ala Arg Thr Leu

50

55

60

Ala Glu Thr Gly Arg Tyr Gly Ala Val Leu Gly Thr Ala Phe Val Val

65

70

75

80

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

85

90

95

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

100

105

110

Val Leu Thr Pro His Arg Tyr Arg Asp Ser Asp Glu His His Arg Phe

115

120

125

Phe Ala Ala His Phe Ala Val Lys Gly Val Glu Ala Ala Arg Ala Cys

130

135

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Ile Glu Ile Leu Asn Ala Arg Glu Lys Ile Ala Ala

145

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155

<210> 28

<211> 156

<212> PRT

<213> construcción sintética

<400> 28

Asn Gln His Ser His Lys Asp His Glu Thr Val Arg Ile Ala Val Val

1 5 10 15

Arg Ala Arg Trp His Ala Asp Ile Val Asp Ala Cys Val Glu Ala Phe

20 25 30

Glu Ile Ala Met Ala Ala Ile Gly Gly Asp Arg Phe Ala Val Asp Val

35 40 45

Phe Asp Val Pro Gly Ala Tyr Glu Ile Pro Leu His Ala Arg Thr Leu

50 55 60

Ala Glu Thr Gly Arg Tyr Gly Ala Val Leu Gly Thr Ala Phe Val Val

65 70 75 80

Asp Gly Gly Ile Tyr Asp His Glu Phe Val Ala Ser Ala Val Ile Asp

85

90

95

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

100

105

110

Val Leu Thr Pro His Glu Tyr Glu Asp Ser Asp Glu Asp His Glu Phe

115

120

125

Phe Ala Ala His Phe Ala Val Lys Gly Val Glu Ala Ala Arg Ala Cys

130

135

140

Ile Glu Ile Leu Asn Ala Arg Glu Lys Ile Ala Ala

145

150

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<210> 29

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<212> PRT

<213> construcción sintética

<400> 29

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

1 5 10 15

Ser Val Glu Glu Ala Ile Glu Lys Ala Val Ala Val Phe Ala Gly Gly

20 25 30

Val His Leu Ile Glu Ile Thr Phe Thr Val Pro Asp Ala Asp Thr Val

35 40 45

Ile Lys Ala Leu Ser Val Leu Lys Glu Lys Gly Ala Ile Ile Gly Ala

50 55 60

Gly Thr Val Thr Ser Val Glu Gln Cys Arg Lys Ala Val Glu Ser Gly

65 70 75 80

Ala Glu Phe Ile Val Ser Pro His Leu Asp Glu Glu Ile Ser Gln Phe

85 90 95

Cys Lys Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met Thr Pro Thr

Glu Leu Val Lys Ala Met Lys Leu Gly His Asp Ile Leu Lys Leu Phe
115 120 125

Phe Pro Asn Val Lys Phe Val Pro Thr Gly Gly Val Asn Leu Asp Asn
145 150 155 160

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

180 185 190

Phe Val Glu Lys Ile Arg Gly Cys Thr Glu
195 200

<210> 30

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<400> 30

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

1 5 10 15

Ser Val Glu Glu Ala Ile Glu Lys Ala Val Ala Val Phe Ala Gly Gly

20 25 30

Val His Leu Ile Glu Ile Thr Phe Thr Val Pro Asp Ala Asp Thr Val

35 40 45

Ile Lys Ala Leu Ser Val Leu Lys Glu Lys Gly Ala Ile Ile Gly Ala

50 55 60

Gly Thr Val Thr Ser Val Glu Gln Cys Arg Lys Ala Val Glu Ser Gly

65 70 75 80

Ala Glu Phe Ile Val Ser Pro His Leu Asp Glu Glu Ile Ser Gln Phe

85

90

95

Cys Lys Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met Thr Pro Thr

100

105

110

Glu Leu Val Lys Ala Met Lys Leu Gly His Asp Ile Leu Lys Leu Phe

115

120

125

Pro Gly Glu Val Val Gly Pro Glu Phe Val Glu Ala Met Lys Gly Pro

130

135

140

Phe Pro Asn Val Lys Phe Val Pro Thr Gly Gly Val Asp Leu Asp Asp

145

150

155

160

Val Cys Glu Trp Phe Asp Ala Gly Val Leu Ala Val Gly Val Gly Asp

165

170

175

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

180

185

190

Phe Val Glu Glu Ile Arg Gly Cys Thr Glu

195

200

<210> 31

<211> 202

<212> PRT

<213> construcción sintética

<400> 31

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

1

5

10

15

Ser Val Glu Glu Ala Ile Glu Lys Ala Val Ala Val Phe Ala Gly Gly

20

25

30

Val His Leu Ile Glu Ile Thr Phe Thr Val Pro Asp Ala Asp Thr Val

35

40

45

Ile Lys Ala Leu Ser Val Leu Lys Glu Lys Gly Ala Ile Ile Gly Ala

50

55

60

Gly Thr Val Thr Ser Val Glu Gln Cys Arg Lys Ala Val Glu Ser Gly

65 70 75 80

Ala Glu Phe Ile Val Ser Pro His Leu Asp Glu Glu Ile Ser Gln Phe

85 90 95

Cys Lys Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met Thr Pro Thr

100 105 110

Glu Leu Val Lys Ala Met Lys Leu Gly His Asp Ile Leu Lys Leu Phe

115 120 125

Pro Gly Glu Val Val Gly Pro Gln Phe Val Lys Ala Met Lys Gly Pro

130 135 140

Phe Pro Asn Val Lys Phe Val Pro Thr Gly Gly Val Asn Leu Asp Asn

145 150 155 160

Val Cys Lys Trp Phe Lys Ala Gly Val Leu Ala Val Gly Val Gly Lys

165 170 175

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

180

185

190

Phe Val Lys Lys Ile Arg Gly Cys Thr Glu

195

200

<210> 32

<211> 156

<212> PRT

<213> construcción sintética

<400> 32

Asn Gln His Ser His Lys Asp His Glu Thr Val Arg Ile Ala Val Val

1

5

10

15

Arg Ala Arg Trp His Ala Glu Ile Val Asp Ala Cys Val Ser Ala Phe

20

25

30

Glu Ala Ala Met Arg Asp Ile Gly Gly Asp Arg Phe Ala Val Asp Val

35

40

45

Phe Asp Val Pro Gly Ala Tyr Glu Ile Pro Leu His Ala Arg Thr Leu

50

55

60

Ala Glu Thr Gly Arg Tyr Gly Ala Val Leu Gly Thr Ala Phe Val Val

65

70

75

80

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

85

90

95

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

100

105

110

Val Leu Thr Pro His Arg Tyr Arg Asp Ser Asp Ala His Thr Leu Leu

115

120

125

Phe Leu Ala Leu Phe Ala Val Lys Gly Met Glu Ala Ala Arg Ala Cys

130

135

140

Val Glu Ile Leu Ala Ala Arg Glu Lys Ile Ala Ala

145 150 155

<210> 33

<211> 156

<212> PRT

<213> construcción sintética

<400> 33

Asn Gln His Ser His Lys Asp His Glu Thr Val Arg Ile Ala Val Val

1 5 10 15

Arg Ala Arg Trp His Ala Glu Ile Val Asp Ala Cys Val Ser Ala Phe

20 25 30

Glu Ala Ala Met Arg Asp Ile Gly Gly Asp Arg Phe Ala Val Asp Val

35 40 45

Phe Asp Val Pro Gly Ala Tyr Glu Ile Pro Leu His Ala Arg Thr Leu

50 55 60

Ala Glu Thr Gly Arg Tyr Gly Ala Val Leu Gly Thr Ala Phe Val Val

65 70 75 80

Asp Gly Gly Ile Tyr Asp His Glu Phe Val Ala Ser Ala Val Ile Asp

85 90 95

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

100 105 110

Val Leu Thr Pro His Glu Tyr Glu Asp Ser Asp Ala Asp Thr Leu Leu

115 120 125

Phe Leu Ala Leu Phe Ala Val Lys Gly Met Glu Ala Ala Arg Ala Cys

130 135 140

Val Glu Ile Leu Ala Ala Arg Glu Lys Ile Ala Ala

145 150 155

<210> 34

<211> 156

<212> PRT

<213> construcción sintética

<400> 34

Asn Gln His Ser His Lys Asp His Glu Thr Val Arg Ile Ala Val Val

1 5 10 15

Arg Ala Arg Trp His Ala Glu Ile Val Asp Ala Cys Val Ser Ala Phe

20 25 30

Glu Ala Ala Met Arg Asp Ile Gly Gly Asp Arg Phe Ala Val Asp Val

35 40 45

Phe Asp Val Pro Gly Ala Tyr Glu Ile Pro Leu His Ala Arg Thr Leu

50 55 60

Ala Glu Thr Gly Arg Tyr Gly Ala Val Leu Gly Thr Ala Phe Val Val

65 70 75 80

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

85 90 95

Gly Met Met Asn Val Gln Leu Asn Thr Gly Val Pro Val Leu Ser Ala

100

105

110

Val Leu Thr Pro His Asn Tyr Asp Lys Ser Lys Ala His Thr Leu Leu

115

120

125

Phe Leu Ala Leu Phe Ala Val Lys Gly Met Glu Ala Ala Arg Ala Cys

130

135

140

Val Glu Ile Leu Ala Ala Arg Glu Lys Ile Ala Ala

145

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<210> 35

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<212> PRT

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<223> X representa A o K

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Thr Lys Lys Val Gly Ile Val Asp Thr Thr Phe Ala Arg Val Asp Met

1 5 10 15

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

20 25 30

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

35 40 45

Lys Lys Leu Leu Glu Glu Glu Gly Cys Asp Ile Val Met Ala Leu Gly

50 55 60

Met Pro Gly Lys Xaa Glu Lys Asp Lys Val Cys Ala His Glu Ala Ser

65 70 75 80

Leu Gly Leu Met Leu Ala Gln Leu Met Thr Asn Lys His Ile Ile Glu

85 90 95

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

100 105 110

Leu Ala Ala Arg Arg Ala Ile Glu His Ala Leu Asn Val Tyr Tyr Leu

115 120 125

Leu Phe Lys Pro Glu Tyr Leu Thr Arg Met Ala Gly Lys Gly Leu Arg

130 135 140

Gln Gly Phe Glu Asp Ala Gly Pro Ala Arg Glu

145 150 155

<210> 36

<211> 208

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<223> X representa S o D

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<223> X representa T o D

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<222> (9)..(9)

<223> X representa A o R

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<222> (84)..(84)

<223> X representa T o D

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<222> (118)..(118)

<223> X representa A o Q

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<222> (162)..(162)

<223> X representa S o D

<220>

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<222> (188)..(188)

<223> X representa T o R

<400> 36

Xaa Xaa Ile Asn Asn Gln Leu Lys Xaa Leu Lys Val Ile Pro Val Ile

1 5 10 15

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

20 25 30

Glu Asn Gly Leu Pro Ala Ala Glu Ile Thr Phe Arg Ser Ser Ala Ala

35 40 45

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

50 55 60

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

65 70 75 80

Ala Gly Ala Xaa Phe Val Val Ser Pro Gly Phe Asn Pro Asn Thr Val

85 90 95

Arg Ala Cys Gln Ile Ile Gly Ile Asp Ile Val Pro Gly Val Asn Asn

100

105

110

Pro Ser Thr Val Glu Xaa Ala Leu Glu Met Gly Leu Thr Thr Leu Lys

115

120

125

Phe Phe Pro Ala Glu Ala Ser Gly Gly Ile Ser Met Val Lys Ser Leu

130

135

140

Val Gly Pro Tyr Gly Asp Ile Arg Leu Met Pro Thr Gly Gly Ile Thr

145

150

155

160

Pro Xaa Asn Ile Asp Asn Tyr Leu Ala Ile Pro Gln Val Leu Ala Cys

165

170

175

Gly Gly Thr Trp Met Val Asp Lys Lys Leu Val Xaa Asn Gly Glu Trp

180

185

190

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

195

200

205

<210> 37
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<223> X representa T o D

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<223> X representa K o E

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<222> (70)..(70)
<223> X representa S o D

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<222> (73)..(73)
<223> X representa R o E

<220>

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<222> (100)..(100)

<223> X representa N o D

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<222> (102)..(102)

<223> X representa N o D

<400> 37

Pro Ile Phe Thr Leu Asn Thr Asn Ile Lys Ala Xaa Asp Val Pro Ser

1 5 10 15

Asp Phe Leu Ser Leu Thr Ser Arg Leu Val Gly Leu Ile Leu Ser Xaa

20 25 30

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

35 40 45

Phe Gly Gly Ser Thr Asn Pro Ala Ala Phe Gly Thr Leu Met Ser Ile

50 55 60

Gly Gly Ile Glu Pro Xaa Lys Asn Xaa Asp His Ser Ala Val Leu Phe

65 70 75 80

Asp His Leu Asn Ala Met Leu Gly Ile Pro Lys Asn Arg Met Tyr Ile

85 90 95

His Phe Val Xaa Leu Xaa Gly Asp Asp Val Gly Trp Asn Gly Thr Thr

100 105 110

Phe

<210> 38

<211> 156

<212> PRT

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<223> X representa Y o H

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<223> X representa N o D

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<222> (86)..(86)

<223> X representa R o D

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<222> (120)..(120)

<223> X representa R o E

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<223> X representa A o D

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<223> X representa R o E

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<222> (149)..(149)

<223> Xaa puede ser cualquier aminoácido natural

<400> 38

Asn Gln His Ser His Lys Asp Xaa Glu Thr Val Arg Ile Ala Val Val

1 5 10 15

Arg Ala Arg Trp His Ala Asp Ile Val Asp Ala Cys Val Glu Ala Phe

20 25 30

Glu Ile Ala Met Ala Ala Ile Gly Gly Asp Arg Phe Ala Val Asp Val

35 40 45

Phe Asp Val Pro Gly Ala Tyr Glu Ile Pro Leu His Ala Arg Thr Leu

50 55 60

Ala Glu Thr Gly Arg Tyr Gly Ala Val Leu Gly Thr Ala Phe Val Val

65 70 75 80

Xaa Gly Gly Ile Tyr Xaa His Glu Phe Val Ala Ser Ala Val Ile Asp

85 90 95

Gly Met Met Asn Val Gln Leu Xaa Thr Gly Val Pro Val Leu Ser Ala

100 105 110

Val Leu Thr Pro His Xaa Tyr Xaa Asp Ser Xaa Glu Xaa His Xaa Phe

115 120 125

Phe Ala Ala His Phe Ala Val Lys Gly Val Glu Ala Ala Arg Ala Cys

130

135

140

Ile Glu Ile Leu Xaa Ala Arg Glu Lys Ile Ala Ala

145

150

155

<210> 39

<211> 202

<212> PRT

<213> construcción sintética

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<222> (123)..(123)

<223> X representa T o D

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<222> (136)..(136)

<223> X representa Q o E

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<222> (139)..(139)

<223> X representa K o E

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<222> (157)..(157)

<223> X representa N o D

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<223> X representa N o D

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<222> (163)..(163)

<223> X representa E o K

<220>

<221> VARIANTE

<222> (166)..(166)

<223> X representa K o D

<220>

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<222> (176)..(176)

<223> X representa S, K o D

<220>

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<222> (180)..(180)

<223> X representa K o E

<220>

<221> misc_feature

<222> (182)..(182)

<223> Xaa puede ser cualquier aminoácido natural

<220>

<221> misc_feature

<222> (189)..(189)

<223> Xaa puede ser cualquier aminoácido natural

<220>

<221> misc_feature

<222> (192)..(192)

<223> Xaa puede ser cualquier aminoácido natural

<220>

<221> misc_feature

<222> (195)..(196)

<223> Xaa puede ser cualquier aminoácido natural

<400> 39

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

1 5 10 15

Ser Val Glu Glu Ala Ile Glu Lys Ala Val Ala Val Phe Ala Gly Gly

20 25 30

Val His Leu Ile Glu Ile Thr Phe Thr Val Pro Asp Ala Asp Thr Val

35 40 45

Ile Lys Ala Leu Ser Val Leu Lys Glu Lys Gly Ala Ile Ile Gly Ala

50 55 60

Gly Thr Val Thr Ser Val Glu Gln Cys Arg Lys Ala Val Glu Ser Gly

65 70 75 80

Ala Glu Phe Ile Val Ser Pro His Leu Asp Glu Glu Ile Ser Gln Phe

85 90 95

Cys Lys Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met Thr Pro Thr

100 105 110

Glu Leu Val Lys Ala Met Lys Leu Gly His Xaa Ile Leu Lys Leu Phe

115

120

125

Pro Gly Glu Val Val Gly Pro Xaa Phe Val Xaa Ala Met Lys Gly Pro

130

135

140

Phe Pro Asn Val Lys Phe Val Pro Thr Gly Gly Val Xaa Leu Asp Xaa

145

150

155

160

Val Cys Xaa Trp Phe Xaa Ala Gly Val Leu Ala Val Gly Val Gly Xaa

165

170

175

Ala Leu Val Xaa Gly Xaa Pro Asp Glu Val Arg Glu Xaa Ala Lys Xaa

180

185

190

Phe Val Xaa Xaa Ile Arg Gly Cys Thr Glu

195

200

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<223> X representa A o R

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<222> (81)..(81)

<223> X representa N o D

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<222> (86)..(86)

<223> X representa R o D

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<221> VARIANTE

<222> (96)..(96)

<223> X representa D o N

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<222> (104)..(104)

<223> X representa S, D o N

<220>

<221> VARIANTE

<222> (118)..(118)

<223> X representa R, E o N

<220>

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<222> (120)..(120)

<223> X representa R, D o E

<220>

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<222> (121)..(121)

<223> X representa D o K

<220>

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<222> (123)..(123)

<223> X representa D o K

<220>

<221> VARIANTE

<222> (125)..(125)

