

1
LISTADO DE SECUENCIAS

<110> Centro Nacional de Investigaciones Cardiovasculares (CNIC)
Universidad Autónoma de Madrid (UAM)

<120> Método de identificación de compuestos inmunomoduladores para la piel

<130> ES1997.3

<160> 60

<170> PatentIn version 3.5

<210> 1

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<212> PRT

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Ser Gly Pro Lys Lys Tyr Phe Pro Ile Pro Val Glu His Leu Glu Glu
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Glu Ile Arg Ile Arg Ser Ala Asp Asp Cys Lys Gln Phe Arg Glu Glu
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Phe Asn Ser Leu Pro Ser Gly His Ile Gln Gly Thr Phe Glu Leu Ala
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Asn Lys Glu Glu Asn Arg Glu Lys Asn Arg Tyr Pro Asn Ile Leu Pro
100 105 110

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

Ser Asp Tyr Ile Asn Ala Ser Tyr Ile Asp Gly Tyr Lys Glu Lys Asn
130 135 140

Lys Phe Ile Ala Ala Gln Gly Pro Lys Gln Glu Thr Val Asn Asp Phe
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Trp Arg Met Val Trp Glu Gln Lys Ser Ala Thr Ile Val Met Leu Thr
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Asn Leu Lys Glu Arg Lys Glu Glu Lys Cys His Gln Tyr Trp Pro Asp
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Gln Gly Cys₁₉₅ Trp Thr Tyr Gly Asn₂₀₀ Ile Arg² Val Cys₂₀₅ Val Glu Asp Cys
 Val₂₁₀ Val₂₁₀ Leu Val Asp Tyr Thr₂₁₅ Ile Arg Lys Phe Cys₂₂₀ Ile Gln Pro Gln
 Leu₂₂₅ Pro Asp Gly Cys₂₃₀ Ala Pro Arg Leu₂₃₅ Val₂₃₅ Ser Gln Leu His Phe₂₄₀
 Thr Ser Trp Pro Asp₂₄₅ Phe Gly Val Pro Phe₂₅₀ Thr Pro Ile Gly Met₂₅₅ Leu
 Lys Phe Leu Lys₂₆₀ Lys Val Lys Thr₂₆₅ Leu₂₆₅ Asn Pro Val His₂₇₀ Ala Gly Pro
 Ile Val₂₇₅ Val₂₇₅ His Cys Ser Ala Gly₂₈₀ Val Gly Arg Thr Gly₂₈₅ Thr Phe Ile
 Val₂₉₀ Ile₂₉₀ Asp Ala Met Met₂₉₅ Ala₂₉₅ Met Met His Ala Glu₃₀₀ Gln Lys Val Asp
 Val₃₀₅ Phe Glu Phe Val₃₁₀ Ser₃₁₀ Arg Ile Arg Asn₃₁₅ Gln₃₁₅ Arg Pro Gln Met₃₂₀ Val₃₂₀
 Gln Thr Asp Met₃₂₅ Gln₃₂₅ Tyr Thr Phe Ile Tyr₃₃₀ Gln Ala Leu Leu₃₃₅ Glu₃₃₅ Tyr
 Tyr Leu Tyr Gly₃₄₀ Asp Thr Glu Leu Asp₃₄₅ Val Ser Ser Leu₃₅₀ Glu₃₅₀ Lys His
 Leu Gln Thr₃₅₅ Met His Gly Thr Thr₃₆₀ Thr His Phe Asp₃₆₅ Lys₃₆₅ Ile Gly Leu
 Glu₃₇₀ Glu₃₇₀ Glu Phe Arg Lys₃₇₅ Leu₃₇₅ Thr Asn Val Arg₃₈₀ Ile₃₈₀ Met Lys Glu Asn
 Met₃₈₅ Arg Thr Gly Asn₃₉₀ Leu₃₉₀ Pro Ala Asn Met₃₉₅ Lys₃₉₅ Lys Ala Arg Val₄₀₀ Ile₄₀₀
 Gln Ile Ile Pro Tyr₄₀₅ Asp Phe Asn Arg₄₁₀ Val₄₁₀ Ile Leu Ser Met₄₁₅ Lys₄₁₅ Arg
 Gly Gln Glu Tyr₄₂₀ Thr Asp Tyr Ile Asn₄₂₅ Ala Ser Phe Ile Asp₄₃₀ Gly Tyr
 Arg Gln Lys₄₃₅ Asp Tyr Phe Ile Ala₄₄₀ Thr Gln Gly Pro₄₄₅ Leu₄₄₅ Ala His Thr
 Val₄₅₀ Glu₄₅₀ Asp Phe Trp Arg Met₄₅₅ Ile Trp Glu Trp₄₆₀ Lys₄₆₀ Ser His Thr Ile
 Val Met Leu Thr Glu Val Gln Glu Arg Glu Gln Asp Lys Cys Tyr Gln

Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr
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Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe
85 90 95

Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His
100 105 110

Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val
115 120 125

Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser
130 135 140

Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser
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Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp
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Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn
180 185 190

Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr
195 200 205

Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln
210 215 220

Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp
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Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr
245 250 255

Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val Val Val Ala Val Ala
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 130 135 140
 Ile Ala Leu Asp Phe Gln Arg Gly Asn Asp Val Ala Phe His Phe Asn
 145 150 155 160
 Pro Arg Phe Asn Glu Asn Asn Arg Arg Val Ile Val Cys Asn Thr Lys
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 Leu Asp Asn Asn Trp Gly Arg Glu Glu Arg Gln Ser Val Phe Pro Phe
 180 185 190
 Glu Ser Gly Lys Pro Phe Lys Ile Gln Val Leu Val Glu Pro Asp His
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 Phe Lys Val Ala Val Asn Asp Ala His Leu Leu Gln Tyr Asn His Arg
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 35 40 45
 Leu Arg Val Ile Ser Asp Glu Gly Gly Trp Trp Lys Ala Ile Ser Leu
 50 55 60
 Ser Thr Gly Arg Glu Ser Tyr Ile Pro Gly Ile Cys Val Ala Arg Val
 65 70 75 80
 Tyr His Gly Trp Leu Phe Glu Gly Leu Gly Arg Asp Lys Ala Glu Glu
 85 90 95
 Leu Leu Gln Leu Pro Asp Thr Lys Val Gly Ser Phe Met Ile Arg Glu

7

100 105 110

Ser Glu Thr Lys Lys Gly Phe Tyr Ser Leu Ser Val Arg His Arg Gln
 115 120 125

Val Lys His Tyr Arg Ile Phe Arg Leu Pro Asn Asn Trp Tyr Tyr Ile
 130 135 140

Ser Pro Arg Leu Thr Phe Gln Cys Leu Glu Asp Leu Val Asn His Tyr
 145 150 155 160

Ser Glu Val Ala Asp Gly Leu Cys Cys Val Leu Thr Thr Pro Cys Leu
 165 170

Thr Gln Ser Thr Ala Ala Pro Ala Val Arg Ala Ser Ser Ser Pro Val
 180 185 190

Thr Leu Arg Gln Lys Thr Val Asp Trp Arg Arg Val Ser Arg Leu Gln
 195 200 205

Glu Asp Pro Glu Gly Thr Glu Asn Pro Leu Gly Val Asp Glu Ser Leu
 210 215 220

Phe Ser Tyr Gly Leu Arg Glu Ser Ile Ala Ser Tyr Leu Ser Leu Thr
 225 230 235 240

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

Arg Arg Ile Thr Arg Ala Ser Ala Leu Leu Asp Ala Cys Gly Phe Tyr
65 70 75 80

Trp Gly Pro Leu Ser Val His Gly Ala His Glu Arg Leu Arg Ala Glu
85 90 95

Pro Val Gly Thr Phe Leu Val Arg Asp Ser Arg Gln Arg Asn Cys Phe
100 105 110

Phe Ala Leu Ser Val Lys Met Ala Ser Gly Pro Thr Ser Ile Arg Val
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His Phe Gln Ala Gly Arg Phe His Leu Asp Gly Ser Arg Glu Ser Phe
130 135 140

Asp Cys Leu Phe Glu Leu Leu Glu His Tyr Val Ala Ala Pro Arg Arg
145 150 155 160

Met Leu Gly Ala Pro Leu Arg Gln Arg Arg Val Arg Pro Leu Gln Glu
165 170 175

Leu Cys Arg Gln Arg Ile Val Ala Thr Val Gly Arg Glu Asn Leu Ala
180 185 190

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Val Lys Gly Pro Asp Pro Ser Ser Pro Ala Phe Arg Ile Glu Asp Ala
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Asn Leu Ile Pro Pro Val Pro Asp Asp Lys Phe Gln Asp Leu Val Asp
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 Lys Gln Asp Gly Gly Trp Ser His Trp Ser Pro Trp Ser Ser Cys Ser
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 Lys Cys Thr Ser Tyr Pro Asp Gly Ser Trp Lys Cys Gly Ala Cys Pro
 565 570 575
 Pro Gly Tyr Ser Gly Asn Gly Ile Gln Cys Thr Asp Val Asp Glu Cys
 580 585 590
 Lys Glu Val Pro Asp Ala Cys Phe Asn His Asn Gly Glu His Arg Cys
 595 600 605
 Glu Asn Thr Asp Pro Gly Tyr Asn Cys Leu Pro Cys Pro Pro Arg Phe
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 Thr Gly Ser Gln Pro Phe Gly Gln Gly Val Glu His Ala Thr Ala Asn
 625 630 635 640