<223> X representa H o D

<400> 40

Asn Gln His Ser His Lys Asp Xaa Glu Thr Val Arg Ile Ala Val Val

1 5 10 15

Arg Ala Arg Trp His Ala Glu Ile Val Asp Ala Cys Val Ser Ala Phe

20 25 30

Glu Ala Ala Met Xaa Asp Ile Gly Gly Asp Arg Phe Ala Val Asp Val

35 40 45

Phe Asp Val Pro Gly Ala Tyr Glu Ile Pro Leu His Ala Arg Thr Leu

50 55 60

Ala Glu Thr Gly Arg Tyr Gly Ala Val Leu Gly Thr Ala Phe Val Val

65 70 75 80

Xaa Gly Gly Ile Tyr Xaa His Glu Phe Val Ala Ser Ala Val Ile Xaa

85

90

95

Gly Met Met Asn Val Gln Leu Xaa Thr Gly Val Pro Val Leu Ser Ala

100

105

110

Val Leu Thr Pro His Xaa Tyr Xaa Xaa Ser Xaa Ala Xaa Thr Leu Leu

115

120

125

Phe Leu Ala Leu Phe Ala Val Lys Gly Met Glu Ala Ala Arg Ala Cys

130

135

140

Val Glu Ile Leu Ala Ala Arg Glu Lys Ile Ala Ala

145

150

155

<210> 41

<211> 158

<212> PRT

<213> construcción sintética

<400> 41

Gly Glu Val Pro Ile Gly Asp Pro Lys Glu Leu Asn Gly Met Glu Ile

1 5 10 15

Ala Ala Val Tyr Leu Gln Pro Ile Glu Met Glu Pro Arg Gly Ile Asp

20 25 30

Leu Ala Ala Ser Leu Ala Asp Ile His Leu Glu Ala Asp Ile His Ala

35 40 45

Leu Lys Asn Asn Pro Asn Gly Phe Pro Glu Gly Phe Trp Met Pro Tyr

50 55 60

Leu Thr Ile Ala Tyr Ala Leu Ala Asn Ala Asp Thr Gly Ala Ile Lys

65 70 75 80

Thr Gly Thr Leu Met Pro Met Val Ala Asp Asp Gly Pro His Tyr Gly

85 90 95

Ala Asn Ile Ala Met Glu Lys Asp Lys Lys Gly Gly Phe Gly Val Gly

100 105 110

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

115

120

125

Gly Arg His Val Asp Glu Glu Thr Gly Val Gly Lys Trp Phe Glu Pro

130

135

140

Phe Val Val Thr Tyr Phe Phe Lys Tyr Thr Gly Thr Pro Lys

145

150

155

<210> 42

<211> 183

<212> PRT

<213> construcción sintética

<400> 42

Ser Gln Ala Ile Gly Ile Leu Glu Leu Thr Ser Ile Ala Lys Gly Met

1

5

10

15

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

20

25

30

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

35

40

45

Ile Gly Ala Ile Gln Gln Ala Ile Glu Thr Gly Thr Ser Gln Ala Gly

50

55

60

Glu Met Leu Val Asp Ser Leu Val Leu Ala Asn Ile His Pro Ser Val

65

70

75

80

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

85

90

95

Gly Ile Val Glu Thr Trp Ser Val Ala Ala Cys Ile Ser Ala Ala Asp

100

105

110

Leu Ala Val Lys Gly Ser Asn Val Thr Leu Val Arg Val His Met Ala

115

120

125

Phe Gly Ile Gly Gly Lys Cys Tyr Met Val Val Ala Gly Asp Val Leu

130

135

140

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

145 150 155 160

Gly Leu Leu Val Tyr Ala Ser Ile Ile Pro Arg Pro His Glu Ala Met

165 170 175

Trp Arg Gln Met Val Glu Gly

180

<210> 43

<211> 102

<212> PRT

<213> construcción sintética

<400> 43

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

1 5 10 15

Ile Ala His Ala Leu Val Glu Glu Arg Leu Ala Ala Cys Val Asn Ile

20 25 30

Val Pro Gly Leu Thr Ser Ile Tyr Arg Trp Gln Gly Ser Val Val Ser

35

40

45

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

50

55

60

Lys Leu Lys Glu Arg Val Lys Ala Leu His Pro Tyr Thr Val Pro Glu

65

70

75

80

Ile Val Ala Leu Pro Ile Ala Glu Gly Asn Arg Glu Tyr Leu Asp Trp

85

90

95

Leu Arg Glu Asn Thr Gly

100

<210> 44

<211> 121

<212> PRT

<213> construcción sintética

<400> 44

Val Arg Gly Ile Arg Gly Ala Ile Thr Val Glu Glu Asp Thr Pro Ala

1 5 10 15

Ala Ile Leu Ala Ala Thr Ile Glu Leu Leu Leu Lys Met Leu Glu Ala

20 25 30

Asn Gly Ile Gln Ser Tyr Glu Glu Leu Ala Ala Val Ile Phe Thr Val

35 40 45

Thr Glu Asp Leu Thr Ser Ala Phe Pro Ala Glu Ala Ala Arg Leu Ile

50 55 60

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

65 70 75 80

Gly Ser Leu Pro Arg Val Ile Arg Val Leu Ala Leu Trp Asn Thr Asp

85 90 95

Thr Pro Gln Asp Arg Val Arg His Val Tyr Leu Asn Glu Ala Val Arg

100 105 110

Leu Arg Pro Asp Leu Glu Ser Ala Gln

115 120

<210> 45

<211> 176

<212> PRT

<213> construcción sintética

<400> 45

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

1 5 10 15

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

20 25 30

Leu Tyr Leu Thr Ser Glu Trp Glu Pro Ile Tyr Gln Val Ile Pro Asp

35 40 45

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

50 55 60

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

65 70 75 80

Asp Val Thr Pro Glu Ala Thr Glu Ala Val Cys Asp Arg Met Met Pro

85 90 95

Gly Phe Gly Glu Leu Met Arg Ala Glu Ser Leu Lys Glu Val Pro Thr

100 105 110

Ala Ile Leu Ser Arg Gln Thr Ala Gly Leu Arg Gly Asp Ser Leu Ile

115 120 125

Val Asn Leu Pro Gly Asp Pro Ala Ser Ile Ser Asp Cys Leu Leu Ala

130 135 140

Val Phe Pro Ala Ile Pro Tyr Cys Ile Asp Leu Met Glu Gly Pro Tyr

145 150 155 160

Leu Glu Cys Asn Glu Ala Met Ile Lys Pro Phe Arg Pro Lys Ala Lys

165

170

175

<210> 46

<211> 121

<212> PRT

<213> construcción sintética

<400> 46

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

1

5

10

15

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

20

25

30

Asn Gly Ile Gln Ser Tyr Glu Glu Leu Ala Ala Val Ile Phe Thr Val

35

40

45

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

50

55

60

Gly Met His Arg Val Pro Leu Leu Ser Ala Arg Glu Val Pro Val Pro
65 70 75 80

Gly Ser Leu Pro Arg Val Ile Arg Val Leu Ala Leu Trp Asn Thr Asp
 85 90 95

Thr Pro Gln Asp Arg Val Arg His Val Tyr Leu Ser Glu Ala Val Arg
 100 105 110

Leu Arg Pro Asp Leu Glu Ser Ala Gln
 115 120

<210> 47

<211> 171

<212> PRT

<213> construcción sintética

<400> 47

Arg Ile Thr Thr Lys Val Gly Asp Lys Gly Ser Thr Arg Leu Phe Gly
1 5 10 15

Gly Glu Glu Val Trp Lys Asp Ser Pro Ile Ile Glu Ala Asn Gly Thr

20

25

30

Leu Asp Glu Leu Thr Ser Phe Ile Gly Glu Ala Lys His Tyr Val Asp

35

40

45

Glu Glu Met Lys Gly Ile Leu Glu Glu Ile Gln Asn Asp Ile Tyr Lys

50

55

60

Ile Met Gly Glu Ile Gly Ser Lys Gly Lys Ile Glu Gly Ile Ser Glu

65

70

75

80

Glu Arg Ile Ala Trp Leu Leu Lys Leu Ile Leu Arg Tyr Met Glu Met

85

90

95

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

100

105

110

Lys Leu Asp Val Cys Arg Thr Ile Ala Arg Arg Ala Leu Arg Lys Val

115

120

125

Leu Thr Val Thr Arg Glu Phe Gly Ile Gly Ala Glu Ala Ala Ala Tyr

130 135 140

Leu Leu Ala Leu Ser Asp Leu Leu Phe Leu Leu Ala Arg Val Ile Glu

145 150 155 160

Ile Glu Lys Asn Lys Leu Lys Glu Val Arg Ser

165 170

<210> 48

<211> 122

<212> PRT

<213> construcción sintética

<400> 48

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

1 5 10 15

Pro Gly Glu Leu Leu Glu Gln Ala Asn Lys Ala Leu Phe Ala Ser Gly

20 25 30

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

35

40

45

Tyr Arg Gln Gly Thr Ala Ala Val Glu Arg Ala Tyr Leu His Ala Cys

50

55

60

Leu Ser Ile Leu Asp Gly Arg Asp Ile Ala Thr Arg Thr Leu Leu Gly

65

70

75

80

Ala Ser Leu Cys Ala Val Leu Ala Glu Ala Val Ala Gly Gly Gly Glu

85

90

95

Glu Gly Val Gln Val Ser Val Glu Val Arg Glu Met Glu Arg Leu Ser

100

105

110

Tyr Ala Lys Arg Val Val Ala Arg Gln Arg

115

120

<210> 49

<211> 157

<212> PRT

<213> construcción sintética

<400> 49

Glu Ser Val Asn Thr Ser Phe Leu Ser Pro Ser Leu Val Thr Ile Arg

1 5 10 15

Asp Phe Asp Asn Gly Gln Phe Ala Val Leu Arg Ile Gly Arg Thr Gly

20 25 30

Phe Pro Ala Asp Lys Gly Asp Ile Asp Leu Cys Leu Asp Lys Met Ile

35 40 45

Gly Val Arg Ala Ala Gln Ile Phe Leu Gly Asp Asp Thr Glu Asp Gly

50 55 60

Phe Lys Gly Pro His Ile Arg Ile Arg Cys Val Asp Ile Asp Asp Lys

65 70 75 80

His Thr Tyr Asn Ala Met Val Tyr Val Asp Leu Ile Val Gly Thr Gly

85 90 95

Ala Ser Glu Val Glu Arg Glu Thr Ala Glu Glu Glu Ala Lys Leu Ala

100

105

110

Leu Arg Val Ala Leu Gln Val Asp Ile Ala Asp Glu His Ser Cys Val

115

120

125

Thr Gln Phe Glu Met Lys Leu Arg Glu Glu Leu Leu Ser Ser Asp Ser

130

135

140

Phe His Pro Asp Lys Asp Glu Tyr Tyr Lys Asp Phe Leu

145

150

155

<210> 50

<211> 112

<212> PRT

<213> construcción sintética

<400> 50

Pro Val Ile Gln Thr Phe Val Ser Thr Pro Leu Asp His His Lys Arg

1

5

10

15

Leu Leu Leu Ala Ile Ile Tyr Arg Ile Val Thr Arg Val Val Leu Gly

20

25

30

Lys Pro Glu Asp Leu Val Met Met Thr Phe His Asp Ser Thr Pro Met

35

40

45

His Phe Phe Gly Ser Thr Asp Pro Val Ala Cys Val Arg Val Glu Ala

50

55

60

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

65

70

75

80

Thr Ala Ala Ile Thr Ala Val Cys Gly Ile Val Ala Asp Arg Ile Phe

85

90

95

Val Leu Tyr Phe Ser Pro Leu His Cys Gly Trp Asn Gly Thr Asn Phe

100

105

110

<210> 51

<211> 102

<212> PRT

<213> construcción sintética

<400> 51

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

1 5 10 15

Ile Ala His Ala Leu Val Glu Glu Arg Leu Ala Ala Cys Val Asn Ile

20 25 30

Val Pro Gly Leu Thr Ser Ile Tyr Arg Glu Glu Gly Ser Val Val Ser

35 40 45

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

50 55 60

Lys Leu Lys Glu Arg Val Lys Glu Leu His Pro Tyr Glu Val Pro Glu

65 70 75 80

Ile Val Ala Leu Pro Ile Ala Glu Gly Asn Arg Glu Tyr Leu Asp Trp

85

90

95

Leu Arg Glu Asn Thr Gly

100

<210> 52

<211> 19

<212> PRT

<213> construcción sintética

<400> 52

Met Val Pro Gln Val Leu Leu Phe Val Pro Leu Leu Gly Phe Ser Leu

1

5

10

15

Cys Phe Gly

<210> 53

<211> 524

<212> PRT

<213> construcción sintética

<400> 53

Met Val Pro Gln Val Leu Leu Phe Val Pro Leu Leu Gly Phe Ser Leu

1 5 10 15

Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Pro Asp Glu Leu Gly Pro

20 25 30

Trp Ser Pro Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val

35 40 45

Val Glu Asp Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu

50 55 60

Leu Lys Val Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys

65 70 75 80

Thr Gly Val Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr

85 90 95

Val Thr Thr Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala

100 105 110

Cys Arg Ala Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu

115 120 125

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

130 135 140

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

145 150 155 160

Leu Asp Pro Tyr Asp Lys Ser Leu His Ser Arg Gly Phe Pro Gly Gly

165 170 175

Lys Cys Ser Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His

180 185 190

Asp Tyr Thr Ile Trp Met Pro Glu Asn Pro Gly Pro Arg Thr Pro Cys

195 200 205

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

210 215 220

Thr Cys Gly Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly

225 230 235 240

Ala Cys Arg Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp

245 250 255

Gly Thr Trp Val Ala Met Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro

260 265 270

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

275 280 285

His Leu Val Val Glu Glu Leu Val Lys Lys Arg Glu Glu Cys Leu Asp

290 295 300

Ala Leu Glu Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu

305 310 315 320

Ser His Leu Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile

325

330

335

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

340

345

350

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

355

360

365

Arg Cys His Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu

370

375

380

Gly Pro Asp Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu

385

390

395

400

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

405

410

415

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

420

425

430

Asp Phe Val Glu Val His Leu Pro Asp Val Tyr Lys Gln Ile Ser Gly

435

440

445

Val Asp Leu Gly Leu Pro Asn Trp Gly Lys Tyr Val Leu Met Thr Ala

450

455

460

Gly Ala Met Ile Gly Leu Val Leu Ile Phe Ser Leu Met Thr Trp Cys

465

470

475

480

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

485

490

495

Gly Arg Asn Val Ser Val Thr Ser Gln Ser Gly Lys Val Ile Pro Ser

500

505

510

Trp Glu Ser Tyr Arg Ser Gly Gly Glu Ile Arg Leu

515

520

<210> 54

<211> 440

<212> PRT

<213> construcción sintética

<400> 54

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Arg Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Gly Phe Pro Gly Gly Lys Cys Ser

145

150

155

160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Asn Pro Gly Pro Arg Thr Pro Cys Asp Ile Phe

180

185

190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Asn Lys Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg

210

215

220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Ala Met Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245

250

255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325 330 335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Lys Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser Thr Val Phe Lys Glu Gly Asp Glu Ala Glu Asp Phe Val

405 410 415

Glu Val His Leu Pro Asp Val Tyr Lys Gln Ile Ser Gly Val Asp Leu

420

425

430

Gly Leu Pro Asn Trp Gly Lys Tyr

435

440

<210> 55

<211> 398

<212> PRT

<213> construcción sintética

<220>

<221> VARIANTE

<222> (47)..(188)

<223> X representa cualquier aminoácido o está ausente

<400> 55

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

1

5

10

15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20

25

30

Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu Leu Xaa Xaa

35

40

45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa

50

55

60

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa

65

70

75

80

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa

85

90

95

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa

100

105

110

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa

115

120

125

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa

130

135

140

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa

145

150

155

160

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa

165

170

175

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Asp Ile Phe

180

185

190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Asn Lys Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg

210

215

220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Ala Met Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245

250

255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Lys Ser Ser Val Ile Pro Leu Met His Pro

385 390 395

<210> 56

<211> 46

<212> PRT

<213> construcción sintética

<400> 56

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu Leu

35 40 45

<210> 57

<211> 210

<212> PRT

<213> construcción sintética

<400> 57

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

1 5 10 15

Lys Thr Cys Gly Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys

20 25 30

Gly Ala Cys Arg Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met

35 40 45

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

50 55 60

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

65 70 75 80

Glu His Leu Val Val Glu Glu Leu Val Lys Lys Arg Glu Glu Cys Leu

85 90 95

Asp Ala Leu Glu Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg

100 105 110

Leu Ser His Leu Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr

115 120 125

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

130 135 140

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

145 150 155 160

Gly Arg Cys His Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile

165

170

175

Leu Gly Pro Asp Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu

180

185

190

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

195

200

205

His Pro

210

<210> 58

<211> 27

<212> PRT

<213> construcción sintética

<400> 58

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

1

5

10

15

Asp Gly Glu Trp Val Leu Leu Ser Thr Phe Leu

20

25

<210> 59

<211> 15

<212> PRT

<213> construcción sintética

<400> 59

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

1

5

10

15

<210> 60

<211> 8

<212> PRT

<213> construcción sintética

<400> 60

Gly Gly Ser Gly Gly Ser Gly Ser

1

5

<210> 61

<211> 8

<212> PRT

<213> construcción sintética

<400> 61

Gly Ser Gly Gly Ser Gly Ser Gly

1 5

<210> 62

<211> 7

<212> PRT

<213> construcción sintética

<400> 62

Gly Ser Gly Ser Gly Ser Gly

1 5

<210> 63

<211> 15

<212> PRT

<213> construcción sintética

<400> 63

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

1 5 10 15

<210> 64

<211> 19

<212> PRT

<213> construcción sintética

<400> 64

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

1 5 10 15

Leu Pro Asp

<210> 65

<211> 32

<212> PRT

<213> construcción sintética

<400> 65

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

1 5 10 15

Leu Pro Asp Val Tyr Lys Gln Ile Ser Gly Val Asp Leu Gly Leu Pro

20 25 30

<210> 66

<211> 37

<212> PRT

<213> construcción sintética

<400> 66

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

1 5 10 15

Leu Pro Asp Val Tyr Lys Gln Ile Ser Gly Val Asp Leu Gly Leu Pro

20 25 30

Asn Trp Gly Lys Tyr

35

<210> 67

<211> 203

<212> PRT

<213> construcción sintética

<400> 67

Met Glu Glu Leu Phe Lys Lys His Lys Ile Val Ala Val Leu Arg Ala

1 5 10 15

Asn Ser Val Glu Glu Ala Ile Glu Lys Ala Val Ala Val Phe Ala Gly

20 25 30

Gly Val His Leu Ile Glu Ile Thr Phe Thr Val Pro Asp Ala Asp Thr

35 40 45

Val Ile Lys Ala Leu Ser Val Leu Lys Glu Lys Gly Ala Ile Ile Gly

50 55 60

Ala Gly Thr Val Thr Ser Val Glu Gln Ala Arg Lys Ala Val Glu Ser

65 70 75 80

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

85

90

95

Phe Ala Lys Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met Thr Pro

100

105

110

Thr Glu Leu Val Lys Ala Met Lys Leu Gly His Thr Ile Leu Lys Leu

115

120

125

Phe Pro Gly Glu Val Val Gly Pro Gln Phe Val Lys Ala Met Lys Gly

130

135

140

Pro Phe Pro Asn Val Lys Phe Val Pro Thr Gly Gly Val Asn Leu Asp

145

150

155

160

Asn Val Ala Glu Trp Phe Lys Ala Gly Val Leu Ala Val Gly Val Gly

165

170

175

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

180

185

190

Ala Phe Val Glu Lys Ile Arg Gly Ala Thr Glu

195

200

<210> 68

<211> 138

<212> PRT

<213> construcción sintética

<400> 68

Asn Leu Ala Glu Lys Met Tyr Lys Ala Gly Asn Ala Met Tyr Arg Lys

1

5

10

15

Gly Gln Tyr Thr Ile Ala Ile Ile Ala Tyr Thr Leu Ala Leu Leu Lys

20

25

30

Asp Pro Asn Asn Ala Glu Ala Trp Tyr Asn Leu Gly Asn Ala Ala Tyr

35

40

45

Lys Lys Gly Glu Tyr Asp Glu Ala Ile Glu Ala Tyr Gln Lys Ala Leu

50

55

60

Glu Leu Asp Pro Asn Asn Ala Glu Ala Trp Tyr Asn Leu Gly Asn Ala

65 70 75 80

Tyr Tyr Lys Gln Gly Asp Tyr Asp Glu Ala Ile Glu Tyr Tyr Lys Lys

85 90 95

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

100 105 110

Glu Ala Glu Glu Lys Gln Gly Pro Arg Thr Ser Tyr Asn Thr His Glu

115 120 125

Thr Ile Cys Cys Asn Ser Thr Arg Cys Thr

130 135

<210> 69

<211> 119

<212> PRT

<213> construcción sintética

<400> 69

Glu Glu Ala Glu Leu Ala Tyr Leu Leu Gly Glu Leu Ala Tyr Lys Leu

1 5 10 15

Gly Glu Tyr Arg Ile Ala Ile Arg Ala Tyr Arg Ile Ala Leu Lys Arg

20 25 30

Asp Pro Asn Asn Ala Glu Ala Trp Tyr Asn Leu Gly Asn Ala Tyr Tyr

35 40 45

Lys Gln Gly Asp Tyr Arg Glu Ala Ile Arg Tyr Tyr Leu Arg Ala Leu

50 55 60

Lys Leu Asp Pro Glu Asn Ala Glu Ala Trp Tyr Asn Leu Gly Asn Ala

65 70 75 80

Leu Tyr Lys Gln Gly Lys Tyr Asp Leu Ala Ile Ile Ala Tyr Gln Ala

85 90 95

Ala Leu Glu Glu Asp Pro Asn Asn Ala Glu Ala Lys Gln Asn Leu Gly

100 105 110

Asn Ala Lys Gln Lys Gln Gly

115

<210> 70

<211> 119

<212> PRT

<213> construcción sintética

<400> 70

Asn Ser Ala Glu Ala Met Tyr Lys Met Gly Asn Ala Ala Tyr Lys Gln

1 5 10 15

Gly Asp Tyr Ile Leu Ala Ile Ile Ala Tyr Leu Leu Ala Leu Glu Lys

20 25 30

Asp Pro Asn Asn Ala Glu Ala Trp Tyr Asn Leu Gly Asn Ala Ala Tyr

35 40 45

Lys Gln Gly Asp Tyr Asp Glu Ala Ile Glu Tyr Tyr Gln Lys Ala Leu

50 55 60

Glu Leu Asp Pro Asn Asn Ala Glu Ala Trp Tyr Asn Leu Gly Asn Ala

65 70 75 80

Tyr Tyr Lys Gln Gly Asp Tyr Asp Glu Ala Ile Glu Tyr Tyr Glu Lys

85 90 95

Ala Leu Glu Leu Asp Pro Asn Asn Ala Glu Ala Leu Lys Asn Leu Leu

100 105 110

Glu Ala Ile Ala Glu Gln Asp

115

<210> 71

<211> 187

<212> PRT

<213> construcción sintética

<400> 71

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

1 5 10 15

Lys Ser Ile Ala Arg Ala Lys Ala Ala Glu Ala Leu Gly Lys Ile Gly

20

25

30

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

35

40

45

Ala Leu Val Arg Ala Ala Ala Ala Asp Ala Leu Gly Gln Ile Gly Asp

50

55

60

Glu Arg Ala Val Glu Pro Leu Ile Lys Ala Leu Lys Asp Glu Glu Gly

65

70

75

80

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

85

90

95

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

100

105

110

Val Arg Val Ala Ala Ala Val Ala Leu Gly Arg Ile Gly Asp Glu Lys

115 120 125

Ala Val Arg Pro Leu Ile Ile Val Leu Lys Asp Glu Glu Gly Glu Val

130 135 140

Arg Glu Ala Ala Ala Ile Ala Leu Gly Ser Ile Gly Gly Glu Arg Val

145 150 155 160

Arg Ala Ala Met Glu Lys Leu Ala Glu Arg Gly Thr Gly Phe Ala Arg

165 170 175

Lys Val Ala Val Asn Tyr Leu Glu Thr His Lys

180 185

<210> 72

<211> 119

<212> PRT

<213> construcción sintética

<400> 72

Glu Glu Ala Glu Leu Ala Tyr Leu Leu Gly Glu Leu Ala Tyr Lys Leu

1 5 10 15

Gly Glu Tyr Arg Ile Ala Ile Arg Ala Tyr Arg Ile Ala Leu Lys Arg

20 25 30

Asp Pro Asn Asn Ala Glu Ala Trp Tyr Asn Leu Gly Asn Ala Tyr Tyr

35 40 45

Lys Gln Gly Asp Tyr Asp Glu Ala Ile Glu Tyr Tyr Gln Lys Ala Leu

50 55 60

Glu Leu Asp Pro Asn Asn Ala Glu Ala Trp Tyr Asn Leu Gly Asn Ala

65 70 75 80

Tyr Tyr Lys Gln Gly Asp Tyr Asp Glu Ala Ile Glu Tyr Tyr Glu Lys

85 90 95

Ala Leu Glu Leu Asp Pro Glu Asn Leu Glu Ala Leu Gln Asn Leu Leu

100 105 110

Asn Ala Met Asp Lys Gln Gly

115

<210> 73

<211> 279

<212> PRT

<213> construcción sintética

<400> 73

Ile Glu Glu Val Val Ala Glu Met Ile Asp Ile Leu Ala Glu Ser Ser

1 5 10 15

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

20 25 30

Glu Lys Ala Val Ala Glu Ala Ile Glu Glu Ile Ala Arg Leu Ala Thr

35 40 45

Ala Ala Ile Gln Leu Ile Glu Ala Leu Ala Lys Asn Leu Ala Ser Glu

50 55 60

Glu Phe Met Ala Arg Ala Ile Ser Ala Ile Ala Glu Leu Ala Lys Lys

65 70 75 80

Ala Ile Glu Ala Ile Tyr Arg Leu Ala Asp Asn His Thr Thr Asp Thr

85 90 95

Phe Met Ala Arg Ala Ile Ala Ala Ile Ala Asn Leu Ala Val Thr Ala

100 105 110

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

115 120 125

Met Ala Arg Ala Ile Ser Ala Ile Ala Glu Leu Ala Lys Lys Ala Ile

130 135 140

Glu Ala Ile Tyr Arg Leu Ala Asp Asn His Thr Thr Asp Lys Phe Met

145 150 155 160

Ala Ala Ala Ile Glu Ala Ile Ala Leu Leu Ala Thr Leu Ala Ile Leu

165 170 175

Ala Ile Ala Leu Leu Ala Ser Asn His Thr Thr Glu Lys Phe Met Ala

180

185

190

Arg Ala Ile Met Ala Ile Ala Ile Leu Ala Ala Lys Ala Ile Glu Ala

195

200

205

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

210

215

220

Ala Ile Glu Ala Ile Glu Lys Ile Ala Arg Lys Ala Ile Lys Ala Ile

225

230

235

240

Glu Met Leu Ala Lys Asn Ile Thr Thr Glu Glu Tyr Lys Glu Lys Ala

245

250

255

Lys Lys Ile Ile Asp Ile Ile Arg Lys Leu Ala Lys Met Ala Ile Lys

260

265

270

Lys Leu Glu Asp Asn Arg Thr

275

<210> 74

<211> 153

<212> PRT

<213> construcción sintética

<400> 74

Lys Tyr Asp Gly Ser Lys Leu Arg Ile Gly Ile Leu His Ala Arg Trp

1 5 10 15

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

20 25 30

Gln Glu Phe Gly Val Lys Arg Glu Asn Ile Ile Ile Glu Thr Val Pro

35 40 45

Gly Ser Phe Glu Leu Pro Tyr Gly Ser Lys Leu Phe Val Glu Lys Gln

50 55 60

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

65 70 75 80

Ile Lys Gly Ser Thr Met His Phe Glu Tyr Ile Cys Asp Ser Thr Thr

85

90

95

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

100

105

110

Gly Val Leu Thr Cys Leu Thr Asp Glu Gln Ala Glu Ala Arg Ala Gly

115

120

125

Leu Ile Glu Gly Lys Met His Asn His Gly Glu Asp Trp Gly Ala Ala

130

135

140

Ala Val Glu Met Ala Thr Lys Phe Asn

145

150

<210> 75

<211> 119

<212> PRT

<213> construcción sintética

<400> 75

Glu Glu Ala Glu Leu Ala Tyr Leu Leu Gly Glu Leu Ala Tyr Lys Leu

1 5 10 15

Gly Glu Tyr Arg Ile Ala Ile Arg Ala Tyr Arg Ile Ala Leu Lys Arg

20 25 30

Asp Pro Asn Asn Ala Glu Ala Trp Tyr Asn Leu Gly Asn Ala Tyr Tyr

35 40 45

Lys Gln Gly Arg Tyr Arg Glu Ala Ile Glu Tyr Tyr Gln Lys Ala Leu

50 55 60

Glu Leu Asp Pro Asn Asn Ala Glu Ala Trp Tyr Asn Leu Gly Asn Ala

65 70 75 80

Tyr Tyr Glu Arg Gly Glu Tyr Glu Glu Ala Ile Glu Tyr Tyr Arg Lys

85 90 95

Ala Leu Arg Leu Asp Pro Asn Asn Ala Asp Ala Met Gln Asn Leu Leu

100 105 110

Asn Ala Lys Met Arg Glu Glu

115

<210> 76

<211> 454

<212> PRT

<213> construcción sintética

<400> 76

Met Val Pro Gln Val Leu Leu Phe Val Pro Leu Leu Gly Phe Ser Leu

1 5 10 15

Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Pro Asp Glu Leu Gly Pro

20 25 30

Trp Ser Pro Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val

35 40 45

Val Glu Asp Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu

50 55 60

Leu Lys Val Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys

65 70 75 80

Thr Gly Val Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr

85 90 95

Val Thr Thr Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala

100 105 110

Cys Arg Ala Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu

115 120 125

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

130 135 140

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

145 150 155 160

Leu Asp Pro Tyr Asp Lys Ser Leu His Ser Arg Gly Phe Pro Gly Gly

165

170

175

Lys Cys Ser Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His

180

185

190

Asp Tyr Thr Ile Trp Met Pro Glu Asn Pro Gly Pro Arg Thr Pro Cys

195

200

205

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

210

215

220

Thr Cys Gly Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly

225

230

235

240

Ala Cys Arg Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp

245

250

255

Gly Thr Trp Val Ala Met Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro

260

265

270

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

275

280

285

His Leu Val Val Glu Glu Leu Val Lys Lys Arg Glu Glu Cys Leu Asp

290

295

300

Ala Leu Glu Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu

305

310

315

320

Ser His Leu Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile

325

330

335

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

340

345

350

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

355

360

365

Arg Cys His Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu

370

375

380

Gly Pro Asp Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu

385 390 395 400

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

405 410 415

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

420 425 430

Asp Phe Val Glu Val His Leu Pro Asp Val Tyr Lys Gln Ile Ser Gly

435 440 445

Val Asp Leu Gly Leu Pro

450

<210> 77

<211> 434

<212> PRT

<213> construcción sintética

<400> 77

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

1 5 10 15

Ala Val Thr Phe Cys Phe Ala Ser Gly Lys Phe Pro Ile Tyr Thr Ile

20 25 30

Pro Asp Glu Leu Gly Pro Trp Ser Pro Ile Asp Ile His His Leu Ser

35 40 45

Cys Pro Asn Asn Leu Val Val Glu Asp Glu Gly Cys Thr Asn Leu Ser

50 55 60

Glu Phe Ser Tyr Met Glu Leu Lys Val Gly Tyr Ile Ser Ala Ile Lys

65 70 75 80

Val Asn Gly Phe Thr Cys Thr Gly Val Val Thr Ser Gly Ser Gly Arg

85 90 95

Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala Ala Tyr Asn Trp

100 105 110

Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu Ser Gly Ser Gly

115 120 125

Glu Ser Leu Ile Ile Ile Ser Pro Ser Val Thr Asp Leu Asp Pro Tyr

130 135 140

Asp Lys Ser Leu His Ser Arg Gly Phe Pro Gly Gly Lys Cys Ser Gly

145 150 155 160

Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr Ile

165 170 175

Trp Met Pro Glu Asn Pro Gly Pro Arg Thr Pro Cys Asp Ile Phe Thr

180 185 190

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

195 200 205

Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg Leu
210 215 220

Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp Val
225 230 235 240

Ala Met Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln Leu
245 250 255

Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val Val
260 265 270

Glu Glu Leu Val Lys Lys Arg Glu Glu Cys Leu Asp Ala Leu Glu Ser
275 280 285

Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu Arg
290 295 300

Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys Thr
305 310 315 320

Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn Glu

325

330

335

Ile Ile Pro Ser Lys Gly Cys Leu Lys Val Gly Gly Arg Cys His Pro

340

345

350

His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp Gly

355

360

365

His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His Met

370

375

380

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

385

390

395

400

Pro Ser Thr Val Phe Lys Glu Gly Asp Glu Ala Glu Asp Phe Val Glu

405

410

415

Val His Leu Pro Asp Val Tyr Lys Gln Ile Ser Gly Val Asp Leu Gly

420

425

430

Leu Pro

<210> 78

<211> 282

<212> PRT

<213> construcción sintética

<400> 78

Met Val Pro Gln Val Leu Leu Phe Val Pro Leu Leu Gly Phe Ser Leu

1 5 10 15

Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Pro Asp Glu Leu Gly Pro

20 25 30

Trp Ser Pro Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val

35 40 45

Val Glu Asp Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu

50 55 60

Leu Gly Ser Gly Ser Gly Ser Gly Cys Asp Ile Phe Thr Asn Ser Arg

65 70 75 80

Gly Lys Arg Ala Ser Lys Gly Asn Lys Thr Cys Gly Phe Val Asp Glu

85 90 95

Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg Leu Lys Leu Cys

100 105 110

Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp Val Ala Met Gln

115 120 125

Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln Leu Val Asn Leu

130 135 140

His Asp Phe Arg Ser Asp Glu Ile Glu Pro Leu Val Val Glu Glu Leu

145 150 155 160

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

165 170 175

Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu Arg Lys Leu Val

180 185 190

Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys Thr Leu Met Glu

195 200 205

Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn Glu Ile Ile Pro

210 215 220

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

225 230 235 240

Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp Gly His Val Leu

245 250 255

Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His Met Glu Leu Leu

260 265 270

Lys Ser Ser Val Ile Pro Leu Met His Pro

275

280

<210> 79

<211> 320

<212> PRT

<213> construcción sintética

<400> 79

Met Val Pro Gln Val Leu Leu Phe Val Pro Leu Leu Gly Phe Ser Leu

1

5

10

15

Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Pro Asp Glu Leu Gly Pro

20

25

30

Trp Ser Pro Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val

35

40

45

Val Glu Asp Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu

50

55

60

Leu Lys Val Gly Ser Ser Ile Gly Lys Cys Asp Ile Phe Thr Asn Ser

65 70 75 80

Arg Gly Lys Arg Ala Ser Lys Gly Asn Lys Thr Cys Gly Phe Val Asp

85 90 95

Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg Leu Lys Leu

100 105 110

Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp Val Ala Met

115 120 125

Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln Leu Val Asn

130 135 140

Leu His Asp Phe Arg Ser Asp Glu Ile Glu Pro Leu Val Val Glu Glu

145 150 155 160

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

165 170 175

Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu Arg Lys Leu

180

185

190

Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys Thr Leu Met

195

200

205

Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn Glu Ile Ile

210

215

220

Pro Ser Lys Gly Cys Leu Lys Val Gly Gly Arg Cys His Pro His Val

225

230

235

240

Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp Gly His Val

245

250

255

Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His Met Glu Leu

260

265

270

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

275

280

285

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

290 295 300

Leu Pro Asp Val Tyr Lys Gln Ile Ser Gly Val Asp Leu Gly Leu Pro

305 310 315 320

<210> 80

<211> 283

<212> PRT

<213> construcción sintética

<400> 80

Met Val Pro Gln Val Leu Leu Phe Val Pro Leu Leu Gly Phe Ser Leu

1 5 10 15

Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Pro Asp Glu Leu Gly Pro

20 25 30

Trp Ser Pro Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val

35 40 45

Val Glu Asp Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu

50

55

60

Leu Lys Val Gly Ile Pro Gly Ser Asn Cys Asp Ile Phe Thr Asn Ser

65

70

75

80

Arg Gly Lys Arg Ala Ser Lys Gly Asn Lys Thr Cys Gly Phe Val Asp

85

90

95

Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg Leu Lys Leu

100

105

110

Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp Val Ala Met

115

120

125

Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln Leu Val Asn

130

135

140

Leu His Asp Phe Arg Ser Asp Glu Ile Glu Pro Leu Val Val Glu Glu

145 150 155 160

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

165 170 175

Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu Arg Lys Leu

180 185 190

Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys Thr Leu Met

195 200 205

Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn Glu Ile Ile

210 215 220

Pro Ser Lys Gly Cys Leu Lys Val Gly Gly Arg Cys His Pro His Val

225 230 235 240

Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp Gly His Val

245 250 255

Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His Met Glu Leu

260

265

270

Leu Lys Ser Ser Val Ile Pro Leu Met His Pro

275

280

<210> 81

<211> 282

<212> PRT

<213> construcción sintética

<400> 81

Met Val Pro Gln Val Leu Leu Phe Val Pro Leu Leu Gly Phe Ser Leu

1

5

10

15

Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Pro Asp Glu Leu Gly Pro

20

25

30

Trp Ser Pro Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val

35

40

45

Val Glu Asp Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu

50

55

60

Leu Gly Ser Gly Ser Gly Ser Gly Cys Asp Ile Phe Thr Asn Ser Arg

65

70

75

80

Gly Lys Arg Ala Ser Lys Gly Asn Lys Thr Cys Gly Phe Val Asp Glu

85

90

95

Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg Leu Lys Leu Cys

100

105

110

Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp Val Ala Met Gln

115

120

125

Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln Leu Val Asn Leu

130

135

140

His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val Val Glu Glu Leu

145

150

155

160

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

165

170

175

Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu Arg Lys Leu Val

180

185

190

Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys Thr Leu Met Glu

195

200

205

Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn Glu Ile Ile Pro

210

215

220

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

225

230

235

240

Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp Gly His Val Leu

245

250

255

Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His Met Glu Leu Leu

260

265

270

Lys Ser Ser Val Ile Pro Leu Met His Pro

275

280

<210> 82

<211> 684

<212> PRT

<213> construcción sintética

<400> 82

Met Val Pro Gln Val Leu Leu Phe Val Pro Leu Leu Gly Phe Ser Leu

1

5

10

15

Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Pro Asp Glu Leu Gly Pro

20

25

30

Trp Ser Pro Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val

35

40

45

Val Glu Asp Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu

50

55

60

Leu Lys Val Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys

65 70 75 80

Thr Gly Val Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr

85 90 95

Val Thr Thr Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala

100 105 110

Cys Arg Ala Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu

115 120 125

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

130 135 140

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

145 150 155 160

Leu Asp Pro Tyr Asp Lys Ser Leu His Ser Arg Gly Phe Pro Gly Gly

165 170 175

Lys Cys Ser Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His

180 185 190

Asp Tyr Thr Ile Trp Met Pro Glu Asn Pro Gly Pro Arg Thr Pro Cys

195 200 205

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

210 215 220

Thr Cys Gly Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly

225 230 235 240

Ala Cys Arg Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp

245 250 255

Gly Thr Trp Val Ala Met Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro

260 265 270

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

275

280

285

His Leu Val Val Glu Glu Leu Val Lys Lys Arg Glu Glu Cys Leu Asp

290

295

300

Ala Leu Glu Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu

305

310

315

320

Ser His Leu Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile

325

330

335

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

340

345

350

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

355

360

365

Arg Cys His Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu

370

375

380

Gly Pro Asp Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu
385 390 395 400

Gln Gln His Met Glu Leu Leu Lys Ser Ser Val Ile Pro Leu Met His
 405 410 415

Pro Leu Ala Asp Pro Ser Thr Val Phe Lys Glu Gly Asp Glu Ala Glu
 420 425 430

Asp Phe Val Glu Val His Leu Pro Asp Val Tyr Lys Gln Ile Ser Gly
 435 440 445

Val Asp Leu Gly Leu Pro Gly Ser Gly Ser Gly Ser Gly Glu Lys Ala
 450 455 460

Ala Lys Ala Glu Glu Ala Ala Arg Lys Met Glu Glu Leu Phe Lys Lys
465 470 475 480

His Lys Ile Val Ala Val Leu Arg Ala Asn Ser Val Glu Glu Ala Ile
 485 490 495

Glu Lys Ala Val Ala Val Phe Ala Gly Gly Val His Leu Ile Glu Ile

500

505

510

Thr Phe Thr Val Pro Asp Ala Asp Thr Val Ile Lys Ala Leu Ser Val

515

520

525

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

530

535

540

Glu Gln Ala Arg Lys Ala Val Glu Ser Gly Ala Glu Phe Ile Val Ser

545

550

555

560

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

565

570

575

Phe Tyr Met Pro Gly Val Met Thr Pro Thr Glu Leu Val Lys Ala Met

580

585

590

Lys Leu Gly His Thr Ile Leu Lys Leu Phe Pro Gly Glu Val Val Gly

595 600 605

Pro Gln Phe Val Lys Ala Met Lys Gly Pro Phe Pro Asn Val Lys Phe

610 615 620

Val Pro Thr Gly Gly Val Asn Leu Asp Asn Val Ala Glu Trp Phe Lys

625 630 635 640

Ala Gly Val Leu Ala Val Gly Val Gly Ser Ala Leu Val Lys Gly Thr

645 650 655

Pro Asp Glu Val Arg Glu Lys Ala Lys Ala Phe Val Glu Lys Ile Arg

660 665 670

Gly Ala Thr Glu Leu Glu His His His His His His

675 680

<210> 83

<211> 664

<212> PRT

<213> construcción sintética

<400> 83

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

1 5 10 15

Ala Val Thr Phe Cys Phe Ala Ser Gly Lys Phe Pro Ile Tyr Thr Ile

20 25 30

Pro Asp Glu Leu Gly Pro Trp Ser Pro Ile Asp Ile His His Leu Ser

35 40 45

Cys Pro Asn Asn Leu Val Val Glu Asp Glu Gly Cys Thr Asn Leu Ser

50 55 60

Glu Phe Ser Tyr Met Glu Leu Lys Val Gly Tyr Ile Ser Ala Ile Lys

65 70 75 80

Val Asn Gly Phe Thr Cys Thr Gly Val Val Thr Ser Gly Ser Gly Arg

85 90 95

Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala Ala Tyr Asn Trp

100

105

110

Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu Ser Gly Ser Gly

115

120

125

Glu Ser Leu Ile Ile Ile Ser Pro Ser Val Thr Asp Leu Asp Pro Tyr

130

135

140

Asp Lys Ser Leu His Ser Arg Gly Phe Pro Gly Gly Lys Cys Ser Gly

145

150

155

160

Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr Ile

165

170

175

Trp Met Pro Glu Asn Pro Gly Pro Arg Thr Pro Cys Asp Ile Phe Thr

180

185

190

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

195

200

205

Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg Leu

210 215 220

Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp Val

225 230 235 240

Ala Met Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln Leu

245 250 255

Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val Val

260 265 270

Glu Glu Leu Val Lys Lys Arg Glu Glu Cys Leu Asp Ala Leu Glu Ser

275 280 285

Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu Arg

290 295 300

Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys Thr

305 310 315 320

Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn Glu

325

330

335

Ile Ile Pro Ser Lys Gly Cys Leu Lys Val Gly Gly Arg Cys His Pro

340

345

350

His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp Gly

355

360

365

His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His Met

370

375

380

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

385

390

395

400

Pro Ser Thr Val Phe Lys Glu Gly Asp Glu Ala Glu Asp Phe Val Glu

405

410

415

Val His Leu Pro Asp Val Tyr Lys Gln Ile Ser Gly Val Asp Leu Gly

420 425 430

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

435 440 445

Glu Ala Ala Arg Lys Met Glu Glu Leu Phe Lys Lys His Lys Ile Val

450 455 460

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

465 470 475 480

Ala Val Phe Ala Gly Gly Val His Leu Ile Glu Ile Thr Phe Thr Val

485 490 495

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

500 505 510

Gly Ala Ile Ile Gly Ala Gly Thr Val Thr Ser Val Glu Gln Ala Arg

515 520 525

Lys Ala Val Glu Ser Gly Ala Glu Phe Ile Val Ser Pro His Leu Asp

530

535

540

Glu Glu Ile Ser Gln Phe Ala Lys Glu Lys Gly Val Phe Tyr Met Pro

545

550

555

560

Gly Val Met Thr Pro Thr Glu Leu Val Lys Ala Met Lys Leu Gly His

565

570

575

Thr Ile Leu Lys Leu Phe Pro Gly Glu Val Val Gly Pro Gln Phe Val

580

585

590

Lys Ala Met Lys Gly Pro Phe Pro Asn Val Lys Phe Val Pro Thr Gly

595

600

605

Gly Val Asn Leu Asp Asn Val Ala Glu Trp Phe Lys Ala Gly Val Leu

610

615

620

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

625

630

635

640

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

645

650

655

Leu Glu His His His His His His

660

<210> 84

<211> 1995

<212> DNA

<213> construcción sintética

<400> 84

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gctttagac tgaaactgtg cggcgtgctg ggctgagac tgatggacgg cacctgggtc 720

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gccggcgtgc tggccgtggg agtgggcagc gccctggtga agggcacccc cgacgaggtg 1920

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caccaccatc attga

1995

<210> 85

<211> 512

<212> PRT

<213> construcción sintética

<400> 85

Met Val Pro Gln Val Leu Leu Phe Val Pro Leu Leu Gly Phe Ser Leu

1 5 10 15

Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Pro Asp Glu Leu Gly Pro

20 25 30

Trp Ser Pro Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val

35 40 45

Val Glu Asp Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu

50 55 60

Leu Gly Ser Gly Ser Gly Ser Gly Cys Asp Ile Phe Thr Asn Ser Arg

65 70 75 80

Gly Lys Arg Ala Ser Lys Gly Asn Lys Thr Cys Gly Phe Val Asp Glu

85 90 95

Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg Leu Lys Leu Cys

100 105 110

Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp Val Ala Met Gln

115 120 125

Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln Leu Val Asn Leu

130 135 140

His Asp Phe Arg Ser Asp Glu Ile Glu Pro Leu Val Val Glu Glu Leu

145 150 155 160

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

165 170 175

Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu Arg Lys Leu Val

180

185

190

Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys Thr Leu Met Glu

195

200

205

Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn Glu Ile Ile Pro

210

215

220

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

225

230

235

240

Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp Gly His Val Leu

245

250

255

Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His Met Glu Leu Leu

260

265

270

Lys Ser Ser Val Ile Pro Leu Met His Pro Gly Ser Gly Ser Gly Ser

275

280

285

Gly Glu Lys Ala Ala Lys Ala Glu Glu Ala Ala Arg Lys Met Glu Glu

290 295 300

Leu Phe Lys Lys His Lys Ile Val Ala Val Leu Arg Ala Asn Ser Val

305 310 315 320

Glu Glu Ala Ile Glu Lys Ala Val Ala Val Phe Ala Gly Gly Val His

325 330 335

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

340 345 350

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

355 360 365

Val Thr Ser Val Glu Gln Ala Arg Lys Ala Val Glu Ser Gly Ala Glu

370 375 380

Phe Ile Val Ser Pro His Leu Asp Glu Glu Ile Ser Gln Phe Ala Lys

385 390 395 400

Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met Thr Pro Thr Glu Leu

405

410

415

Val Lys Ala Met Lys Leu Gly His Thr Ile Leu Lys Leu Phe Pro Gly

420

425

430

Glu Val Val Gly Pro Gln Phe Val Lys Ala Met Lys Gly Pro Phe Pro

435

440

445

Asn Val Lys Phe Val Pro Thr Gly Gly Val Asn Leu Asp Asn Val Ala

450

455

460

Glu Trp Phe Lys Ala Gly Val Leu Ala Val Gly Val Gly Ser Ala Leu

465

470

475

480

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

485

490

495

Glu Lys Ile Arg Gly Ala Thr Glu Leu Glu His His His His His His

500

505

510

<210> 86

<211> 1539

<212> DNA

<213> construcción sintética

<400> 86

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ctgagctgcc ccaacaacct ggtggtcgag gacgagggct gtactaacct gagcgagttc 180

agctacatgg aactgggatc tggctctggc agcggatgcg acatcttcac caatagcaga 240

ggcaagcggg ccagcaaggg caacaagacc tgtggcttcg tggacgaaag aggcctgtac 300

aagtcactga aggggtgctg tagactgaaa ctgtgcggcg tgctgggcct gagactgatg 360

gacggcacct gggtcgcat gcaaacaatct gacgagacaa agtgggtgcc tcctgaccag 420

ctggtgaacc tgcacgactt cagaagcgac gagatcgaac ctctggctgt ggaagagctg 480

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tccttccgga gactgtctca cctgcggaag ctggtgcccg gattcggcaa ggcctacacc 600

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gagatcattc caagcaaggg ttgtctgaag gtgggcggca gatgccaccc tcacgtgaac 720

ggcgtctttt tcaacggcat catcctgggc cccgatggcc acgtgctgat ccctgagatg 780

cagagcagcc tgctgcagca gcacatggaa ctgctgaagt ccagcgtcat cccctgatg 840

caccccgga gcggtctgg atctggcgag aaagctgcca aggccgagga agccgctaga 900

aagatggaag agctgtttaa gaagcacaag atcgtggccg tgctgcgagc taattctgtc 960

gaggaagcca tcgagaaagc cgttgccgtg ttcgccgag gcgttcatt gatcgagatc 1020

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ggcgccatca tcggcgccgg cacagtcacc agcgtggaac aggccagaaa ggccgtggaa 1140

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gaaaaggggg tggtctacat gcctggcgtg atgacccta cagagctggt gaaagctatg 1260

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aaggctatga agggccatt ccctaactg aagttcgtgc ctaccggcgg cgtgaatctg 1380

gacaacgtgg ccgagtgggt caaggccggc gtgctggccg tgggagtggg cagcgccctg 1440

gtgaagggca ccccgacga ggtgcgggaa aaggccaaag ccttcgtgga aaagatcaga 1500

ggcgctacag agctcgagca ccaccaccac catcattga 1539

<210> 87

<211> 550

<212> PRT

<213> construcción sintética

<400> 87

Met Val Pro Gln Val Leu Leu Phe Val Pro Leu Leu Gly Phe Ser Leu

1 5 10 15

Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Pro Asp Glu Leu Gly Pro

20 25 30

Trp Ser Pro Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val

35 40 45

Val Glu Asp Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu

50

55

60

Leu Lys Val Gly Ser Ser Ile Gly Lys Cys Asp Ile Phe Thr Asn Ser

65

70

75

80

Arg Gly Lys Arg Ala Ser Lys Gly Asn Lys Thr Cys Gly Phe Val Asp

85

90

95

Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg Leu Lys Leu

100

105

110

Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp Val Ala Met

115

120

125

Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln Leu Val Asn

130

135

140

Leu His Asp Phe Arg Ser Asp Glu Ile Glu Pro Leu Val Val Glu Glu

145

150

155

160

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

165

170

175

Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu Arg Lys Leu

180

185

190

Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys Thr Leu Met

195

200

205

Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn Glu Ile Ile

210

215

220

Pro Ser Lys Gly Cys Leu Lys Val Gly Gly Arg Cys His Pro His Val

225

230

235

240

Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp Gly His Val

245

250

255

Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His Met Glu Leu

260

265

270

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

275

280

285

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

290

295

300

Leu Pro Asp Val Tyr Lys Gln Ile Ser Gly Val Asp Leu Gly Leu Pro

305

310

315

320

Gly Ser Gly Ser Gly Ser Gly Glu Lys Ala Ala Lys Ala Glu Glu Ala

325

330

335

Ala Arg Lys Met Glu Glu Leu Phe Lys Lys His Lys Ile Val Ala Val

340

345

350

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

355

360

365

Phe Ala Gly Gly Val His Leu Ile Glu Ile Thr Phe Thr Val Pro Asp

370 375 380

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

385 390 395 400

Ile Ile Gly Ala Gly Thr Val Thr Ser Val Glu Gln Ala Arg Lys Ala

405 410 415

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

420 425 430

Ile Ser Gln Phe Ala Lys Glu Lys Gly Val Phe Tyr Met Pro Gly Val

435 440 445

Met Thr Pro Thr Glu Leu Val Lys Ala Met Lys Leu Gly His Thr Ile

450 455 460

Leu Lys Leu Phe Pro Gly Glu Val Val Gly Pro Gln Phe Val Lys Ala

465 470 475 480

Met Lys Gly Pro Phe Pro Asn Val Lys Phe Val Pro Thr Gly Gly Val

485

490

495

Asn Leu Asp Asn Val Ala Glu Trp Phe Lys Ala Gly Val Leu Ala Val

500

505

510

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

515

520

525

Lys Ala Lys Ala Phe Val Glu Lys Ile Arg Gly Ala Thr Glu Leu Glu

530

535

540

His His His His His His

545

550

<210> 88

<211> 1653

<212> DNA

<213> construcción sintética

<400> 88

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ctgagctgcc ccaacaacct ggtggtcgag gacgagggct gtactaacct gagcgagttc	180
agctacatgg aactgaaggt gggcagctct atcggcaagt gcgacatctt caccaatagc	240
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acagagctcg agcaccacca ccaccatcat tga 1653