Lys Gln Val Cys Lys₆₄₅ Pro Arg Asn Pro Cys₆₅₀ Thr Asp Gly Thr His₆₅₅ Asp
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 Met Tyr Arg₆₇₅ Cys Glu Cys Lys Pro₆₈₀ Gly Tyr Ala Gly Asn₆₈₅ Gly Ile Ile
 Cys Gly₆₉₀ Glu Asp Thr Asp Leu₆₉₅ Asp Gly Trp Pro Asn₇₀₀ Glu Asn Leu Val
 Cys Val₇₀₅ Ala Asn Ala Thr₇₁₀ Tyr His Cys Lys Lys₇₁₅ Asp Asn Cys Pro Asn₇₂₀
 Leu Pro Asn Ser Gly₇₂₅ Gln Glu Asp Tyr Asp₇₃₀ Lys Asp Gly Ile Gly₇₃₅ Asp
 Ala Cys Asp Asp₇₄₀ Asp Asp Asp Asn Asp₇₄₅ Lys Ile Pro Asp Asp₇₅₀ Arg Asp
 Asn Cys Pro₇₅₅ Phe His Tyr Asn Pro₇₆₀ Ala Gln Tyr Asp Tyr₇₆₅ Asp Arg Asp
 Asp Val₇₇₀ Gly Asp Arg Cys Asp₇₇₅ Asn Cys Pro Tyr Asn₇₈₀ His Asn Pro Asp
 Gln₇₈₅ Ala Asp Thr Asp Asn₇₉₀ Asn Gly Glu Gly Asp₇₉₅ Ala Cys Ala Ala Asp₈₀₀
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 Tyr Asn Val Asp₈₂₀ Gln Arg Asp Thr Asp₈₂₅ Met Asp Gly Val Gly₈₃₀ Asp Gln
 Cys Asp Asn₈₃₅ Cys Pro Leu Glu His₈₄₀ Asn Pro Asp Gln Leu₈₄₅ Asp Ser Asp
 Ser Asp₈₅₀ Arg Ile Gly Asp Thr₈₅₅ Cys Asp Asn Asn Gln₈₆₀ Asp Ile Asp Glu
 Asp Gly₈₆₅ His Gln Asn Asn₈₇₀ Leu Asp Asn Cys Pro₈₇₅ Tyr Val Pro Asn Ala₈₈₀
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 Asp Asp Asp Asn₉₀₀ Asp Gly Ile Pro Asp₉₀₅ Asp Lys Asp Asn Cys₉₁₀ Arg Leu

Val Pro Asn Pro Asp Gln Lys Asp Ser Asp Gly Asp Gly Arg Gly Asp
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 945 950 955 960
 Gln Met Ile Pro Leu Asp Pro Lys Gly Thr Ser Gln Asn Asp Pro Asn
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 His Ile Gly Trp Lys Asp Phe Thr Ala Tyr Arg Trp Arg Leu Ser
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 His Arg Pro Lys Thr Gly Phe Ile Arg Val Val Met Tyr Glu Gly
 1115 1120 1125
 Lys Lys Ile Met Ala Asp Ser Gly Pro Ile Tyr Asp Lys Thr Tyr
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Gln Arg Thr Ile Thr Val Gly Val Tyr Glu Ala Ala Lys Leu Leu Asn
 35 40 45

Val Asp Pro Asp Asn Val Val Leu Cys Leu Leu Ala Ala Asp Glu Asp
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Asp Asp Arg Asp Val Ala Leu Gln Ile His Phe Thr Leu Ile Gln Ala
 65 70 75 80

Phe Cys Cys Glu Asn Asp Ile Asn Ile Leu Arg Val Ser Asn Pro Gly
 85 90 95

Arg Leu Ala Glu Leu Leu Leu Leu Glu Thr Asp Ala Gly Pro Ala Ala
 100 105 110

Ser Glu Gly Ala Glu Gln Pro Pro Asp Leu His Cys Val Leu Val Thr
 115 120 125

Asn Pro His Ser Ser Gln Trp Lys Asp Pro Ala Leu Ser Gln Leu Ile
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Asn Leu Pro Glu Arg
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