<210> 89

<211> 513

<212> PRT

<213> construcción sintética

<400> 89

Met Val Pro Gln Val Leu Leu Phe Val Pro Leu Leu Gly Phe Ser Leu

1 5 10 15

Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Pro Asp Glu Leu Gly Pro

20 25 30

Trp Ser Pro Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val

35 40 45

Val Glu Asp Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu

50 55 60

Leu Lys Val Gly Ile Pro Gly Ser Asn Cys Asp Ile Phe Thr Asn Ser

65 70 75 80

Arg Gly Lys Arg Ala Ser Lys Gly Asn Lys Thr Cys Gly Phe Val Asp

85

90

95

Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg Leu Lys Leu

100

105

110

Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp Val Ala Met

115

120

125

Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln Leu Val Asn

130

135

140

Leu His Asp Phe Arg Ser Asp Glu Ile Glu Pro Leu Val Val Glu Glu

145

150

155

160

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

165

170

175

Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu Arg Lys Leu

Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys Thr Leu Met
195 200 205

Pro Ser Lys Gly Cys Leu Lys Val Gly Gly Arg Cys His Pro His Val
225 230 235 240

Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His Met Glu Leu

260 265 270

Leu Lys Ser Ser Val Ile Pro Leu Met His Pro Gly Ser Gly Ser Gly

275 280 285

Ser Gly Glu Lys Ala Ala Lys Ala Glu Glu Ala Ala Arg Lys Met Glu

290 295 300

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

305 310 315 320

Val Glu Glu Ala Ile Glu Lys Ala Val Ala Val Phe Ala Gly Gly Val

325 330 335

His Leu Ile Glu Ile Thr Phe Thr Val Pro Asp Ala Asp Thr Val Ile

340 345 350

Lys Ala Leu Ser Val Leu Lys Glu Lys Gly Ala Ile Ile Gly Ala Gly

355 360 365

Thr Val Thr Ser Val Glu Gln Ala Arg Lys Ala Val Glu Ser Gly Ala

370 375 380

Glu Phe Ile Val Ser Pro His Leu Asp Glu Glu Ile Ser Gln Phe Ala

385 390 395 400

Lys Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met Thr Pro Thr Glu

405

410

415

Leu Val Lys Ala Met Lys Leu Gly His Thr Ile Leu Lys Leu Phe Pro

420

425

430

Gly Glu Val Val Gly Pro Gln Phe Val Lys Ala Met Lys Gly Pro Phe

435

440

445

Pro Asn Val Lys Phe Val Pro Thr Gly Gly Val Asn Leu Asp Asn Val

450

455

460

Ala Glu Trp Phe Lys Ala Gly Val Leu Ala Val Gly Val Gly Ser Ala

465

470

475

480

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

485

490

495

Val Glu Lys Ile Arg Gly Ala Thr Glu Leu Glu His His His His His

500

505

510

His

<210> 90

<211> 1542

<212> DNA

<213> construcción sintética

<400> 90

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ctgagctgcc ccaacaacct ggtggtcgag gacgagggt gtactaacct gagcgagttc 180

agctacatgg aactgaagggt gggcatcccc ggctctaact gcgacatctt caccaatagc 240

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tacaagtcac tgaagggcgc ttgtagactg aaactgtgcg gcgtgctggg cctgagactg 360

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accatcttca acaagacact gatggaagcc gatgctcact acaagagcgt tagaacctgg 660

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<210> 91

<211> 512

<212> PRT

<213> construcción sintética

<400> 91

Met Val Pro Gln Val Leu Leu Phe Val Pro Leu Leu Gly Phe Ser Leu

1 5 10 15

Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Pro Asp Glu Leu Gly Pro

20 25 30

Trp Ser Pro Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val

35 40 45

Val Glu Asp Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu

50 55 60

Leu Gly Ser Gly Ser Gly Ser Gly Cys Asp Ile Phe Thr Asn Ser Arg

65 70 75 80

Gly Lys Arg Ala Ser Lys Gly Asn Lys Thr Cys Gly Phe Val Asp Glu

85 90 95

Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg Leu Lys Leu Cys

100 105 110

Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp Val Ala Met Gln

115 120 125

Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln Leu Val Asn Leu

130 135 140

His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val Val Glu Glu Leu
145 150 155 160

Val Lys Lys Arg Glu Glu Cys Leu Asp Ala Leu Glu Ser Ile Met Thr
 165 170 175

Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu Arg Lys Leu Val
 180 185 190

Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys Thr Leu Met Glu
 195 200 205

Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn Glu Ile Ile Pro
 210 215 220

Ser Lys Gly Cys Leu Lys Val Gly Gly Arg Cys His Pro His Val Asn
225 230 235 240

Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp Gly His Val Leu
 245 250 255

Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His Met Glu Leu Leu

260

265

270

Lys Ser Ser Val Ile Pro Leu Met His Pro Gly Ser Gly Ser Gly Ser

275

280

285

Gly Glu Lys Ala Ala Lys Ala Glu Glu Ala Ala Arg Lys Met Glu Glu

290

295

300

Leu Phe Lys Lys His Lys Ile Val Ala Val Leu Arg Ala Asn Ser Val

305

310

315

320

Glu Glu Ala Ile Glu Lys Ala Val Ala Val Phe Ala Gly Gly Val His

325

330

335

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

340

345

350

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

355

360

365

Val Thr Ser Val Glu Gln Ala Arg Lys Ala Val Glu Ser Gly Ala Glu

370 375 380

Phe Ile Val Ser Pro His Leu Asp Glu Glu Ile Ser Gln Phe Ala Lys

385 390 395 400

Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met Thr Pro Thr Glu Leu

405 410 415

Val Lys Ala Met Lys Leu Gly His Thr Ile Leu Lys Leu Phe Pro Gly

420 425 430

Glu Val Val Gly Pro Gln Phe Val Lys Ala Met Lys Gly Pro Phe Pro

435 440 445

Asn Val Lys Phe Val Pro Thr Gly Gly Val Asn Leu Asp Asn Val Ala

450 455 460

Glu Trp Phe Lys Ala Gly Val Leu Ala Val Gly Val Gly Ser Ala Leu

465 470 475 480

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

 485 490 495

Glu Lys Ile Arg Gly Ala Thr Glu Leu Glu His His His His His His

 500 505 510

<210> 92

<211> 1539

<212> DNA

<213> construcción sintética

<400> 92

atggtgcctc aggtgctgct gttcgtgccc ctgctgggct ttagcctctg cttcggaaaa 60

ttccctatct acaccatccc tgatgagctg ggaccttgga gcccacatga catccaccac 120

ctgagctgcc ccaacaacct ggtggtcgag gacgagggt gtactaacct gagcgagttc 180

agctacatgg aactgggatc tggctctggc agcggatgcg acatcttcac caatagcaga 240

ggcaagcggg ccagcaaggg caacaagacc tgtggcttcg tggacgaaag aggcctgtac 300

aagtcaactga aggggtgcttg tagactgaaa ctgtgcggcg tgctgggcct gagactgatg 360

gacggcacct gggtcgcat gcaaacaatct gacgagacaa agtgggtgcc tcctgaccag 420

ctggtgaacc tgcacgactt cagaagcgac gagatcgaac acctggctgt ggaagagctg 480

gtcaagaaaa gagaggagtg cctggatgcc ctcgagtcta tcatgaccac caagtctgtg 540

tccttccgga gactgtctca cctgcggaag ctggtgcccg gattcggcaa ggcctacacc 600

atcttcaaca agacactgat ggaagccgat gctcactaca agagcgtag aacctggaac 660

gagatcattc caagcaaggg ttgtctgaag gtgggcggca gatgccaccc tcacgtgaac 720

ggcgtctttt tcaacggcat catcctgggc cccgatggcc acgtgctgat ccctgagatg 780

cagagcagcc tgctgcagca gcacatggaa ctgctgaagt ccagcgcat ccccctgatg 840

caccccggca gcggctctgg atctggcgag aaagctgcca aggccgagga agccgctaga 900

aagatggaag agctgtttaa gaagcacaag atcgtggccg tgctgcgagc taattctgtc 960

gaggaagcca tcgagaaagc cgttgccgtg ttgccggag gcgttcatct gatcgagatc 1020

accttaccg tgcccgatgc cgacaccgtg atcaaggctc tgagcgtgct gaaagaaaag 1080

ggcgccatca tcggcgccgg cacagtcacc agcgtggaac aggccagaaa ggccgtggaa 1140

agtggcgccg agttcatcgt gtctccacac ctggacgagg aaatctcaca gtttgccaag 1200
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 aaactgggcc acaccatcct gaagctgttc ccaggcgaag tggaggggccc ccaatttg 1320
 aaggctatga agggccatt ccctaactg aagttcgtgc ctaccggcgg cgtgaatctg 1380
 gacaacgtgg ccgagtgggt caaggccggc gtgctggccg tgggagtggg cagcgccctg 1440
 gtgaagggca ccccgacga ggtgcgggaa aaggccaaag ccttcgtgga aaagatcaga 1500
 ggcgctacag agctcgagca ccaccaccac catcattga 1539

<210> 93

<211> 657

<212> PRT

<213> construcción sintética

<400> 93

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20

25

30

Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu Leu Lys Val

35

40

45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Arg Thr Thr

115

120

125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Gly Phe Pro Gly Gly Lys Cys Ser

145 150 155 160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Asn Pro Gly Pro Arg Thr Pro Cys Asp Ile Phe

180 185 190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Asn Lys Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg

210 215 220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Met Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245

250

255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Lys Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser Thr Val Phe Lys Glu Gly Asp Glu Ala Glu Asp Phe Val

405 410 415

Glu Val His Leu Pro Asp Val Tyr Lys Gln Ile Ser Gly Val Asp Leu

420 425 430

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

435 440 445

Glu Glu Ala Ala Arg Lys Met Glu Glu Leu Phe Lys Lys His Lys Ile

450

455

460

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

465

470

475

480

Val Ala Val Phe Ala Gly Gly Val His Leu Ile Glu Ile Thr Phe Thr

485

490

495

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

500

505

510

Lys Gly Ala Ile Ile Gly Ala Gly Thr Val Thr Ser Val Glu Gln Ala

515

520

525

Arg Lys Ala Val Glu Ser Gly Ala Glu Phe Ile Val Ser Pro His Leu

530

535

540

Asp Glu Glu Ile Ser Gln Phe Ala Lys Glu Lys Gly Val Phe Tyr Met

545

550

555

560

Pro Gly Val Met Thr Pro Thr Glu Leu Val Lys Ala Met Lys Leu Gly

565

570

575

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

580

585

590

Val Lys Ala Met Lys Gly Pro Phe Pro Asn Val Lys Phe Val Pro Thr

595

600

605

Gly Gly Val Asn Leu Asp Asn Val Ala Glu Trp Phe Lys Ala Gly Val

610

615

620

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

625

630

635

640

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

645

650

655

Glu

<210> 94

<211> 631

<212> PRT

<213> construcción sintética

<400> 94

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Ser Gly Ser Gly Arg Lys His Phe Arg Pro Thr Pro Asp Ala

65 70 75 80

Cys Arg Ala Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu

85

90

95

Glu Ser Leu Ser Gly Ser Gly Glu Ser Leu Ile Ile Ile Ser Pro Ser

100

105

110

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

115

120

125

Pro Gly Gly Lys Cys Ser Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser

130

135

140

Thr Asn His Asp Tyr Thr Ile Trp Met Pro Glu Asn Pro Gly Pro Arg

145

150

155

160

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

165

170

175

Gly Asn Lys Thr Cys Gly Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser

180 185 190

Leu Lys Gly Ala Cys Arg Leu Lys Leu Cys Gly Val Leu Gly Leu Arg

195 200 205

Leu Met Asp Gly Thr Trp Val Ala Met Gln Thr Ser Asp Glu Thr Lys

210 215 220

Trp Cys Pro Pro Asp Gln Leu Val Asn Leu His Asp Phe Arg Ser Asp

225 230 235 240

Glu Ile Glu His Leu Val Val Glu Glu Leu Val Lys Lys Arg Glu Glu

245 250 255

Cys Leu Asp Ala Leu Glu Ser Ile Met Thr Thr Lys Ser Val Ser Phe

260 265 270

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

275 280 285

Tyr Thr Ile Phe Asn Lys Thr Leu Met Glu Ala Asp Ala His Tyr Lys

290 295 300

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

305 310 315 320

Val Gly Gly Arg Cys His Pro His Val Asn Gly Val Phe Phe Asn Gly

325 330 335

Ile Ile Leu Gly Pro Asp Gly His Val Leu Ile Pro Glu Met Gln Ser

340 345 350

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

355 360 365

Leu Met His Pro Leu Ala Asp Pro Ser Thr Val Phe Lys Glu Gly Asp

370 375 380

Glu Ala Glu Asp Phe Val Glu Val His Leu Pro Asp Val Tyr Lys Gln

385 390 395 400

Ile Ser Gly Val Asp Leu Gly Leu Pro Gly Ser Gly Ser Gly

405

410

415

Glu Lys Ala Ala Lys Ala Glu Glu Ala Ala Arg Lys Met Glu Glu Leu

420

425

430

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

435

440

445

Glu Ala Ile Glu Lys Ala Val Ala Val Phe Ala Gly Gly Val His Leu

450

455

460

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

465

470

475

480

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

485

490

495

Thr Ser Val Glu Gln Ala Arg Lys Ala Val Glu Ser Gly Ala Glu Phe

500

505

510

Ile Val Ser Pro His Leu Asp Glu Glu Ile Ser Gln Phe Ala Lys Glu

515

520

525

Lys Gly Val Phe Tyr Met Pro Gly Val Met Thr Pro Thr Glu Leu Val

530

535

540

Lys Ala Met Lys Leu Gly His Thr Ile Leu Lys Leu Phe Pro Gly Glu

545

550

555

560

Val Val Gly Pro Gln Phe Val Lys Ala Met Lys Gly Pro Phe Pro Asn

565

570

575

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

580

585

590

Trp Phe Lys Ala Gly Val Leu Ala Val Gly Val Gly Ser Ala Leu Val

595

600

605

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

610 615 620

Lys Ile Arg Gly Ala Thr Glu

625 630

<210> 95

<211> 485

<212> PRT

<213> construcción sintética

<400> 95

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu Leu Gly Ser

35 40 45

Gly Ser Gly Ser Gly Cys Asp Ile Phe Thr Asn Ser Arg Gly Lys Arg

50 55 60

Ala Ser Lys Gly Asn Lys Thr Cys Gly Phe Val Asp Glu Arg Gly Leu

65 70 75 80

Tyr Lys Ser Leu Lys Gly Ala Cys Arg Leu Lys Leu Cys Gly Val Leu

85 90 95

Gly Leu Arg Leu Met Asp Gly Thr Trp Val Ala Met Gln Thr Ser Asp

100 105 110

Glu Thr Lys Trp Cys Pro Pro Asp Gln Leu Val Asn Leu His Asp Phe

115 120 125

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

130 135 140

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

145 150 155 160

Val Ser Phe Arg Arg Leu Ser His Leu Arg Lys Leu Val Pro Gly Phe

165

170

175

Gly Lys Ala Tyr Thr Ile Phe Asn Lys Thr Leu Met Glu Ala Asp Ala

180

185

190

His Tyr Lys Ser Val Arg Thr Trp Asn Glu Ile Ile Pro Ser Lys Gly

195

200

205

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

210

215

220

Phe Asn Gly Ile Ile Leu Gly Pro Asp Gly His Val Leu Ile Pro Glu

225

230

235

240

Met Gln Ser Ser Leu Leu Gln Gln His Met Glu Leu Leu Lys Ser Ser

245

250

255

Val Ile Pro Leu Met His Pro Gly Ser Gly Ser Gly Ser Gly Glu Lys

260

265

270

Ala Ala Lys Ala Glu Glu Ala Ala Arg Lys Met Glu Glu Leu Phe Lys

275

280

285

Lys His Lys Ile Val Ala Val Leu Arg Ala Asn Ser Val Glu Glu Ala

290

295

300

Ile Glu Lys Ala Val Ala Val Phe Ala Gly Gly Val His Leu Ile Glu

305

310

315

320

Ile Thr Phe Thr Val Pro Asp Ala Asp Thr Val Ile Lys Ala Leu Ser

325

330

335

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

340

345

350

Val Glu Gln Ala Arg Lys Ala Val Glu Ser Gly Ala Glu Phe Ile Val

355

360

365

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

370

375

380

Val Phe Tyr Met Pro Gly Val Met Thr Pro Thr Glu Leu Val Lys Ala

385 390 395 400

Met Lys Leu Gly His Thr Ile Leu Lys Leu Phe Pro Gly Glu Val Val

405 410 415

Gly Pro Gln Phe Val Lys Ala Met Lys Gly Pro Phe Pro Asn Val Lys

420 425 430

Phe Val Pro Thr Gly Gly Val Asn Leu Asp Asn Val Ala Glu Trp Phe

435 440 445

Lys Ala Gly Val Leu Ala Val Gly Val Gly Ser Ala Leu Val Lys Gly

450 455 460

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

465 470 475 480

Arg Gly Ala Thr Glu

485

<210> 96

<211> 485

<212> PRT

<213> construcción sintética

<400> 96

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu Leu Gly Ser

35 40 45

Gly Ser Gly Ser Gly Cys Asp Ile Phe Thr Asn Ser Arg Gly Lys Arg

50 55 60

Ala Ser Lys Gly Asn Lys Thr Cys Gly Phe Val Asp Glu Arg Gly Leu

65 70 75 80

Tyr Lys Ser Leu Lys Gly Ala Cys Arg Leu Lys Leu Cys Gly Val Leu

85 90 95

Gly Leu Arg Leu Met Asp Gly Thr Trp Val Ala Met Gln Thr Ser Asp

100 105 110

Glu Thr Lys Trp Cys Pro Pro Asp Gln Leu Val Asn Leu His Asp Phe

115 120 125

Arg Ser Asp Glu Ile Glu His Leu Val Val Glu Glu Leu Val Lys Lys

130 135 140

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

145 150 155 160

Val Ser Phe Arg Arg Leu Ser His Leu Arg Lys Leu Val Pro Gly Phe

165 170 175

Gly Lys Ala Tyr Thr Ile Phe Asn Lys Thr Leu Met Glu Ala Asp Ala

180

185

190

His Tyr Lys Ser Val Arg Thr Trp Asn Glu Ile Ile Pro Ser Lys Gly

195

200

205

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

210

215

220

Phe Asn Gly Ile Ile Leu Gly Pro Asp Gly His Val Leu Ile Pro Glu

225

230

235

240

Met Gln Ser Ser Leu Leu Gln Gln His Met Glu Leu Leu Lys Ser Ser

245

250

255

Val Ile Pro Leu Met His Pro Gly Ser Gly Ser Gly Ser Gly Glu Lys

260

265

270

Ala Ala Lys Ala Glu Glu Ala Ala Arg Lys Met Glu Glu Leu Phe Lys

275

280

285

Lys His Lys Ile Val Ala Val Leu Arg Ala Asn Ser Val Glu Glu Ala

290 295 300

Ile Glu Lys Ala Val Ala Val Phe Ala Gly Gly Val His Leu Ile Glu

305 310 315 320

Ile Thr Phe Thr Val Pro Asp Ala Asp Thr Val Ile Lys Ala Leu Ser

325 330 335

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

340 345 350

Val Glu Gln Ala Arg Lys Ala Val Glu Ser Gly Ala Glu Phe Ile Val

355 360 365

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

370 375 380

Val Phe Tyr Met Pro Gly Val Met Thr Pro Thr Glu Leu Val Lys Ala

385 390 395 400

Met Lys Leu Gly His Thr Ile Leu Lys Leu Phe Pro Gly Glu Val Val

405

410

415

Gly Pro Gln Phe Val Lys Ala Met Lys Gly Pro Phe Pro Asn Val Lys

420

425

430

Phe Val Pro Thr Gly Gly Val Asn Leu Asp Asn Val Ala Glu Trp Phe

435

440

445

Lys Ala Gly Val Leu Ala Val Gly Val Gly Ser Ala Leu Val Lys Gly

450

455

460

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

465

470

475

480

Arg Gly Ala Thr Glu

485

<210> 97

<211> 562

<212> PRT

<213> construcción sintética

<400> 97

Met Val Pro Gln Val Leu Leu Phe Val Pro Leu Leu Gly Phe Ser Leu

1 5 10 15

Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Pro Asp Glu Leu Gly Pro

20 25 30

Trp Ser Pro Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val

35 40 45

Val Glu Asp Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu

50 55 60

Leu Lys Val Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys

65 70 75 80

Thr Gly Val Val Thr Ser Gly Ser Gly Arg Lys His Phe Arg Pro Thr

85

90

95

Pro Asp Ala Cys Arg Ala Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro

100

105

110

Arg Tyr Glu Glu Ser Leu Ser Gly Ser Gly Glu Ser Leu Ile Ile Ile

115

120

125

Ser Pro Ser Val Thr Asp Leu Asp Pro Tyr Asp Lys Ser Leu His Ser

130

135

140

Arg Gly Phe Pro Gly Gly Lys Cys Ser Gly Ile Thr Val Ser Ser Thr

145

150

155

160

Tyr Cys Ser Thr Asn His Asp Tyr Thr Ile Trp Met Pro Glu Asn Pro

165

170

175

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

180

185

190

Ala Ser Lys Gly Asn Lys Thr Cys Gly Phe Val Asp Glu Arg Gly Leu

195

200

205

Tyr Lys Ser Leu Lys Gly Ala Cys Arg Leu Lys Leu Cys Gly Val Leu

210

215

220

Gly Leu Arg Leu Met Asp Gly Thr Trp Val Ala Met Gln Thr Ser Asp

225

230

235

240

Glu Thr Lys Trp Cys Pro Pro Asp Gln Leu Val Asn Leu His Asp Phe

245

250

255

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

260

265

270

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

275

280

285

Val Ser Phe Arg Arg Leu Ser His Leu Arg Lys Leu Val Pro Gly Phe

290

295

300

Gly Lys Ala Tyr Thr Ile Phe Asn Lys Thr Leu Met Glu Ala Asp Ala

305 310 315 320

His Tyr Lys Ser Val Arg Thr Trp Asn Glu Ile Ile Pro Ser Lys Gly

325 330 335

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

340 345 350

Phe Asn Gly Ile Ile Leu Gly Pro Asp Gly His Val Leu Ile Pro Glu

355 360 365

Met Gln Ser Ser Leu Leu Gln Gln His Met Glu Leu Leu Lys Ser Ser

370 375 380

Val Ile Pro Leu Met His Pro Leu Ala Asp Pro Ser Thr Val Phe Lys

385 390 395 400

Glu Gly Asp Glu Ala Glu Asp Phe Val Glu Val His Leu Pro Asp Val

405 410 415

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

420

425

430

Gly Ser Ala Glu Glu Ala Glu Leu Ala Tyr Leu Leu Gly Glu Leu Ala

435

440

445

Tyr Lys Leu Gly Glu Tyr Arg Ile Ala Ile Arg Ala Tyr Arg Ile Ala

450

455

460

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

465

470

475

480

Ala Tyr Tyr Lys Gln Gly Arg Tyr Arg Glu Ala Ile Glu Tyr Tyr Gln

485

490

495

Lys Ala Leu Glu Leu Asp Pro Asn Asn Ala Glu Ala Trp Tyr Asn Leu

500

505

510

Gly Asn Ala Tyr Tyr Glu Arg Gly Glu Tyr Glu Glu Ala Ile Glu Tyr

515 520 525

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

530 535 540

Asn Leu Leu Asn Ala Lys Met Arg Glu Glu Gly Ser His His His His

545 550 555 560

His His

<210> 98

<211> 1689

<212> DNA

<213> construcción sintética

<400> 98

atggtgcctc aggtgctgct gttcgtgccc ctgctgggct ttagcctctg cttcggaata 60

ttccctatct acaccatccc tgatgagctg ggaccttgga gcccacatga catccaccac 120

ctgagctgcc ccaacaacct ggtggtcgag gacgagggct gtactaacct gagcgagttc 180

agctacatgg aactgaaggt gggctacatc agtgccatta aggtgaacgg cttcacatgc 240

accggcgttg tgaccagcgg cagcggcaga aagcacttc gccccacacc tgacgcctgc 300

agagccgcct ataactggaa gatggccggc gacccagat acgaggaatc tctgagcggc 360

agcggcgaga gcctgatcat catcagcccc agcgtgacag acctggaccc ttacgacaag 420

agcctgcaca gcagaggttt tccaggcggg aagtgcagtg gaattaccgt cagcagcacc 480

tactgtcca caaaccacga ttacaccatc tggatgcccg agaaccctgg cccgcggaca 540

ccgtgcgaca tcttcaccaa tagcagaggc aagcggggcca gcaagggcaa caagacctgt 600

ggcttcgtgg acgaaagagg cctgtacaag tactgaagg gtgctttag actgaaactg 660

tcgggcgtgc tgggcctgag actgatggac ggcacctggg tcgcatgca aacatctgac 720

gagacaaagt ggtgccctcc tgaccagctg gtgaacctgc acgacttcag aagcgacgag 780

atcgaacctc tggtcgtgga agagctggtc aagaaaagag aggagtcct ggatgccctc 840

gagtctatca tgaccaccaa gtctgtgtcc ttccggagac tgtctcacct gcggaagctg 900

gtgcccggat tcggcaaggc ctacaccatc ttcaacaaga cactgatgga agccgatgct 960

cactacaaga gcgttagaac ctggaacgag atcattccaa gcaaggggtg tctgaaggtg 1020

ggcggcagat gccaccctca cgtgaacggc gtcttttca acggcatcat cctgggcccc 1080
 gatggccacg tgctgatccc tgagatgcag agcagcctgc tgcagcagca catggaactg 1140
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 gaaggcgacg aagctgaaga ttctgtgag gtgcacctgc ctgatgtgta caagcagatc 1260
 agcggagtgg acctgggcct gccttctgcc atcggaggct ccgccgagga ggagagctg 1320
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 gagtatgagg aagctatcga gtactatagg aaggccctgc gcctggaccc aaacaatgcc 1620
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 caccactga 1689

<211> 416

<212> PRT

<213> construcción sintética

<400> 99

Met Val Pro Gln Val Leu Leu Phe Val Pro Leu Leu Gly Phe Ser Leu

1 5 10 15

Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Pro Asp Glu Leu Gly Pro

20 25 30

Trp Ser Pro Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val

35 40 45

Val Glu Asp Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu

50 55 60

Leu Gly Ser Gly Ser Gly Ser Gly Cys Asp Ile Phe Thr Asn Ser Arg

65 70 75 80

Gly Lys Arg Ala Ser Lys Gly Asn Lys Thr Cys Gly Phe Val Asp Glu

85

90

95

Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg Leu Lys Leu Cys

100

105

110

Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp Val Ala Met Gln

115

120

125

Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln Leu Val Asn Leu

130

135

140

His Asp Phe Arg Ser Asp Glu Ile Glu Pro Leu Val Val Glu Glu Leu

145

150

155

160

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

165

170

175

Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu Arg Lys Leu Val

180

185

190

Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys Thr Leu Met Glu

195

200

205

Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn Glu Ile Ile Pro

210

215

220

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

225

230

235

240

Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp Gly His Val Leu

245

250

255

Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His Met Glu Leu Leu

260

265

270

Lys Ser Ser Val Ile Pro Leu Met His Pro Ser Ala Ile Gly Gly Ser

275

280

285

Ala Glu Glu Ala Glu Leu Ala Tyr Leu Leu Gly Glu Leu Ala Tyr Lys

290

295

300

Leu Gly Glu Tyr Arg Ile Ala Ile Arg Ala Tyr Arg Ile Ala Leu Lys

305 310 315 320

Arg Asp Pro Asn Asn Ala Glu Ala Trp Tyr Asn Leu Gly Asn Ala Tyr

325 330 335

Tyr Lys Gln Gly Arg Tyr Arg Glu Ala Ile Glu Tyr Tyr Gln Lys Ala

340 345 350

Leu Glu Leu Asp Pro Asn Asn Ala Glu Ala Trp Tyr Asn Leu Gly Asn

355 360 365

Ala Tyr Tyr Glu Arg Gly Glu Tyr Glu Glu Ala Ile Glu Tyr Tyr Arg

370 375 380

Lys Ala Leu Arg Leu Asp Pro Asn Asn Ala Asp Ala Met Gln Asn Leu

385 390 395 400

Leu Asn Ala Lys Met Arg Glu Glu Gly Ser His His His His His His

405 410 415

<210> 100

<211> 1251

<212> DNA

<213> construcción sintética

<400> 100

atggtgcctc aggtgctgct gttcgtgccc ctgctgggct ttagcctctg cttcggaata 60

ttccctatct acaccatccc tgatgagctg ggaccttga gcccatcga catccaccac 120

ctgagctgcc ccaacaacct ggtggtcgag gacgagggt gtactaacct gagcgagttc 180

agctacatgg aactgggatc tggctctggc agcggatgcg acatcttcac caatagcaga 240

ggcaagcggg ccagcaaggg caacaagacc tgtggcttcg tggacgaaag aggcctgtac 300

aagtcactga aggggtgctg tagactgaaa ctgtgcggcg tgctgggcct gagactgatg 360

gacggcacct gggtcgcat gcaaacaatct gacgagaca agtgggtgcc tcctgaccag 420

ctggtgaacc tgcacgactt cagaagcgac gagatcgaac ctctggtcgt ggaagagctg 480

gtcaagaaaa gagaggagtg cctggatgcc ctcgagtcta tcatgaccac caagtctgtg 540

tccttccgga gactgtctca cctgcggaag ctggtgcccg gattcggcaa ggcctacacc 600

atcttcaaca agacactgat ggaagccgat gctcactaca agagcgtag aacctggaac 660

gagatcattc caagcaaggg ttgtctgaag gtgggcggca gatgccaccc tcacgtgaac 720

ggcgtctttt tcaacggcat catcctgggc cccgatggcc acgtgctgat ccctgagatg 780

cagagcagcc tgctgcagca gcacatggaa ctgctgaagt ccagcgcat ccccctgatg 840

caccctctg ccatcggagg ctccgccgag gaggcagagc tggcctacct gctgggcgag 900

ctggcctaca agctgggcga gtataggatc gccatccggg cctatagaat cgccctgaag 960

cgcgatccca acaatgccga ggctgggtac aacctgggca atgcctacta taagcagggc 1020

cggtatagag aggccatcga gtactatcag aaggccctgg agctggaccc taataacgct 1080

gaggcctggt ataacctggg aaacgcctac tatgagcggg gcgagtatga ggaagctatc 1140

gagtactata ggaagggcct gcgcctggac ccaaacaatg ccgatgccat gcagaacctg 1200

ctgaatgccca agatgagaga ggagggcagc caccaccacc accaccactg a 1251

<210> 101

<211> 535

<212> PRT

<213> construcción sintética

<400> 101

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Ser Gly Ser Gly Arg Lys His Phe Arg Pro Thr Pro Asp Ala

65 70 75 80

Cys Arg Ala Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu

85 90 95

Glu Ser Leu Ser Gly Ser Gly Glu Ser Leu Ile Ile Ile Ser Pro Ser

100

105

110

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

115

120

125

Pro Gly Gly Lys Cys Ser Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser

130

135

140

Thr Asn His Asp Tyr Thr Ile Trp Met Pro Glu Asn Pro Gly Pro Arg

145

150

155

160

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

165

170

175

Gly Asn Lys Thr Cys Gly Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser

180

185

190

Leu Lys Gly Ala Cys Arg Leu Lys Leu Cys Gly Val Leu Gly Leu Arg

195

200

205

Leu Met Asp Gly Thr Trp Val Ala Met Gln Thr Ser Asp Glu Thr Lys

210 215 220

Trp Cys Pro Pro Asp Gln Leu Val Asn Leu His Asp Phe Arg Ser Asp

225 230 235 240

Glu Ile Glu Pro Leu Val Val Glu Glu Leu Val Lys Lys Arg Glu Glu

245 250 255

Cys Leu Asp Ala Leu Glu Ser Ile Met Thr Thr Lys Ser Val Ser Phe

260 265 270

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

275 280 285

Tyr Thr Ile Phe Asn Lys Thr Leu Met Glu Ala Asp Ala His Tyr Lys

290 295 300

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

305 310 315 320

Val Gly Gly Arg Cys His Pro His Val Asn Gly Val Phe Phe Asn Gly

325 330 335

Ile Ile Leu Gly Pro Asp Gly His Val Leu Ile Pro Glu Met Gln Ser

340 345 350

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

355 360 365

Leu Met His Pro Leu Ala Asp Pro Ser Thr Val Phe Lys Glu Gly Asp

370 375 380

Glu Ala Glu Asp Phe Val Glu Val His Leu Pro Asp Val Tyr Lys Gln

385 390 395 400

Ile Ser Gly Val Asp Leu Gly Leu Pro Ser Ala Ile Gly Gly Ser Ala

405 410 415

Glu Glu Ala Glu Leu Ala Tyr Leu Leu Gly Glu Leu Ala Tyr Lys Leu

420

425

430

Gly Glu Tyr Arg Ile Ala Ile Arg Ala Tyr Arg Ile Ala Leu Lys Arg

435

440

445

Asp Pro Asn Asn Ala Glu Ala Trp Tyr Asn Leu Gly Asn Ala Tyr Tyr

450

455

460

Lys Gln Gly Arg Tyr Arg Glu Ala Ile Glu Tyr Tyr Gln Lys Ala Leu

465

470

475

480

Glu Leu Asp Pro Asn Asn Ala Glu Ala Trp Tyr Asn Leu Gly Asn Ala

485

490

495

Tyr Tyr Glu Arg Gly Glu Tyr Glu Glu Ala Ile Glu Tyr Tyr Arg Lys

500

505

510

Ala Leu Arg Leu Asp Pro Asn Asn Ala Asp Ala Met Gln Asn Leu Leu

515

520

525

Asn Ala Lys Met Arg Glu Glu

530

535

<210> 102

<211> 389

<212> PRT

<213> construcción sintética

<400> 102

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

1

5

10

15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20

25

30

Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu Leu Gly Ser

35

40

45

Gly Ser Gly Ser Gly Cys Asp Ile Phe Thr Asn Ser Arg Gly Lys Arg

50

55

60

Ala Ser Lys Gly Asn Lys Thr Cys Gly Phe Val Asp Glu Arg Gly Leu

65 70 75 80

Tyr Lys Ser Leu Lys Gly Ala Cys Arg Leu Lys Leu Cys Gly Val Leu

85 90 95

Gly Leu Arg Leu Met Asp Gly Thr Trp Val Ala Met Gln Thr Ser Asp

100 105 110

Glu Thr Lys Trp Cys Pro Pro Asp Gln Leu Val Asn Leu His Asp Phe

115 120 125

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

130 135 140

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

145 150 155 160

Val Ser Phe Arg Arg Leu Ser His Leu Arg Lys Leu Val Pro Gly Phe

165 170 175

Gly Lys Ala Tyr Thr Ile Phe Asn Lys Thr Leu Met Glu Ala Asp Ala

180

185

190

His Tyr Lys Ser Val Arg Thr Trp Asn Glu Ile Ile Pro Ser Lys Gly

195

200

205

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

210

215

220

Phe Asn Gly Ile Ile Leu Gly Pro Asp Gly His Val Leu Ile Pro Glu

225

230

235

240

Met Gln Ser Ser Leu Leu Gln Gln His Met Glu Leu Leu Lys Ser Ser

245

250

255

Val Ile Pro Leu Met His Pro Ser Ala Ile Gly Gly Ser Ala Glu Glu

260

265

270

Ala Glu Leu Ala Tyr Leu Leu Gly Glu Leu Ala Tyr Lys Leu Gly Glu

275 280 285

Tyr Arg Ile Ala Ile Arg Ala Tyr Arg Ile Ala Leu Lys Arg Asp Pro

290 295 300

Asn Asn Ala Glu Ala Trp Tyr Asn Leu Gly Asn Ala Tyr Tyr Lys Gln

305 310 315 320

Gly Arg Tyr Arg Glu Ala Ile Glu Tyr Tyr Gln Lys Ala Leu Glu Leu

325 330 335

Asp Pro Asn Asn Ala Glu Ala Trp Tyr Asn Leu Gly Asn Ala Tyr Tyr

340 345 350

Glu Arg Gly Glu Tyr Glu Glu Ala Ile Glu Tyr Tyr Arg Lys Ala Leu

355 360 365

Arg Leu Asp Pro Asn Asn Ala Asp Ala Met Gln Asn Leu Leu Asn Ala

370 375 380

Lys Met Arg Glu Glu

385

<210> 103

<211> 461

<212> PRT

<213> construcción sintética

<400> 103

Met Val Pro Gln Val Leu Leu Phe Val Pro Leu Leu Gly Phe Ser Leu

1 5 10 15

Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Pro Asp Glu Leu Gly Pro

20 25 30

Trp Ser Pro Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val

35 40 45

Val Glu Asp Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Met Glu

50 55 60

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

Gly Lys Arg Ala Ser Lys Gly Asn Lys Thr Cys Gly Phe Val Asp Glu
 85 90 95

Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg Leu Lys Leu Cys
 100 105 110

Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp Val Ala Met Gln
 115 120 125

Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln Leu Val Asn Leu
 130 135 140

His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val Val Glu Glu Leu
145 150 155 160

Val Lys Lys Arg Glu Glu Cys Leu Asp Ala Leu Glu Ser Ile Met Thr
 165 170 175

Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu Arg Lys Leu Val

180

185

190

Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys Thr Leu Met Glu

195

200

205

Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn Glu Ile Ile Pro

210

215

220

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

225

230

235

240

Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp Gly His Val Leu

245

250

255

Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His Met Glu Leu Leu

260

265

270

Lys Ser Ser Val Ile Pro Leu Met His Pro Gly Gly Ser Gly Gly Ser

275

280

285

Gly Ser Gly Gly Ser Gly Gly Ser Gly Ser Asp Ile Ile Lys Leu Leu

290

295

300

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

305

310

315

320

Met Ser Ser Trp Cys Tyr Thr His Ser Leu Asp Gly Ala Gly Leu Phe

325

330

335

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

340

345

350

Ile Phe Leu Asn Glu Asn Asn Val Pro Val Gln Leu Thr Ser Ile Ser

355

360

365

Ala Pro Glu His Lys Phe Glu Gly Leu Thr Gln Ile Phe Gln Lys Ala

370

375

380

Tyr Glu His Glu Gln His Ile Ser Glu Ser Ile Asn Asn Ile Val Asp

385 390 395 400

His Ala Ile Lys Ser Lys Asp His Ala Thr Phe Asn Phe Leu Gln Trp

405 410 415

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

420 425 430

Asp Lys Ile Glu Leu Ile Gly Asn Glu Asn His Gly Leu Tyr Leu Ala

435 440 445

Asp Gln Tyr Val Lys Gly Ile Ala Lys Ser Arg Lys Ser

450 455 460

<210> 104

<211> 403

<212> PRT

<213> construcción sintética

<400> 104

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Ile Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

Gln Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Lys Cys Leu

145

150

155

160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Glu Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Ser Ser Lys Gly Lys Lys Ala Ser Lys Gly Gly Lys Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ser Ile Gln Thr Ser Asp Asp Thr Lys Trp Cys Pro Ser Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser Tyr Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325 330 335

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

340

345

350

Pro Pro Val Asp Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 105

<211> 403

<212> PRT

<213> construcción sintética

<400> 105

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly His Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Ser Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115 120 125

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

130 135 140

Tyr Asp Asn Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Ser

145 150 155 160

Gly Ile Thr Val Ser Ser Val Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Val Trp Met Pro Glu Ser Leu Arg Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

Thr Asn Ser Arg Gly Lys Arg Val Ser Lys Gly Ser Lys Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Arg Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Met Gln Thr Ser Asn Glu Thr Lys Trp Cys Pro Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Leu Arg Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Ile Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser Tyr Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Glu Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Ile Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Phe

<210> 106

<211> 403

<212> PRT

<213> construcción sintética

<400> 106

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Leu

145

150

155

160

Gly Ile Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Ser Lys Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Met Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325 330 335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 107

<211> 403

<212> PRT

<213> construcción sintética

<400> 107

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Thr Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Arg Ser Leu His Ser Arg Val Phe Pro Gly Gly Asn Cys Ser

145

150

155

160

Gly Val Ala Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Met Ser Cys Asp Ile Phe

180

185

190

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

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Ala Met Gln Thr Ser Asn Glu Thr Lys Trp Cys Pro Pro Gly Gln

245

250

255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325 330 335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Val Ser Ser Val Ile Pro Leu Met His Pro Met Ala

385 390 395 400

Asp Pro Ser

<210> 108

<211> 403

<212> PRT

<213> construcción sintética

<400> 108

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Arg Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Gly Cys Met Tyr Ser

85 90 95

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

100 105 110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Arg Thr Thr

115 120 125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Arg Lys Cys Ser

145 150 155 160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Val Trp Met Pro Glu Ile Leu Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Ser Lys Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Ala Met Gln Thr Ser Asn Glu Thr Lys Trp Cys Pro Pro Gly Gln

245

250

255

Leu Val Asn Leu His Asp Leu His Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Thr Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Glu Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Ile Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Phe

<210> 109

<211> 403

<212> PRT

<213> construcción sintética

<400> 109

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Asn Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ser

85 90 95

Ala Tyr Asn Trp Lys Leu Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Asn Pro Tyr Pro Glu Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115 120 125

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

130 135 140

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

145 150 155 160

Gly Met Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Glu Tyr Thr

165

170

175

Ile Trp Met Pro Glu Lys Val Gly Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Thr Ser Lys Gly Lys Arg Ala Ser Lys Gly Gly Arg Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Ser Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Ala Ile Gln Thr Ser Asp Glu Thr Lys Trp Cys Ser Pro Asp Gln

245

250

255

Leu Val Asn Leu His Asp Leu His Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Ile Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Leu Ser

<210> 110

<211> 403

<212> PRT

<213> construcción sintética

<400> 110

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ser

85 90 95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115 120 125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Arg Gly Lys Cys Ser

145 150 155 160

Gly Ile Thr Val Ser Ser Ala Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Ser Lys Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Ile Gln Thr Ser Asn Glu Thr Lys Trp Cys Pro Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Lys Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 111

<211> 403

<212> PRT

<213> construcción sintética

<400> 111

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

1

5

10

15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20

25

30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35

40

45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Ser

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Lys Cys Ser

145 150 155 160

Gly Ile Thr Val Ser Ser Thr Cys Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Gly Lys Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Met Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Ile Gln Thr Ser Asp Glu Ile Lys Trp Cys Ser Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Thr Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

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

325 330 335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu His Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 112

<211> 403

<212> PRT

<213> construcción sintética

<400> 112

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

1

5

10

15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20

25

30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35

40

45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Glu Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Ser

145 150 155 160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Ser Lys Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Leu Gly Leu Lys Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Met Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245

250

255

Leu Val Asn Leu His Asp Leu Arg Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Val Ile Leu Gly Pro Asp

355 360 365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 113

<211> 403

<212> PRT

<213> construcción sintética

<400> 113

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Asn Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Cys Pro Met Pro Asp Ala Cys Arg Ser

85 90 95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

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

145

150

155

160

Gly Leu Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Lys Ala Gly Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Asn Ser Lys Gly Lys Arg Ala Ser Lys Gly Gly Lys Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Ser Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Ile Gln Thr Leu Asp Glu Thr Lys Trp Cys Ser Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Leu Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Ser

325 330 335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Val Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 114

<211> 403

<212> PRT

<213> construcción sintética

<400> 114

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Ser Asp Ala Cys Arg Ala

85 90 95

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

100 105 110
Gln Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr
115 120 125

Lys Glu Ser Leu Ile Ile Ile Ser Pro Ser Val Ala Asp Leu Asp Pro
130 135 140

Tyr Asp Lys Ser Leu Arg Ser Arg Ile Phe Pro Gly Gly Lys Cys Leu
145 150 155 160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr
165 170 175

Ile Trp Met Pro Glu Glu Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe
180 185 190

Thr Asn Ser Lys Gly Lys Arg Ala Ser Lys Gly Gly Lys Ile Cys Gly
195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg

210 215 220

Leu Lys Leu Cys Gly Val Ser Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Ile Gln Thr Ser Glu Glu Thr Lys Trp Cys Pro Ser Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260 265 270

Val Glu Glu Leu Val Lys Lys Arg Glu Glu Cys Leu Asp Thr Leu Glu

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Asn Ser Val Arg Thr Trp Asn

325

330

335

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

340

345

350

Pro His Val Asp Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 115

<211> 403

<212> PRT

<213> construcción sintética

<400> 115

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Arg Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Thr

85 90 95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Arg Ser Leu His Ser Arg Val Phe Pro Asn Gly Lys Cys Ser

145

150

155

160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Pro Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

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

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Met Arg Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245 250 255

Leu Val Asn Ile His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys
305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asp
 325 330 335

Glu Ile Ile Pro Ser Lys Gly Cys Leu Arg Val Gly Gly Arg Cys His
 340 345 350

Pro His Val His Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp
 355 360 365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His
 370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala
385 390 395 400

Asp Pro Ser

<210> 116

<211> 403

<212> PRT

<213> construcción sintética

<400> 116

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Glu Cys Thr Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Lys Cys Leu

145

150

155

160

Gly Ile Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Glu Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Ala Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Gly Arg Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Thr Ile Gln Thr Ser Asn Glu Thr Lys Trp Cys Pro Pro Asp Arg

245

250

255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser Tyr Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325 330 335

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

340 345 350

Pro His Val Asp Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 117

<211> 403

<212> PRT

<213> construcción sintética

<400> 117

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ser Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Thr Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

Gln Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115 120 125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Lys Cys Leu

145 150 155 160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Glu Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Gly Arg Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Thr Ile His Thr Ser Asn Glu Thr Lys Trp Cys Pro Ser Asp Gln

245

250

255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

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

325

330

335

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

340

345

350

Pro His Val Asp Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Val Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 118

<211> 403

<212> PRT

<213> construcción sintética

<400> 118

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Gly Glu Asp

20 25 30

Glu Gly Cys Ile Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Ile Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Ile Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

Gln Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115 120 125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Leu Phe Pro Gly Gly Lys Cys Leu

145 150 155 160

Gly Ile Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Glu Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Asn Ser Lys Gly Lys Lys Ala Ser Lys Gly Gly Lys Val Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Ser Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Thr Ile Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245

250

255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser Tyr Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

Glu Ile Ile Pro Ser Lys Gly Cys Leu Lys Val Ser Asp Arg Cys His

340

345

350

Pro His Val Asp Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 119

<211> 403

<212> PRT

<213> construcción sintética

<400> 119

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85

90

95

Ala His Asp Trp Lys Ile Ala Gly Asp Pro Arg Tyr Glu Asp Ser Leu

100

105

110

Gln Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Leu

145 150 155 160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Val Glu Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

Thr Asn Ser Arg Gly Lys Lys Ala Ser Lys Gly Gly Arg Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ser Ile Gln Thr Ser Asp Asp Ile Lys Trp Cys Pro Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Asn

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340

345

350

Pro Pro Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly Lys Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 120

<211> 403

<212> PRT

<213> construcción sintética

<400> 120

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Thr Leu Ser Gly Phe Ser Tyr Ile Glu Leu Lys Val

35

40

45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Ile Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Lys Cys Leu

145 150 155 160

Gly Ile Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Glu Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Gly Arg Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ser Ile Gln Ala Ser Asp Glu Thr Lys Trp Cys Ser Pro Asp Gln

245 250 255

Leu Val Asn Val His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Val Thr Thr Lys Ser Ile Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325 330 335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 121

<211> 403

<212> PRT

<213> construcción sintética

<400> 121

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

1

5

10

15

Ile Asp Ile His His Leu Gly Cys Pro Asn Asn Leu Val Val Glu Asp

20

25

30

Glu Gly Cys Asp Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35

40

45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Thr Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Lys Cys Leu

145 150 155 160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Glu Thr Arg Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Gly Lys Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ser Ile Gln Thr Pro Asp Glu Thr Lys Trp Cys Ser Pro Asp Gln

245

250

255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asp

325

330

335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Val Ala

385 390 395 400

Asn Pro Ser

<210> 122

<211> 403

<212> PRT

<213> construcción sintética

<400> 122

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Asn Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ser Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Met Ser Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Ser Gly Gly Lys Cys Leu

145

150

155

160

Gly Ile Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Leu Trp Met Pro Glu Glu Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Asn Ser Lys Gly Lys Arg Ala Ser Lys Gly Gly Lys Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ser Ile Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245 250 255

Leu Val Asn Ile His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325 330 335

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

340

345

350

Pro His Val Asp Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly Ser Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asn Pro Ser

<210> 123

<211> 403

<212> PRT

<213> construcción sintética

<400> 123

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Asp Ser Leu

100 105 110
Gln Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr
115 120 125

Lys Glu Ser Leu Ile Ile Ile Ser Pro Ser Val Ala Asp Leu Asp Pro
130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Leu
145 150 155 160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr
165 170 175

Ile Trp Met Pro Glu Glu Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe
180 185 190

Thr Asn Ser Lys Gly Lys Arg Ala Ser Lys Gly Gly Lys Thr Cys Gly
195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Arg Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ser Ile Gln Thr Thr Asp Glu Thr Lys Trp Cys Pro Ser Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Gln Thr Trp Asn

325

330

335

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

340

345

350

Pro His Val Asp Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 124

<211> 403

<212> PRT

<213> construcción sintética

<400> 124

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Ala Glu Asn

20 25 30

Asp Gly Cys Thr Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Met Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85 90 95

Ala His Asp Trp Lys Ile Ala Gly Asp Pro Arg Tyr Glu Asp Ser Leu

100

105

110

Gln Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Leu

145

150

155

160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Val Glu Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

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

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Pro Gly Ile Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ser Ile Gln Thr Ser Glu Glu Ile Lys Trp Cys Pro Pro Asp Arg

245 250 255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Lys Thr Trp Asn

325 330 335

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

340 345 350

Pro Pro Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 125

<211> 403

<212> PRT

<213> construcción sintética

<400> 125

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85

90

95

Ala His Glu Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Asp Ser Leu

100

105

110

Gln Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Asn Cys Leu

145

150

155

160

Gly Ile Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Glu Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Ser Ser Arg Gly Lys Arg Ala Ser Lys Gly Gly Lys Ile Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Ser Ile Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245

250

255

Leu Val Asn Val His Asp Phe His Ser Asp Glu Ile Glu His Leu Ile

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325 330 335

Glu Ile Ile Pro Ser Lys Gly Cys Leu Lys Val Gly Gly Met Cys His

340 345 350

Pro His Val Gly Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

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

370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 126

<211> 403

<212> PRT

<213> construcción sintética

<400> 126

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Asp Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Thr Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115 120 125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Lys Cys Leu

145 150 155 160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Glu Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Asn Ser Lys Gly Lys Arg Ala Ser Lys Gly Gly Arg Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Ala Ile Gln Thr Pro Gly Glu Thr Lys Trp Cys Ser Pro Asp Gln

245

250

255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser Asn Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asp

325

330

335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Ile His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 127

<211> 403

<212> PRT

<213> construcción sintética

<400> 127

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Asn Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Thr Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115 120 125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Ile Phe Pro Gly Gly Lys Cys Leu

145 150 155 160

Gly Ile Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Glu Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Asn Ser Lys Gly Lys Arg Ala Ser Lys Gly Gly Arg Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Ala Ile Gln Thr Pro Asn Glu Thr Lys Trp Cys Ser Pro Asp Gln

245

250

255

Leu Val Asn Val His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser Asn Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Ile Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Ile His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 128

<211> 403

<212> PRT

<213> construcción sintética

<400> 128

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Asn Ser Leu Ser Gly Ile Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Phe His Pro Met Pro Asp Ala Cys Arg Ser

85

90

95

Ala Tyr Asn Trp Lys Leu Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Ile Phe Pro Ser Gly Lys Cys Ser

145 150 155 160

Gly Met Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Glu Tyr Thr

165 170 175

Ile Trp Met Pro Glu Lys Ala Gly Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

Thr Thr Ser Lys Gly Lys Arg Ala Ser Lys Gly Gly Lys Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Ser Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Ile Gln Thr Ser Glu Glu Thr Lys Trp Cys Pro Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Leu His Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

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

325

330

335

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

340

345

350

Pro His Val Asp Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Leu Ser

<210> 129

<211> 403

<212> PRT

<213> construcción sintética

<400> 129

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

1

5

10

15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20

25

30

Glu Gly Cys Asn Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35

40

45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Phe Arg Pro Val Pro Asp Ala Cys Arg Ser

85

90

95

Ala Tyr Asn Trp Lys Leu Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Ile Phe Pro Asp Gly Lys Cys Ser

145 150 155 160

Gly Ile Thr Val Ser Ser Thr His Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Lys Ala Gly Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

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

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Ala Ala Ile Gln Thr Ala Asp Glu Thr Lys Trp Cys Ser Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325 330 335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Phe Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 130

<211> 403

<212> PRT

<213> construcción sintética

<400> 130

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

1

5

10

15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20

25

30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35

40

45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Arg Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Lys Cys Ser

145 150 155 160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

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

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Ile Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245

250

255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 131

<211> 403

<212> PRT

<213> construcción sintética

<400> 131

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Ala Glu Asp

20 25 30

Glu Gly Cys Thr Thr Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Ile Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Ser Pro Arg Pro Asp Ala Cys Arg Thr

85 90 95

Ala Tyr Asn Trp Lys Ile Thr Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

Gln Asn Pro Tyr Pro Asp Tyr Ser Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Arg Cys Leu

145

150

155

160

Gly Ile Thr Ile Tyr Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

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

180

185

190

Val Lys Ser Arg Gly Lys Arg Ala Ser Lys Gly Gly Arg Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Arg Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Val Asp Gly Thr Trp

225 230 235 240

Val Thr Ile Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Ser Glu Gln

245 250 255

Leu Val Asn Leu His Asn Phe His Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Thr Ser Val Arg Thr Trp Asn

325 330 335

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

340

345

350

Pro His Val Gly Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

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

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 132

<211> 403

<212> PRT

<213> construcción sintética

<400> 132

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Asn Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Ile Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115 120 125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Ser

145 150 155 160

Gly Met Thr Val Ser Ser Thr Cys Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Ser Lys Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Met Gln Thr Ser Asp Glu Ile Lys Trp Cys Pro Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Arg

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asn Pro Ser

<210> 133

<211> 403

<212> PRT

<213> construcción sintética

<400> 133

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Ile Glu Asp

20 25 30

Glu Gly Cys Asn Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ser

85 90 95

Ala Tyr Asn Trp Lys Leu Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Ile Phe Pro Gly Gly Lys Cys Ser

145

150

155

160

Gly Met Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Glu Tyr Thr

165

170

175

Ile Trp Met Pro Glu Lys Pro Gly Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Ala Thr Ser Lys Gly Lys Arg Ala Ser Lys Gly Gly Arg Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Ser Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Ile Gln Thr Ser Asp Glu Thr Lys Trp Cys Ser Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Leu His Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325 330 335

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

340 345 350

Pro Pro Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 134

<211> 403

<212> PRT

<213> construcción sintética

<400> 134

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

Gln Asn Pro Tyr Pro Asp Tyr Asn Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Asn Gly Lys Cys Leu

145

150

155

160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Glu Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Asn Ser Lys Gly Lys Arg Ala Ser Lys Gly Gly Lys Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Arg Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Ser Ile Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245

250

255

Leu Val Asn Val His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

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

325 330 335

Glu Ile Ile Pro Ser Lys Gly Cys Leu Lys Val Gly Gly Met Cys His

340 345 350

Pro His Leu Asp Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 135

<211> 403

<212> PRT

<213> construcción sintética

<400> 135

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Ser Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Arg His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115 120 125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Lys Cys Ser

145 150 155 160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Ser Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Ser Lys Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Ala Met Gln Thr Ser Asp Glu Thr Lys Trp Cys Leu Pro Asp Gln

245

250

255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

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

325

330

335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly Gln Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 136

<211> 403

<212> PRT

<213> construcción sintética

<400> 136

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Leu Arg Pro Ala Pro Asp Ala Cys Arg Asn

85 90 95

Ala Phe Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115 120 125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Ser

145 150 155 160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

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

180

185

190

Thr Asn Ser Lys Gly Lys Arg Ala Ser Lys Gly Ser Arg Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Thr Asp Gly Thr Trp

225

230

235

240

Val Ala Met Gln Thr Ser Glu Glu Thr Lys Trp Cys Pro His Asp Gln

245

250

255

Leu Val Asn Leu His Asp Phe Arg Leu Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 137

<211> 403

<212> PRT

<213> construcción sintética

<400> 137

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Ser

145 150 155 160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

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

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Ile Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 138

<211> 403

<212> PRT

<213> construcción sintética

<400> 138

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

1

5

10

15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Ala Glu Asp

20

25

30

Glu Gly Cys Asn Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35

40

45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Asp Gly Lys Cys Leu

145 150 155 160

Gly Ile Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Glu Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

Thr Thr Ser Lys Gly Lys Arg Ala Ser Lys Gly Asp Lys Ile Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ser Ile Gln Thr Pro Gly Glu Thr Lys Trp Cys Ser Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325 330 335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly Ser Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 139

<211> 403

<212> PRT

<213> construcción sintética

<400> 139

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

1

5

10

15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20

25

30

Glu Gly Cys Asn Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35

40

45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Lys Cys Leu

145 150 155 160

Gly Ile Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Glu Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

Thr Asn Ser Lys Gly Lys Arg Ala Ser Lys Gly Gly Arg Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ser Ile Gln Thr Ser Glu Glu Thr Lys Trp Cys Ser Ser Asp Gln

245

250

255

Leu Val Asn Ile His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Asn

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Lys Thr Trp Asn

325

330

335

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

340 345 350

Pro Asn Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

Gly Ser Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asn Pro Ser

<210> 140

<211> 403

<212> PRT

<213> construcción sintética

<400> 140

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Ser

145

150

155

160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Leu Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Asn Leu Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Arg Gly Ser Lys Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Met Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Ser Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325 330 335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Val Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 141

<211> 403

<212> PRT

<213> construcción sintética

<400> 141

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Ser Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asp Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Ile Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ser

85 90 95

Ala Tyr Asn Trp Lys Ile Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100	105	110	
His Thr Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr			
115	120	125	
Lys Glu Ser Leu Val Ile Ile Ser Pro Ser Val Ala Asp Leu Asp Pro			
130	135	140	
Tyr Asp Lys Ser Leu His Ser Met Val Phe Pro Asn Gly Lys Cys Ser			
145	150	155	160
Gly Ile Thr Val Tyr Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr			
165	170	175	
Ile Trp Met Pro Glu Lys Ala Gly Leu Gly Thr Ser Cys Asp Ile Phe			
180	185	190	
Thr Asn Ser Lys Gly Lys Arg Ala Ser Lys Gly Gly Arg Thr Cys Gly			
195	200	205	

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Arg Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Ala Thr Ile Gln Thr Pro Glu Glu Thr Lys Trp Cys Ser Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260 265 270

Val Glu Asp Leu Val Lys Lys Arg Glu Glu Cys Leu Asp Thr Leu Glu

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340

345

350

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

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Ile His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 142

<211> 403

<212> PRT

<213> construcción sintética

<400> 142

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Ser Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Thr Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

Gln Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Ser Asp Gly Lys Cys Leu

145

150

155

160

Gly Ile Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Glu Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Thr Ser Arg Gly Lys Arg Ala Ser Lys Gly Gly Lys Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Ser Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ser Ile Gln Ala Pro Asp Glu Ala Lys Trp Cys Ser Thr Asp Gln

245 250 255

Leu Val Asn Ile His Asp Ile Arg Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys
305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Ser
 325 330 335

Glu Val Ile Pro Ser Lys Gly Cys Leu Ser Val Gly Gly Arg Cys His
 340 345 350

Pro His Glu Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp
 355 360 365

Gly Ser Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His
 370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala
385 390 395 400

Asn Pro Ser

<210> 143

<211> 403

<212> PRT

<213> construcción sintética

<400> 143

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Ile Gly Tyr Val Thr Thr

65 70 75 80

Val Phe Lys Arg Lys His Ser Arg Pro Thr Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Ser

145

150

155

160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Leu Thr Asn His Glu Tyr Thr

165

170

175

Ile Trp Met Pro Glu Asn Leu Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Arg Gly Ser Lys Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Ala Met Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245

250

255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325 330 335

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

340 345 350

Pro His Val Lys Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Glu Ser Ser Ile Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 144

<211> 403

<212> PRT

<213> construcción sintética

<400> 144

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115 120 125

Lys Glu Ser Leu Val Ile Ile Ser Pro Ser Val Ser Asp Leu Asp Pro

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Ser

145 150 155 160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Pro Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Ser Lys Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Ala Ala Ile Gln Thr Ser Asp Glu Ala Lys Trp Cys Pro Pro Asp Gln

245

250

255

Leu Val Asn Ile His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met Leu Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 145

<211> 403

<212> PRT

<213> construcción sintética

<400> 145

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85 90 95

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

100 105 110

Gln Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115 120 125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Leu

145 150 155 160

Gly Ile Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Glu Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Asn Ser Lys Gly Lys Lys Ala Ser Lys Gly Gly Arg Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Thr Ile Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245

250

255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340

345

350

Pro His Val Asp Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 146

<211> 403

<212> PRT

<213> construcción sintética

<400> 146

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Leu Arg Pro Thr Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Ser

145 150 155 160

Gly Met Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

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

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Thr Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Met Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Ile Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 147

<211> 403

<212> PRT

<213> construcción sintética

<400> 147

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

1

5

10

15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20

25

30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35

40

45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Arg Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ser

85

90

95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Asn Gly Lys Cys Ser

145 150 155 160

Gly Leu Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Arg Gly Asn Lys Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Ile Asp Gly Thr Trp

225 230 235 240

Val Ala Met His Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Ile Arg Thr Trp Asp

325 330 335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Ser Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Val Glu Leu Leu Glu Ser Ser Val Val Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 148

<211> 403

<212> PRT

<213> construcción sintética

<400> 148

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

1

5

10

15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Ile Glu Asp

20

25

30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35

40

45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Arg Arg Lys His Phe Arg Pro Thr Ser Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Arg Thr Thr

115

120

125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Asn Gly Arg Cys Ser

145 150 155 160

Gly Leu Thr Val Ser Ser Thr Phe Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Asn Arg Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Met Gln Thr Ser Glu Glu Thr Lys Trp Cys Pro Pro Asp Gln

245

250

255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

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

325

330

335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Ser Asp

355 360 365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Val Glu Leu Leu Glu Ser Ser Val Val Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 149

<211> 403

<212> PRT

<213> construcción sintética

<400> 149

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Glu Phe Ser Tyr Val Glu Leu Lys Val

35 40 45

Gly Tyr Ile Leu Ala Ile Lys Met Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Arg Thr Thr

115

120

125

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

130

135

140

Tyr Asp Arg Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Ser

145

150

155

160

Gly Val Ala Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Met Ser Cys Asp Ile Phe

180

185

190

Thr Lys Ser Arg Gly Lys Arg Ala Ser Lys Gly Ser Glu Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Met Gln Thr Ser Asn Glu Thr Lys Trp Cys Pro Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser Leu Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325 330 335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Val His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 150

<211> 403

<212> PRT

<213> construcción sintética

<400> 150

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Leu Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Ser Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Ile Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115 120 125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Ser Arg Glu Lys Cys Leu

145 150 155 160

Gly Met Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

Thr Asn Ser Lys Gly Lys Arg Ala Ser Arg Gly Ser Lys Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Val Asp Gly Thr Trp

225 230 235 240

Ile Ala Met Gln Thr Ser Asp Glu Ala Lys Trp Cys Pro Ser Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

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

325

330

335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 151

<211> 403

<212> PRT

<213> construcción sintética

<400> 151

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Ile Val Glu Asp

20 25 30

Glu Gly Cys Ser Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Lys Cys Leu

145

150

155

160

Gly Ile Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Glu Pro Arg Leu Arg Thr Ser Cys Asp Ile Phe

180

185

190

Thr Asn Ser Lys Gly Lys Arg Ala Ser Lys Gly Gly Lys Met Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ser Val Gln Thr Pro Asp Glu Thr Lys Trp Cys Ser Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260 265 270

Val Glu Glu Leu Val Lys Lys Arg Glu Glu Cys Leu Asp Thr Leu Glu

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

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

325 330 335

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

340 345 350

Pro His Val Asn Gly Val Phe Leu Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ser

385 390 395 400

Asp Pro Ser

<210> 152

<211> 403

<212> PRT

<213> construcción sintética

<400> 152

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Ile Val Glu Asp

20 25 30

Glu Gly Cys Thr Ser Leu Ser Gly Leu Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Ile Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

Gln Asn Pro Tyr Pro Asp Ser His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

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

145

150

155

160

Gly Ile Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Glu Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

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

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Ser Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Ser Ile Gln Ile Pro Asp Glu Ile Lys Trp Cys Pro Ser Asp Gln

245

250

255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Asn Ser Val Arg Thr Trp Asn

325 330 335

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

340 345 350

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

355 360 365

Gly Ser Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 153

<211> 403

<212> PRT

<213> construcción sintética

<400> 153

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Ala Val Glu Asp

20 25 30

Glu Gly Cys Asn Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Thr Thr Thr

115 120 125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Lys Cys Met

145 150 155 160

Gly Ile Thr Val Ser Ser Thr Phe Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Asn Ala Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr Thr Ser Lys Gly Lys Lys Ala Ser Lys Gly Gly Lys Ile Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Ser Gly Leu Arg Leu Leu Asp Gly Thr Trp

225

230

235

240

Val Thr Ile Gln Thr Ser Asp Glu Ile Lys Trp Cys Pro Pro Asp Lys

245

250

255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260

265

270

Val Glu Glu Leu Val Arg Lys Arg Glu Glu Cys Leu Asp Thr Leu Glu

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Asn Thr Trp Asn

325

330

335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 154

<211> 403

<212> PRT

<213> construcción sintética

<400> 154

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85 90 95

Ala His Glu Trp Lys Thr Ala Gly Asp Pro Arg Tyr Glu Asp Ser Leu

100 105 110

Gln Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115 120 125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Lys Cys Leu

145 150 155 160

Gly Val Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Glu Ala Gly Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

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

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Ser Ile Gln Ala Pro Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245

250

255

Val Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

Glu Val Val Pro Ser Lys Gly Cys Leu Lys Val Gly Gly Arg Cys His

340

345

350

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

355

360

365

Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 155

<211> 403

<212> PRT

<213> construcción sintética

<400> 155

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Arg His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85

90

95

Ala His Asn Trp Lys Ile Ala Gly Asp Pro Arg Tyr Glu Asp Ser Leu

100

105

110

Gln Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Lys Cys Leu

145 150 155 160

Gly Val Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Glu Ala Gly Leu Gly Thr Ser Cys Asp Ile Phe

180 185 190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Gly Lys Thr Cys Gly

195 200 205

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

210 215 220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Ile Asp Gly Thr Trp

225 230 235 240

Val Ser Ile Gln Thr Pro Asp Glu Thr Lys Trp Cys Pro Pro Asp Gln

245 250 255

Val Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

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

305

310

315

320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340

345

350

Pro Asn Val Asp Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 156

<211> 403

<212> PRT

<213> construcción sintética

<400> 156

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

1

5

10

15

Ile Asp Ile His His Leu Cys Cys Pro Asn Asn Leu Val Ala Glu Glu

20

25

30

Glu Gly Cys Thr Ser Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35

40

45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Phe Arg Pro Met Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asp Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Asp Ser Leu

100

105

110

Gln Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Lys Cys Leu

145 150 155 160

Gly Ile Thr Ile Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

Ile Trp Met Pro Glu Glu Ala Arg Leu Gly Thr Ser Cys Asn Ile Phe

180 185 190

Thr Asn Ser Arg Gly Lys Lys Ala Ser Lys Gly Gly Arg Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ser Ile Gln Thr Ser Asn Glu Thr Lys Trp Cys Pro Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325 330 335

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

340 345 350

Pro His Val Asp Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Ile His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 157

<211> 403

<212> PRT

<213> construcción sintética

<400> 157

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

1

5

10

15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20

25

30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35

40

45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85

90

95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130 135 140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Leu

145 150 155 160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165 170 175

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

180 185 190

Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Ser Lys Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Trp Tyr Lys Ser Trp Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Ile Asp Gly Thr Trp

225 230 235 240

Ile Ala Met Gln Thr Ser Glu Glu Thr Lys Trp Cys Pro Pro Asp Gln

245

250

255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290

295

300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305

310

315

320

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

325

330

335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Tyr

<210> 158

<211> 403

<212> PRT

<213> construcción sintética

<400> 158

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

1 5 10 15

Ile Asp Leu His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Gly Gly Asn Cys Ser

145

150

155

160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Asn Leu Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Thr His Ser Arg Gly Lys Arg Ala Ser Lys Gly Asp Lys Thr Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Met Gln Thr Ser Asp Glu Thr Lys Trp Cys Pro Pro Gly Gln

245 250 255

Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Gln Thr Trp Asn

325 330 335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Ser Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 159

<211> 403

<212> PRT

<213> construcción sintética

<400> 159

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Leu Glu Leu Lys Val

35 40 45

Gly His Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Thr Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100	105	110	
Gln Asn Pro Tyr Pro Asp Tyr Gln Trp Leu Arg Thr Val Arg Thr Thr			
115	120	125	
Lys Glu Ser Leu Val Ile Ile Ser Pro Ser Ala Ala Asp Leu Asp Pro			
130	135	140	
Tyr Asp Lys Ser Leu His Ser Arg Val Phe Pro Ser Gly Lys Cys Ser			
145	150	155	160
Gly Ile Thr Val Ser Ser Val Tyr Cys Ser Thr Asn His Asp Tyr Thr			
165	170	175	
Ile Trp Met Pro Glu Asn Pro Arg Gln Gly Met Ser Cys Asp Ile Phe			
180	185	190	
Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Glu Arg Lys Thr Cys Gly			
195	200	205	

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

210 215 220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp Gly Thr Trp

225 230 235 240

Val Ala Met Gln Thr Ser Asn Glu Thr Lys Trp Cys Ser Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Ile Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Glu Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325

330

335

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

340

345

350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355

360

365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370

375

380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385

390

395

400

Asp Pro Ser

<210> 160

<211> 403

<212> PRT

<213> construcción sintética

<400> 160

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Arg Arg Lys His Phe Arg Pro Thr Pro Asp Ala Cys Arg Ala

85 90 95

Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Arg Val Phe Leu Asn Gly Lys Cys Ser

145

150

155

160

Gly Leu Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Ser

165

170

175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

Val Thr Ser Arg Gly Lys Arg Ala Ser Lys Gly Ser Lys Thr Cys Gly

195 200 205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Ile Asp Gly Thr Trp

225 230 235 240

Val Ala Met Gln Thr Ser Glu Glu Pro Lys Trp Cys Pro Pro Asp Gln

245 250 255

Leu Val Asn Leu His Asn Phe Arg Ser Asp Glu Ile Glu His Leu Val

260 265 270

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

275 280 285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Ile Arg Thr Trp Asp

325 330 335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Ser Asp

355 360 365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Val Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 161

<211> 403

<212> PRT

<213> construcción sintética

<400> 161

Asp Phe Pro Leu Tyr Thr Ile Pro Glu Lys Ile Gly Pro Trp Thr Pro

1 5 10 15

Ile Asp Leu Thr His Leu Ser Cys Pro Asn Asn Leu Leu Ser Glu Asp

20 25 30

Asp Gly Cys Ser Ser Ser Ser Thr Phe Ser Tyr Ile Glu Leu Arg Thr

35 40 45

Gly Tyr Leu Thr His Gln Lys Val Ser Gly Phe Thr Cys Thr Gly Val

50 55 60

Ile Asn Glu Ala Val Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Lys Pro Thr Ala Ser Ala Cys Arg Asp

85

90

95

Ala Tyr His Trp Lys Ile Ser Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

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

115

120

125

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

130

135

140

Tyr Ser Arg Ser Leu His Ser Pro Met Phe Pro Thr Gly Arg Cys Tyr

145

150

155

160

Asp Phe Tyr Lys Ser Thr Pro Ser Cys Leu Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Leu Pro Asp Asp Ala Asn Val Arg Leu Thr Cys Asp Ile Phe

180

185

190

Val Thr Ser Thr Gly Lys Lys Ser Met Asn Gly Ser Lys Met Cys Gly

195

200

205

Phe Thr Asp Glu Arg Gly Leu Tyr Arg Thr Leu Lys Gly Ala Cys Lys

210

215

220

Leu Thr Leu Cys Gly Lys Pro Gly Leu Arg Leu Phe Asp Gly Thr Trp

225

230

235

240

Ile Ser Ile Thr Arg Pro Glu Ile Val Met Trp Cys Ser Pro Asn Gln

245

250

255

Leu Val Asn Val His Asn Asn Arg Val Asp Glu Ile Glu His Leu Ile

260

265

270

Val Gly Asp Leu Ile Arg Arg Arg Glu Glu Cys Leu Asp Thr Leu Glu

275

280

285

Thr Val Leu Met Ser Lys Ser Val Ser Phe Arg Arg Leu Ser His Phe

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Ala Asn Gly

305 310 315 320

Ser Leu Met Glu Thr Asn Val His Tyr Lys Arg Val Asp Arg Trp Glu

325 330 335

Glu Ile Leu Pro Ser Lys Gly Cys Leu Lys Leu Asn Asp Lys Cys Leu

340 345 350

Asn Pro Glu Asn Gly Val Phe Phe Asn Gly Ile Ile Lys Gly Pro Asp

355 360 365

Gly Gln Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Lys Gln His

370 375 380

Met Asp Leu Leu Lys Ala Ser Val Phe Pro Leu Arg His Pro Leu Ile

385 390 395 400

Asp Gln Thr

<210> 162

<211> 403

<212> PRT

<213> construcción sintética

<400> 162

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Thr Leu Thr Pro Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Thr Ser Ile Lys Val Ser Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Arg Arg Arg His Phe Arg Pro Ser Val Asn Ser Cys Arg Asp

85 90 95

Ala Tyr Asn Trp Lys Ile Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Asn Pro Tyr Pro Asp Ser His Trp Leu Arg Thr Val Lys Thr Thr

115 120 125

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

130 135 140

Tyr Asp Lys Lys Leu Tyr Ser Lys Met Phe Pro Asn Gly Lys Cys Ser

145 150 155 160

Glu Ile Ser Pro Gly Ser Pro Phe Cys Pro Thr Asn His Glu Tyr Thr

165 170 175

Ile Trp Met Pro Glu Ser Ser Asn Pro Gly Ile Ser Cys Asp Ile Phe

180

185

190

Thr Arg Ser Met Gly Lys Lys Ala Thr Lys Asp Gly Gln Leu Cys Gly

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Arg

210

215

220

Leu Arg Leu Cys Gly Ile Ser Gly Leu Arg Leu Met Asp Gly Ser Trp

225

230

235

240

Val Ser Leu Pro Gln Val Asn Asn Ser Glu Trp Cys Ser Pro Asp Gln

245

250

255

Leu Val Asn Ile His Asp Phe His Ser Asp Glu Ile Glu His Leu Val

260

265

270

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

275

280

285

Thr Ile Ile Phe Thr Lys Ser Ile Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Ile Asn Arg

305 310 315 320

Thr Leu Met Glu Ala Glu Ala His Tyr Lys Ser Val Arg Glu Trp Lys

325 330 335

Glu Ile Ile Pro Ser Lys Gly Cys Leu Lys Ala Gly Gly Arg Cys Tyr

340 345 350

Pro His His Asn Gly Ile Phe Phe Asn Gly Ile Ile Leu Gly Pro Gly

355 360 365

Gly Glu Ile Leu Ile Pro Glu Met Gln Ser Ala Leu Leu Gln Gln His

370 375 380

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

385 390 395 400

Asp Pro Ser

<210> 163

<211> 403

<212> PRT

<213> construcción sintética

<400> 163

Asp Phe Pro Leu Tyr Thr Ile Pro Glu Lys Ile Asp Ser Trp Thr Pro

1 5 10 15

Ile Asp Met Ile His Leu Ser Cys Pro Asn Asn Leu Leu Ser Gly Asp

20 25 30

Asp Gly Cys Ser Thr Ser Thr Ser Phe Ser Tyr Val Glu Leu Lys Thr

35 40 45

Gly Tyr Leu Thr His Gln Lys Val Ser Gly Phe Thr Cys Thr Gly Val

50 55 60

Ile Ser Glu Ala Val Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Lys Pro Thr Val Ser Ala Cys Arg Asp

85 90 95

Ala Phe His Trp Lys Ile Ser Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100 105 110

His Thr Pro Tyr Pro Asp Ser Ser Trp Leu Arg Thr Val Thr Thr Thr

115 120 125

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

130 135 140

Tyr Ser Arg Thr Leu His Ser Pro Met Phe Pro Thr Gly Thr Cys Ser

145 150 155 160

Arg Phe Tyr Pro Ser Val Pro Ser Cys Ala Thr Asn His Asp Tyr Thr

165

170

175

Leu Trp Leu Pro Glu Asp Ser Asn Leu Ser Leu Ile Cys Asp Ile Phe

180

185

190

Val Thr Ser Thr Gly Arg Lys Ala Met Asn Gly Ser Lys Met Cys Gly

195

200

205

Phe Thr Asp Glu Arg Gly Phe Tyr Arg Thr Leu Arg Gly Ala Cys Lys

210

215

220

Leu Thr Leu Cys Gly Lys Pro Gly Leu Arg Leu Tyr Asp Gly Thr Trp

225

230

235

240

Val Ser Phe Thr Arg Pro Glu Val His Val Trp Cys Ser Pro Asn Gln

245

250

255

Leu Val Asn Val His Asn Asn Arg Ile Asp Glu Leu Glu His Leu Ile

260

265

270

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

275

280

285

Thr Ile Leu Met Ser Lys Ser Ile Ser Phe Arg Arg Leu Ser His Phe

290

295

300

Arg Lys Leu Val Pro Gly Tyr Gly Lys Ala Tyr Thr Ile Leu Asn Gly

305

310

315

320

Ser Leu Met Glu Thr Asn Val His Tyr Arg Arg Val Asp Asn Trp Thr

325

330

335

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

340

345

350

Asp Pro His Lys Gly Val Tyr Phe Asn Gly Ile Ile Lys Gly Pro Asp

355

360

365

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

370

375

380

Ile Asp Leu Leu Lys Ala Ala Val Phe Pro Leu Arg His Pro Leu Ile

385 390 395 400

Asp Gln Ser

<210> 164

<211> 403

<212> PRT

<213> construcción sintética

<400> 164

Asp Phe Pro Leu Tyr Thr Ile Pro Glu Arg Leu Asn Pro Trp Thr Pro

1 5 10 15

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

20 25 30

Glu Gly Cys Ser Glu Thr Ser Ser Phe Thr Tyr Val Glu Leu Lys Thr

35 40 45

Gly Phe Leu Ala His Gln Lys Val Pro Gly Phe Thr Cys Thr Gly Val

50

55

60

Ile Asn Glu Ala Val Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Phe Lys Pro Thr Val Ser Ala Cys Arg Asp

85

90

95

Ala Phe Asn Trp Lys Val Ser Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

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

115

120

125

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

130

135

140

Tyr Gly Arg Thr Leu His Ser Pro Met Phe Pro Thr Gly Ile Cys Ser

145 150 155 160

Lys Phe Tyr Pro Ser Ile Pro Ser Cys Ala Thr Asn His Asp Tyr Thr

165 170 175

Leu Trp Leu Pro Glu Asp Pro Asn Leu Ser Leu Ile Cys Asp Ile Phe

180 185 190

Val Thr Ser Thr Gly Arg Lys Ala Met Asn Gly Ser Arg Met Cys Gly

195 200 205

Phe Thr Asp Glu Arg Gly Phe Tyr Arg Thr Leu Lys Gly Ala Cys Lys

210 215 220

Leu Thr Leu Cys Gly Lys Pro Gly Leu Arg Leu Tyr Asp Gly Thr Trp

225 230 235 240

Val Ser Phe Thr Arg Pro Glu Ile His Val Trp Cys Ser Pro Asp Gln

245 250 255

Leu Val Asn Val His Asn Asn Arg Ile Asp Glu Ile Glu His Leu Ile

260

265

270

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

275

280

285

Thr Val Leu Met Ser Lys Ser Leu Ser Phe Arg Arg Leu Ser His Phe

290

295

300

Arg Lys Leu Val Pro Gly Tyr Gly Lys Ala Tyr Thr Ile Leu Asn Gly

305

310

315

320

Ser Leu Met Glu Thr Asn Val His Tyr Lys Arg Val Asp Asn Trp Val

325

330

335

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

340

345

350

Glu Ser Asp Thr Gly Val Phe Phe Asn Gly Ile Ile Lys Gly Pro Asp

355

360

365

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

370

375

380

Met Asp Leu Leu Lys Ala Ala Val Phe Pro Leu Arg His Pro Leu Ile

385

390

395

400

Asp Lys Ala

<210> 165

<211> 403

<212> PRT

<213> construcción sintética

<400> 165

Glu Phe Pro Leu Tyr Thr Ile Pro Glu Lys Ile Glu Lys Trp Thr Pro

1

5

10

15

Ile Asp Met Ile His Leu Ser Cys Pro Asn Asn Leu Leu Ser Glu Glu

20

25

30

Glu Gly Cys Asn Thr Glu Ser Pro Leu Thr Tyr Phe Glu Leu Lys Ser

35

40

45

Gly Tyr Leu Ala His Gln Lys Val Pro Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Phe Gly Pro Thr Val Ala Ala Cys Arg Asp

85

90

95

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

100

105

110

His Thr Pro Tyr Pro Asp Ser Ser Trp Leu Arg Thr Val Thr Thr Thr

115

120

125

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

130

135

140

Tyr Gly Arg Thr Leu His Ser Pro Met Phe Pro Ser Gly Ile Cys Ser

145 150 155 160

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

165 170 175

Leu Trp Leu Pro Glu Asp Pro Ser Leu Ser Leu Ile Cys Asp Ile Phe

180 185 190

Thr Ser Gly Ser Gly Arg Lys Ala Met Asn Gly Ser Arg Ile Cys Gly

195 200 205

Phe Lys Asp Glu Arg Gly Phe Tyr Arg Ser Leu Lys Gly Ala Cys Lys

210 215 220

Leu Thr Leu Cys Gly Lys Pro Gly Ile Arg Leu Phe Asp Gly Thr Trp

225 230 235 240

Val Ser Phe Thr Arg Pro Glu Val His Val Trp Cys Thr Pro Asn Gln

245 250 255

Leu Val Asn Ile His Asn Asp Arg Leu Asp Glu Ile Glu His Leu Ile

260 265 270

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

275 280 285

Thr Ile Phe Met Ser Gln Ser Ile Ser Phe Arg Arg Leu Ser His Phe

290 295 300

Arg Lys Leu Val Pro Gly Tyr Gly Lys Ala Tyr Thr Ile Leu Asn Gly

305 310 315 320

Ser Leu Met Glu Ala Asn Val Tyr Tyr Lys Arg Val Asp Lys Trp Ala

325 330 335

Asp Ile Leu Pro Ser Lys Gly Cys Leu Lys Val Gly Gln Gln Cys Met

340 345 350

Asp Pro Val Asn Gly Val Phe Phe Asn Gly Ile Ile Lys Gly Pro Asp

355

360

365

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

370

375

380

Met Asp Leu Leu Lys Ala Ala Val Phe Pro Leu Arg His Pro Leu Ile

385

390

395

400

Ser Gln Glu

<210> 166

<211> 403

<212> PRT

<213> construcción sintética

<400> 166

Asp Phe Pro Leu Tyr Thr Ile Pro Glu Lys Ile Gly Thr Trp Thr Pro

1

5

10

15

Ile Asp Leu Ile His Leu Thr Cys Pro Asn Asn Leu Leu Ser Gly Asp

20

25

30

Asp Gly Cys Ser Asp Thr Ala Thr Phe Gly Tyr Ile Glu Leu Lys Thr

35

40

45

Gly Tyr Leu Thr His Gln Lys Val Ser Gly Phe Thr Cys Thr Gly Val

50

55

60

Val Asn Glu Ala Val Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65

70

75

80

Thr Phe Lys Arg Lys His Phe Lys Pro Thr Ala Leu Ala Cys Arg Asp

85

90

95

Ala Phe His Trp Lys Ile Ser Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

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

115

120

125

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

130 135 140

Tyr Ser Arg Thr Leu His Ser Pro Met Phe Pro Gly Gly Val Cys Ser

145 150 155 160

Lys Phe Tyr Pro Ser Ser Pro Ser Cys Pro Thr Asn His Asp Tyr Thr

165 170 175

Leu Trp Leu Pro Glu Asp Ala Asn Leu Ser Met Ala Cys Asp Ile Phe

180 185 190

Val Thr Ser Thr Gly Lys Lys Ser Met Asn Gly Ser Arg Met Cys Gly

195 200 205

Phe Thr Asp Glu Arg Gly Phe Tyr Arg Thr Leu Lys Gly Ala Cys Lys

210 215 220

Leu Thr Leu Cys Gly Lys Pro Gly Leu Arg Leu Tyr Asp Gly Thr Trp

225 230 235 240

Val Ser Phe Thr Arg Pro Glu Ile Asn Val Trp Cys Ser Pro Asn Gln

245

250

255

Leu Val Asn Val His Asn Asn Arg Leu Asp Glu Ile Glu His Leu Ile

260

265

270

Val Gly Asp Leu Ile Arg Lys Arg Glu Glu Cys Leu Asp Thr Leu Glu

275

280

285

Thr Ile Leu Met Ser Lys Ser Ile Ser Phe Arg Arg Leu Ser His Phe

290

295

300

Arg Lys Leu Val Pro Gly Tyr Gly Lys Ala Tyr Thr Ile Ile Asn Gly

305

310

315

320

Ser Leu Met Glu Thr Asn Val His Tyr Leu Arg Val Asp Ser Trp Asn

325

330

335

Asp Ile Leu Pro Ser Lys Gly Cys Leu Lys Met Asn Lys Gln Cys Val

340 345 350

Asp Ser Tyr Lys Gly Val Phe Phe Asn Gly Ile Ile Lys Gly Leu Asp

355 360 365

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

370 375 380

Met Asp Leu Leu Lys Ala Ala Val Phe Pro Leu Arg His Pro Leu Ile

385 390 395 400

Asp Gln Asn

<210> 167

<211> 403

<212> PRT

<213> construcción sintética

<400> 167

Glu Phe Pro Leu Tyr Thr Ile Pro Glu Lys Ile Glu Lys Trp Thr Pro

1 5 10 15

Ile Asp Met Ile His Leu Ser Cys Pro Asn Asn Met Leu Ser Glu Glu

20 25 30

Glu Gly Cys Asn Thr Glu Ser Pro Phe Thr Tyr Phe Glu Leu Lys Ser

35 40 45

Gly Tyr Leu Ala His Gln Lys Val Pro Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Asn Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Lys Pro Thr Val Ala Ala Cys Arg Asp

85 90 95

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

100 105 110

His Thr Pro Tyr Pro Asp Ser Ser Trp Leu Arg Thr Val Thr Thr Thr

115

120

125

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

130

135

140

Tyr Gly Arg Thr Leu His Ser Pro Met Phe Pro Ser Gly Lys Cys Ser

145

150

155

160

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

165

170

175

Leu Trp Leu Pro Glu Asp Ser Ser Leu Ser Leu Ile Cys Asp Ile Phe

180

185

190

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

195

200

205

Phe Lys Asp Glu Arg Gly Phe Tyr Arg Ser Leu Lys Gly Ser Cys Lys

210

215

220

Leu Thr Leu Cys Gly Lys Pro Gly Ile Arg Leu Phe Asp Gly Thr Trp
225 230 235 240

Val Ser Phe Thr Lys Pro Asp Val His Val Trp Cys Thr Pro Asn Gln
 245 250 255

Leu Val Asn Ile His Asn Asp Arg Leu Asp Glu Val Glu His Leu Ile
 260 265 270

Val Asp Asp Ile Ile Lys Lys Arg Glu Glu Cys Leu Asp Thr Leu Glu
 275 280 285

Thr Ile Leu Met Ser Gln Ser Val Ser Phe Arg Arg Leu Ser His Phe
 290 295 300

Arg Lys Leu Val Pro Gly Tyr Gly Lys Ala Tyr Thr Ile Leu Asn Gly
305 310 315 320

Ser Leu Met Glu Thr Asn Val Tyr Tyr Lys Arg Val Asp Arg Trp Ala
 325 330 335

Asp Ile Leu Pro Ser Arg Gly Cys Leu Lys Val Gly Gln Gln Cys Met

340

345

350

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

355

360

365

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

370

375

380

Met Asp Leu Leu Lys Ala Ala Met Phe Pro Leu Arg His Pro Leu Ile

385

390

395

400

Asn Arg Glu

<210> 168

<211> 403

<212> PRT

<213> construcción sintética

<400> 168

Glu Phe Pro Leu Tyr Thr Ile Pro Glu Lys Ile Glu Lys Trp Thr Pro

1 5 10 15

Ile Asp Met Ile His Leu Ser Cys Pro Asn Asn Leu Leu Ser Glu Glu

20 25 30

Glu Gly Cys Asn Thr Glu Ser Pro Phe Thr Tyr Phe Glu Leu Lys Ser

35 40 45

Gly Tyr Leu Ala His Gln Lys Val Pro Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Asn Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Met Pro Thr Val Ala Ala Cys Arg Asp

85 90 95

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

100 105 110

His Thr Pro Tyr Pro Asp Ser Ser Trp Leu Arg Thr Val Thr Thr Thr

115 120 125

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

130 135 140

Tyr Gly Arg Thr Leu His Ser Pro Met Phe Pro Ser Gly Ile Cys Ser

145 150 155 160

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

165 170 175

Leu Trp Leu Pro Glu Asp Pro Ser Leu Ser Leu Ile Cys Asp Ile Phe

180 185 190

Thr Ser Ser Ser Gly Gln Lys Val Met Asn Gly Ser Arg Ile Cys Gly

195 200 205

Phe Arg Asp Glu Arg Gly Phe Tyr Arg Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Thr Leu Cys Gly Arg Pro Gly Ile Arg Leu Phe Asp Gly Thr Trp

225

230

235

240

Val Ser Phe Thr Lys Pro Asp Ile His Val Trp Cys Thr Pro Asn Gln

245

250

255

Leu Val Asn Ile His Asn Asp Arg Leu Asp Glu Ile Glu His Leu Ile

260

265

270

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

275

280

285

Thr Ile Leu Met Ser Gln Ser Ile Ser Phe Arg Arg Leu Ser His Phe

290

295

300

Arg Lys Leu Val Pro Gly Tyr Gly Lys Ala Tyr Thr Ile Leu Asn Gly

305

310

315

320

Ser Leu Met Glu Thr Asn Val Tyr Tyr Lys Arg Val Asp Lys Trp Thr

325

330

335

Asp Ile Leu Pro Ser Lys Gly Cys Leu Lys Val Gly Gln Gln Cys Met

340

345

350

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

355

360

365

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

370

375

380

Met Asp Leu Leu Lys Ala Ala Val Phe Pro Leu Arg His Pro Leu Ile

385

390

395

400

Lys Arg Glu

<210> 169

<211> 403

<212> PRT

<213> construcción sintética

<400> 169

Asp Phe Pro Leu Tyr Thr Ile Pro Glu Lys Ile Gly Pro Trp Thr Pro

1 5 10 15

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

20 25 30

Glu Gly Cys Gly Thr Ser Ser Val Phe Ser Tyr Val Glu Leu Lys Thr

35 40 45

Gly Tyr Leu Thr His Gln Lys Val Ser Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Asn Glu Ala Val Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Lys Pro Thr Ala Leu Ala Cys Arg Asp

85 90 95

Ala Tyr His Trp Lys Ile Ser Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

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

115

120

125

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

130

135

140

Tyr Ser Arg Thr Leu His Ser Pro Met Phe Pro Thr Gly Thr Cys Ser

145

150

155

160

Arg Phe Tyr Pro Ser Ser Pro Ser Cys Ala Thr Asn His Asp Tyr Thr

165

170

175

Leu Trp Leu Pro Asp Asp Pro Asn Leu Ser Leu Ala Cys Asp Ile Phe

180

185

190

Val Thr Ser Thr Gly Lys Lys Ser Met Asn Gly Ser Arg Met Cys Gly

195 200 205

Phe Thr Asp Glu Arg Gly Tyr Tyr Arg Thr Ile Lys Gly Ala Cys Lys

210 215 220

Leu Thr Leu Cys Gly Lys Pro Gly Leu Arg Leu Phe Asp Gly Thr Trp

225 230 235 240

Ile Ser Phe Thr Arg Pro Glu Val Thr Thr Arg Cys Leu Pro Asn Gln

245 250 255

Leu Val Asn Ile His Asn Asn Arg Ile Asp Glu Val Glu His Leu Ile

260 265 270

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

275 280 285

Thr Val Leu Met Ser Lys Ser Ile Ser Phe Arg Arg Leu Ser His Phe

290 295 300

Arg Lys Leu Val Pro Gly Tyr Gly Lys Ala Tyr Thr Ile Leu Asn Gly

305 310 315 320

Ser Leu Met Glu Thr Asn Val His Tyr Leu Lys Val Asp Asn Trp Ser

325 330 335

Glu Ile Leu Pro Ser Lys Gly Cys Leu Lys Ile Asn Asn Gln Cys Val

340 345 350

Ala His Tyr Lys Gly Val Phe Phe Asn Gly Ile Ile Lys Gly Pro Asp

355 360 365

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

370 375 380

Met Asp Leu Leu Lys Ala Ala Val Phe Pro Leu Arg His Pro Leu Ile

385 390 395 400

Glu Pro Gly

<210> 170

<211> 403

<212> PRT

<213> construcción sintética

<400> 170

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

1 5 10 15

Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Met Val Val Glu Asp

20 25 30

Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu Leu Lys Val

35 40 45

Gly Tyr Ile Ser Ala Ile Lys Val Asn Gly Phe Thr Cys Thr Gly Val

50 55 60

Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr Val Thr Thr

65 70 75 80

Thr Phe Lys Arg Lys His Phe Arg Pro Val Pro Asp Ala Cys Arg Asp

85

90

95

Ala His Asn Trp Lys Ile Ala Gly Asp Pro Arg Tyr Glu Glu Ser Leu

100

105

110

His Asn Pro Tyr Pro Asp Tyr His Trp Leu Arg Thr Val Lys Thr Thr

115

120

125

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

130

135

140

Tyr Asp Lys Ser Leu His Ser Ser Val Phe Pro Gly Gly Lys Cys Ser

145

150

155

160

Gly Ile Thr Val Ser Ser Thr Tyr Cys Ser Thr Asn His Asp Tyr Thr

165

170

175

Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Thr Ser Cys Asp Ile Phe

180

185

190

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

195

200

205

Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly Ala Cys Lys

210

215

220

Leu Lys Leu Cys Gly Val Pro Gly Leu Arg Leu Met Asp Gly Thr Trp

225

230

235

240

Val Ala Ile Gln Thr Ser Asp Glu Val Lys Trp Cys Pro Pro Asp Gln

245

250

255

Leu Val Asn Leu His Asp Leu His Ser Asp Glu Leu Glu His Arg Val

260

265

270

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

275

280

285

Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu Ser His Leu

290 295 300

Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile Phe Asn Lys

305 310 315 320

Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg Thr Trp Asn

325 330 335

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

340 345 350

Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu Gly Pro Asp

355 360 365

Gly His Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu Gln Gln His

370 375 380

Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Met His Pro Leu Ala

385 390 395 400

Asp Pro Ser

<210> 171

<211> 153

<212> PRT

<213> construcción sintética

<400> 171

Lys Tyr Asp Gly Ser Lys Leu Arg Ile Gly Ile Leu His Ala Arg Gly

1 5 10 15

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

20 25 30

Gln Glu Phe Gly Val Lys Arg Glu Asn Ile Ile Ile Glu Thr Val Pro

35 40 45

Gly Ser Phe Glu Leu Pro Tyr Gly Ser Lys Leu Phe Val Glu Lys Gln

50 55 60

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

65 70 75 80

Ile Arg Gly Ser Thr Pro His Phe Asp Tyr Ile Ala Asp Ser Thr Thr

85 90 95

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

100 105 110

Gly Val Ile Thr Ala Asp Thr Asp Glu Gln Ala Glu Ala Arg Ala Gly

115 120 125

Leu Ile Glu Gly Lys Met His Asn His Gly Glu Asp Trp Gly Ala Ala

130 135 140

Ala Val Glu Met Ala Thr Lys Phe Asn

145 150

<210> 172

<211> 150

<212> PRT

<213> construcción sintética

<400> 172

Lys Tyr Asp Gly Ser Lys Leu Arg Ile Gly Ile Leu His Ala Arg Gly

1 5 10 15

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

20 25 30

Gln Glu Phe Gly Val Lys Arg Glu Asn Ile Ile Ile Glu Thr Val Pro

35 40 45

Gly Ser Phe Glu Leu Pro Tyr Gly Ser Lys Leu Phe Val Glu Lys Gln

50 55 60

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

65 70 75 80

Ile Arg Gly Ser Thr Ala His Phe Asp Tyr Ile Ala Asp Ser Thr Thr

85 90 95

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

100

105

110

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

115

120

125

Thr Lys Ala Gly Asn His Gly Glu Asp Trp Gly Ala Ala Ala Val Glu

130

135

140

Met Ala Thr Lys Phe Asn

145

150

<210> 173

<211> 205

<212> PRT

<213> construcción sintética

<400> 173

Met Lys Met Glu Glu Leu Phe Lys Lys His Lys Ile Val Ala Val Leu

1

5

10

15

Arg Ala Asn Ser Val Glu Glu Ala Lys Lys Lys Ala Leu Ala Val Phe

20

25

30

Leu Gly Gly Val His Leu Ile Glu Ile Thr Phe Thr Val Pro Asp Ala

35

40

45

Asp Thr Val Ile Lys Glu Leu Ser Phe Leu Lys Glu Met Gly Ala Ile

50

55

60

Ile Gly Ala Gly Thr Val Thr Ser Val Glu Gln Cys Arg Lys Ala Val

65

70

75

80

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

85

90

95

Ser Gln Phe Cys Lys Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met

100

105

110

Thr Pro Thr Glu Leu Val Lys Ala Met Lys Leu Gly His Thr Ile Leu

115

120

125

Lys Leu Phe Pro Gly Glu Val Val Gly Pro Gln Phe Val Lys Ala Met

130

135

140

Lys Gly Pro Phe Pro Asn Val Lys Phe Val Pro Thr Gly Gly Val Asn

145

150

155

160

Leu Asp Asn Val Cys Glu Trp Phe Lys Ala Gly Val Leu Ala Val Gly

165

170

175

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

180

185

190

Ala Lys Ala Phe Val Glu Lys Ile Arg Gly Cys Thr Glu

195

200

205

<210> 174

<211> 205

<212> PRT

<213> construcción sintética

<400> 174

Met Lys Ile Glu Glu Leu Phe Lys Lys His Lys Ile Val Ala Val Leu

1 5 10 15

Arg Ala Asn Ser Val Glu Glu Ala Lys Lys Lys Ala Leu Ala Val Phe

20 25 30

Leu Gly Gly Val His Leu Ile Glu Ile Thr Phe Thr Val Pro Asp Ala

35 40 45

Asp Thr Val Ile Lys Glu Leu Ser Phe Leu Lys Glu Met Gly Ala Ile

50 55 60

Ile Gly Ala Gly Thr Val Thr Ser Val Glu Gln Cys Arg Lys Ala Val

65 70 75 80

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

85 90 95

Ser Gln Phe Cys Lys Glu Lys Gly Val Glu Tyr Met Pro Gly Val Met

100	105	110
Thr	Pro	Thr
Glu	Leu	Val
Lys	Ala	Met
Lys	Leu	Gly
His	Thr	Ile
Leu		
115	120	125
Lys	Leu	Phe
Pro	Gly	Glu
Val	Val	Gly
Pro	Gln	Phe
Val	Lys	Ala
Met		
130	135	140
Lys	Gly	Pro
Phe	Pro	Asn
Val	Lys	Phe
Val	Pro	Thr
Gly	Gly	Val
Asn		
145	150	155
160		
Leu	Asp	Asn
Val	Cys	Glu
Trp	Phe	Lys
Ala	Gly	Val
Leu	Ala	Val
Gly		
165	170	175
Val	Gly	Ser
Ala	Leu	Val
Lys	Gly	Thr
Pro	Val	Glu
Val	Ala	Glu
Lys		
180	185	190
Ala	Lys	Ala
Phe	Val	Glu
Lys	Ile	Arg
Gly	Cys	Thr
Glu		
195	200	205

<210> 175

<211> 205

<212> PRT

<213> construcción sintética

<400> 175

Met Lys Met Glu Glu Leu Phe Lys Lys His Lys Ile Val Ala Val Leu

1 5 10 15

Arg Ala Asn Ser Val Glu Glu Ala Lys Glu Lys Ala Leu Ala Val Phe

20 25 30

Glu Gly Gly Val His Leu Ile Glu Ile Thr Phe Thr Val Pro Asp Ala

35 40 45

Asp Thr Val Ile Lys Glu Leu Ser Phe Leu Lys Glu Lys Gly Ala Ile

50 55 60

Ile Gly Ala Gly Thr Val Thr Ser Val Glu Gln Cys Arg Lys Ala Val

65 70 75 80

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

85

90

95

Ser Gln Phe Cys Lys Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met

100

105

110

Thr Pro Thr Glu Leu Val Lys Ala Met Lys Leu Gly His Thr Ile Leu

115

120

125

Lys Leu Phe Pro Gly Glu Val Val Gly Pro Gln Phe Val Lys Ala Met

130

135

140

Lys Gly Pro Phe Pro Asn Val Lys Phe Val Pro Thr Gly Gly Val Asn

145

150

155

160

Leu Asp Asn Val Cys Glu Trp Phe Lys Ala Gly Val Leu Ala Val Gly

165

170

175

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

180

185

190

Ala Lys Ala Phe Val Glu Lys Ile Arg Gly Cys Thr Glu

195

200

205

<210> 176

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<212> PRT

<213> construcción sintética

<400> 176

Met Lys Met Glu Glu Leu Phe Lys Lys His Lys Ile Val Ala Val Leu

1

5

10

15

Arg Ala Asn Ser Val Glu Glu Ala Lys Lys Lys Ala Leu Ala Val Phe

20

25

30

Leu Gly Gly Val His Leu Ile Glu Ile Thr Phe Thr Val Pro Asp Ala

35

40

45

Asp Thr Val Ile Lys Glu Leu Ser Phe Leu Lys Glu Met Gly Ala Ile

50

55

60

Ile Gly Ala Gly Thr Val Thr Ser Val Glu Gln Cys Arg Lys Ala Val

65 70 75 80

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

85 90 95

Ser Gln Phe Cys Lys Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met

100 105 110

Thr Pro Thr Glu Leu Val Lys Ala Met Lys Leu Gly His Thr Ile Leu

115 120 125

Lys Leu Phe Pro Gly Glu Val Val Gly Pro Gln Phe Val Lys Ala Met

130 135 140

Lys Gly Pro Phe Pro Asn Val Lys Phe Val Pro Thr Gly Gly Val Asn

145 150 155 160

Leu Asp Asn Val Cys Glu Trp Phe Lys Ala Gly Val Leu Ala Val Gly

165 170 175

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

180

185

190

Ala Lys Ala Phe Val Glu Lys Ile Arg Gly Cys Thr Glu

195

200

205

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<211> 205

<212> PRT

<213> construcción sintética

<400> 177

Met Lys Ile Glu Glu Leu Phe Lys Lys His Lys Ile Val Ala Val Leu

1

5

10

15

Arg Ala Asn Ser Val Glu Glu Ala Lys Lys Lys Ala Leu Ala Val Phe

20

25

30

Leu Gly Gly Val His Leu Ile Glu Ile Thr Phe Thr Val Pro Asp Ala

35

40

45

Asp Thr Val Ile Lys Glu Leu Ser Phe Leu Lys Glu Met Gly Ala Ile

50

55

60

Ile Gly Ala Gly Thr Val Thr Ser Val Glu Gln Cys Arg Lys Ala Val

65

70

75

80

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

85

90

95

Ser Gln Phe Cys Lys Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met

100

105

110

Thr Pro Thr Glu Leu Val Lys Ala Met Lys Leu Gly His Thr Ile Leu

115

120

125

Lys Leu Phe Pro Gly Glu Val Val Gly Pro Gln Phe Val Lys Ala Met

130

135

140

Lys Gly Pro Phe Pro Asn Val Lys Phe Val Pro Thr Gly Gly Val Asn

145 150 155 160

Leu Asp Asn Val Cys Glu Trp Phe Lys Ala Gly Val Leu Ala Val Gly

165 170 175

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

180 185 190

Ala Lys Ala Phe Val Glu Lys Ile Arg Gly Cys Thr Glu

195 200 205

<210> 178

<211> 205

<212> PRT

<213> construcción sintética

<400> 178

Met Lys Met Glu Glu Leu Phe Lys Lys His Lys Ile Val Ala Val Leu

1 5 10 15

Arg Ala Asn Ser Val Glu Glu Ala Lys Lys Lys Ala Leu Ala Val Phe

20 25 30

Leu Gly Gly Val His Leu Ile Glu Ile Thr Phe Thr Val Pro Asp Ala

35 40 45

Asp Thr Val Ile Lys Glu Leu Ser Phe Leu Lys Glu Met Gly Ala Ile

50 55 60

Ile Gly Ala Gly Thr Val Thr Ser Val Glu Gln Ala Arg Lys Ala Val

65 70 75 80

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

85 90 95

Ser Gln Phe Ala Lys Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met

100 105 110

Thr Pro Thr Glu Leu Val Lys Ala Met Lys Leu Gly His Thr Ile Leu

115 120 125

Lys Leu Phe Pro Gly Glu Val Val Gly Pro Gln Phe Val Lys Ala Met

130

135

140

Lys Gly Pro Phe Pro Asn Val Lys Phe Val Pro Thr Gly Gly Val Asn

145

150

155

160

Leu Asp Asn Val Cys Glu Trp Phe Lys Ala Gly Val Leu Ala Val Gly

165

170

175

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

180

185

190

Ala Lys Ala Phe Val Glu Lys Ile Arg Gly Cys Thr Glu

195

200

205

<210> 179

<211> 205

<212> PRT

<213> construcción sintética

<400> 179

Met Lys Met Glu Glu Leu Phe Lys Lys His Lys Ile Val Ala Val Leu

1 5 10 15

Arg Ala Asn Ser Val Glu Glu Ala Lys Met Lys Ala Leu Ala Val Phe

20 25 30

Val Gly Gly Val His Leu Ile Glu Ile Thr Phe Thr Val Pro Asp Ala

35 40 45

Asp Thr Val Ile Lys Glu Leu Ser Phe Leu Lys Glu Leu Gly Ala Ile

50 55 60

Ile Gly Ala Gly Thr Val Thr Ser Val Glu Gln Cys Arg Lys Ala Val

65 70 75 80

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

85 90 95

Ser Gln Phe Cys Lys Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met

100 105 110

Thr Pro Thr Glu Leu Val Lys Ala Met Lys Leu Gly His Thr Ile Leu

115

120

125

Lys Leu Phe Pro Gly Glu Val Val Gly Pro Gln Phe Val Lys Ala Met

130

135

140

Lys Gly Pro Phe Pro Asn Val Lys Phe Val Pro Thr Gly Gly Val Asn

145

150

155

160

Leu Asp Asn Val Cys Glu Trp Phe Lys Ala Gly Val Leu Ala Val Gly

165

170

175

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

180

185

190

Ala Ala Ala Phe Val Glu Lys Ile Arg Gly Cys Thr Glu

195

200

205

<210> 180

<211> 205

<212> PRT

<213> construcción sintética

<400> 180

Met Lys Met Glu Glu Leu Phe Lys Lys His Lys Ile Val Ala Val Leu

1 5 10 15

Arg Ala Asn Ser Val Glu Glu Ala Lys Lys Lys Ala Leu Ala Val Phe

20 25 30

Leu Gly Gly Val Asp Leu Ile Glu Ile Thr Phe Thr Val Pro Asp Ala

35 40 45

Asp Thr Val Ile Lys Glu Leu Ser Phe Leu Lys Glu Met Gly Ala Ile

50 55 60

Ile Gly Ala Gly Thr Val Thr Ser Val Glu Gln Cys Arg Lys Ala Val

65 70 75 80

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

85 90 95

Ser Gln Phe Cys Lys Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met

100

105

110

Thr Pro Thr Glu Leu Val Lys Ala Met Lys Leu Gly His Thr Ile Leu

115

120

125

Lys Leu Phe Pro Gly Glu Val Val Gly Pro Gln Phe Val Lys Ala Met

130

135

140

Lys Gly Pro Phe Pro Asn Val Lys Phe Val Pro Thr Gly Gly Val Asn

145

150

155

160

Leu Asp Asn Val Cys Glu Trp Phe Lys Ala Gly Val Gln Ala Val Gly

165

170

175

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

180

185

190

Ala Lys Ala Phe Val Glu Lys Ile Arg Gly Cys Thr Glu

195 200 205

<210> 181

<211> 205

<212> PRT

<213> construcción sintética

<400> 181

Met Lys Met Glu Glu Leu Phe Lys Lys His Lys Ile Val Ala Val Leu

1 5 10 15

Arg Ala Asn Ser Val Glu Glu Ala Lys Lys Lys Ala Leu Ala Val Phe

20 25 30

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

35 40 45

Asp Thr Val Ile Lys Glu Leu Ser Phe Leu Lys Glu Leu Gly Ala Ile

50 55 60

Ile Gly Ala Gly Thr Val Thr Ser Val Glu Gln Cys Arg Lys Ala Val

65 70 75 80

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

85 90 95

Ser Gln Phe Cys Lys Glu Lys Gly Val Phe Tyr Met Pro Gly Val Met

100 105 110

Thr Pro Thr Glu Leu Val Lys Ala Met Lys Leu Gly His Thr Ile Leu

115 120 125

Lys Leu Phe Pro Gly Glu Val Val Gly Pro Gln Phe Val Lys Ala Met

130 135 140

Lys Gly Pro Phe Pro Asn Val Lys Phe Val Pro Thr Gly Gly Val Asn

145 150 155 160

Leu Asp Asn Val Cys Glu Trp Phe Lys Ala Gly Val Gln Ala Val Gly

165 170 175

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

180

185

190

Ala Lys Ala Phe Val Glu Lys Ile Arg Gly Cys Thr Glu

195

200

205

<210> 182

<211> 167

<212> PRT

<213> construcción sintética

<400> 182

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

1

5

10

15

Glu Met Asn Ser Ser Asn Leu Tyr Met Ser Met Ser Ser Trp Cys Tyr

20

25

30

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

35

40

45

Glu Glu Tyr Glu His Ala Lys Lys Leu Ile Ile Phe Leu Asn Glu Asn

50

55

60

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

65

70

75

80

Glu Gly Leu Thr Gln Ile Phe Gln Lys Ala Tyr Glu His Glu Gln His

85

90

95

Ile Ser Glu Ser Ile Asn Asn Ile Val Asp His Ala Ile Lys Ser Lys

100

105

110

Asp His Ala Thr Phe Asn Phe Leu Gln Trp Tyr Val Ala Glu Gln His

115

120

125

Glu Glu Glu Val Leu Phe Lys Asp Ile Leu Asp Lys Val Glu Leu Ile

130

135

140

Gly Asn Glu Asn His Gly Leu Tyr Leu Ala Asp Gln Tyr Val Lys Gly

145

150

155

160

Ile Ala Lys Ser Arg Lys Ser

165

<210> 183

<211> 165

<212> PRT

<213> construcción sintética

<400> 183

Met Leu Lys Pro Glu Met Ile Glu Lys Leu Asn Glu Gln Met Asn Leu

1 5 10 15

Glu Leu Tyr Ser Ser Leu Leu Tyr Gln Gln Met Ser Ala Trp Cys Ser

20 25 30

Tyr His Thr Phe Glu Gly Ala Ala Ala Phe Leu Arg Arg His Ala Gln

35 40 45

Glu Glu Met Thr His Met Gln Arg Leu Phe Asp Tyr Leu Thr Asp Thr

50 55 60

Gly Asn Leu Pro Arg Ile Asn Thr Val Glu Ser Pro Phe Ala Glu Tyr

65 70 75 80

Ser Ser Leu Asp Glu Leu Phe Gln Glu Thr Tyr Lys His Glu Gln Leu

85 90 95

Ile Thr Gln Lys Ile Asn Glu Leu Ala His Ala Ala Met Thr Asn Gln

100 105 110

Asp Tyr Pro Thr Phe Asn Phe Leu Gln Trp Tyr Val Ser Glu Gln His

115 120 125

Glu Glu Glu Lys Leu Phe Lys Ser Ile Ile Asp Lys Leu Ser Leu Ala

130 135 140

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

145 150 155 160

Leu Asp Ala Gln Asn

165

<210> 184

<211> 166

<212> PRT

<213> construcción sintética

<400> 184

Asn Phe His Gln Asp Cys Glu Ala Gly Leu Asn Arg Thr Val Asn Leu

1 5 10 15

Lys Phe His Ser Ser Tyr Val Tyr Leu Ser Met Ala Ser Tyr Phe Asn

20 25 30

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

35 40 45

Ser Glu Glu Glu Lys Glu His Ala Glu Lys Leu Ile Glu Tyr Gln Asn

50 55 60

Gln Arg Gly Gly Arg Val Phe Leu Gln Ser Val Glu Lys Pro Glu Arg

65 70 75 80

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

85

90

95

Gln Lys Ser Val Asn Gln Ala Leu Leu Asp Leu His Ala Val Ala Ala

100

105

110

Asp Lys Ser Asp Pro His Met Thr Asp Phe Leu Glu Ser Pro Tyr Leu

115

120

125

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

130

135

140

Leu Lys Lys Leu Trp Ser Ser His Pro Gly Met Ala Glu Tyr Leu Phe

145

150

155

160

Asn Lys His Thr Leu Gly

165

<210> 185

<211> 169

<212> PRT

<213> construcción sintética

<400> 185

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

1 5 10 15

Glu Met Gln Ser Ser Asn Leu Tyr Met Ser Met Ser Ser Trp Cys Tyr

20 25 30

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

35 40 45

Glu Glu Tyr Glu His Ala Lys Lys Leu Ile Ile Phe Leu Asn Glu Asn

50 55 60

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

65 70 75 80

Glu Gly Leu Thr Gln Ile Phe Gln Lys Ala Tyr Glu His Glu Gln His

85

90

95

Ile Ser Glu Ser Ile Asn Asn Ile Val Asp His Ala Ile Lys Ser Lys

100

105

110

Asp His Ala Thr Phe Asn Phe Leu Gln Trp Tyr Val Ala Glu Gln His

115

120

125

Glu Glu Glu Val Leu Phe Lys Asp Ile Leu Asp Lys Ile Glu Leu Ile

130

135

140

Gly Asn Glu Asn His Gly Leu Tyr Leu Ala Asp Gln Tyr Val Lys Gly

145

150

155

160

Ile Ala Lys Ser Arg Lys Ser Gly Ser

165

<210> 186

<211> 172

<212> PRT

<213> construcción sintética

<400> 186

Ser Gly Glu Ser Gln Val Arg Gln Asn Phe Lys Pro Glu Met Glu Glu

1 5 10 15

Lys Leu Asn Glu Gln Met Asn Leu Glu Leu Tyr Ser Ser Leu Leu Tyr

20 25 30

Gln Gln Met Ser Ala Trp Cys Ser Tyr His Thr Phe Glu Gly Ala Ala

35 40 45

Ala Phe Leu Arg Arg His Ala Gln Glu Glu Met Thr His Met Gln Arg

50 55 60

Leu Phe Asp Tyr Leu Thr Asp Thr Gly Asn Leu Pro Arg Ile Asn Thr

65 70 75 80

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

85 90 95

Glu Thr Tyr Lys His Glu Gln Leu Ile Thr Gln Lys Ile Asn Glu Leu

100

105

110

Ala His Ala Ala Met Thr Asn Gln Asp Tyr Pro Thr Phe Asn Phe Leu

115

120

125

Gln Trp Tyr Val Ser Glu Gln His Glu Glu Glu Lys Leu Phe Lys Ser

130

135

140

Ile Ile Asp Lys Leu Ser Leu Ala Gly Lys Ser Gly Glu Gly Leu Tyr

145

150

155

160

Phe Ile Asp Lys Glu Leu Ser Thr Leu Asp Gly Ser

165

170