

SEQUENCE LISTING

<110> Novo Nordisk A/S

<120> IL-21 variants

<130> 7524.204-WO

<160> 10

<170> PatentIn version 3.3

<210> 1

<211> 162

<212> PRT

<213> Homo sapiens

<400> 1

Met Arg Ser Ser Pro Gly Asn Met Glu Arg Ile Val Ile Cys Leu Met
1 5 10 15

Val Ile Phe Leu Gly Thr Leu Val His Lys Ser Ser Ser Gln Gly Gln
20 25 30

Asp Arg His Met Ile Arg Met Arg Gln Leu Ile Asp Ile Val Asp Gln
35 40 45

Leu Lys Asn Tyr Val Asn Asp Leu Val Pro Glu Phe Leu Pro Ala Pro
50 55 60

Glu Asp Val Glu Thr Asn Cys Glu Trp Ser Ala Phe Ser Cys Phe Gln
65 70 75 80

Lys Ala Gln Leu Lys Ser Ala Asn Thr Gly Asn Asn Glu Arg Ile Ile
85 90 95

Asn Val Ser Ile Lys Lys Leu Lys Arg Lys Pro Pro Ser Thr Asn Ala
100 105 110

Gly Arg Arg Gln Lys His Arg Leu Thr Cys Pro Ser Cys Asp Ser Tyr
115 120 125

Glu Lys Lys Pro Pro Lys Glu Phe Leu Glu Arg Phe Lys Ser Leu Leu
130 135 140

Gln Lys Met Ile His Gln His Leu Ser Ser Arg Thr His Gly Ser Glu
145 150 155 160

Asp Ser

<210> 2
<211> 133
<212> PRT
<213> Homo sapiens

<400> 2

Gln Gly Gln Asp Arg His Met Ile Arg Met Arg Gln Leu Ile Asp Ile
1 5 10 15

Val Asp Gln Leu Lys Asn Tyr Val Asn Asp Leu Val Pro Glu Phe Leu
20 25 30

Pro Ala Pro Glu Asp Val Glu Thr Asn Cys Glu Trp Ser Ala Phe Ser
35 40 45

Cys Phe Gln Lys Ala Gln Leu Lys Ser Ala Asn Thr Gly Asn Asn Glu
50 55 60

Arg Ile Ile Asn Val Ser Ile Lys Lys Leu Lys Arg Lys Pro Pro Ser
65 70 75 80

Thr Asn Ala Gly Arg Arg Gln Lys His Arg Leu Thr Cys Pro Ser Cys
85 90 95

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

Ser Leu Leu Gln Lys Met Ile His Gln His Leu Ser Ser Arg Thr His
115 120 125

Gly Ser Glu Asp Ser
130

<210> 3
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<212> PRT
<213> Artificial

<220>
<223> IL-21 variant

<400> 3

Gln Gly Gln Asp Arg His Met Ile Arg Met Arg Gln Leu Ile Asp Ile
1 5 10 15

Val Asp Gln Leu Lys Asn Tyr Val Asn Asp Leu Val Pro Glu Phe Leu
20 25 30

Pro Ala Pro Glu Asp Val Glu Thr Asn Cys Glu Trp Ser Ala Phe Ser
35 40 45

Cys Phe Gln Lys Ala Gln Leu Lys Ser Ala Asn Thr Gly Asn Asn Glu
50 55 60

Arg Ile Ile Asn Val Ser Ile Lys Lys Leu Lys Arg Lys Pro Pro Ser
65 70 75 80

Thr Asn Gln Lys His Arg Leu Thr Cys Pro Ser Cys Asp Ser Tyr Glu
85 90 95

Lys Lys Pro Pro Lys Glu Phe Leu Glu Arg Phe Lys Ser Leu Leu Gln
100 105 110

Lys Met Ile His Gln His Leu Ser Ser Arg Thr His Gly Ser Glu Asp
115 120 125

Ser

<210> 4

<211> 127

<212> PRT

<213> Artificial

<220>

<223> IL-21 variant

<400> 4

Gln Gly Gln Asp Arg His Met Ile Arg Met Arg Gln Leu Ile Asp Ile
1 5 10 15

Val Asp Gln Leu Lys Asn Tyr Val Asn Asp Leu Val Pro Glu Phe Leu
20 25 30

Pro Ala Pro Glu Asp Val Glu Thr Asn Cys Glu Trp Ser Ala Phe Ser

35

40

45

Cys Phe Gln Lys Ala Gln Leu Lys Ser Ala Asn Thr Gly Asn Asn Glu
 50 55 60

Arg Ile Ile Asn Val Ser Ile Lys Lys Leu Lys Arg Lys Pro Pro Ser
 65 70 75 80

Thr Asn His Arg Leu Thr Cys Pro Ser Cys Asp Ser Tyr Glu Lys Lys
 85 90 95

Pro Pro Lys Glu Phe Leu Glu Arg Phe Lys Ser Leu Leu Gln Lys Met
 100 105 110

Ile His Gln His Leu Ser Ser Arg Thr His Gly Ser Glu Asp Ser
 115 120 125

<210> 5

<211> 125

<212> PRT

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<223> Il-21 variant

<400> 5

Gln Gly Gln Asp Arg His Met Ile Arg Met Arg Gln Leu Ile Asp Ile
 1 5 10 15

Val Asp Gln Leu Lys Asn Tyr Val Asn Asp Leu Val Pro Glu Phe Leu
 20 25 30

Pro Ala Pro Glu Asp Val Glu Thr Asn Cys Glu Trp Ser Ala Phe Ser
 35 40 45

Cys Phe Gln Lys Ala Gln Leu Lys Ser Ala Asn Thr Gly Asn Asn Glu
 50 55 60

Arg Ile Ile Asn Val Ser Ile Lys Lys Leu Lys Arg Lys Pro Pro Ser
 65 70 75 80

Thr Asn Leu Thr Cys Pro Ser Cys Asp Ser Tyr Glu Lys Lys Pro Pro
 85 90 95

Lys Glu Phe Leu Glu Arg Phe Lys Ser Leu Leu Gln Lys Met Ile His
100 105 110

Gln His Leu Ser Ser Arg Thr His Gly Ser Glu Asp Ser
115 120 125

<210> 6
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<212> PRT
<213> Artificial

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<223> IL-21 variant

<400> 6

Gln Gly Gln Asp Arg His Met Ile Arg Met Arg Gln Leu Ile Asp Ile
1 5 10 15

Val Asp Gln Leu Lys Asn Tyr Val Asn Asp Leu Val Pro Glu Phe Leu
20 25 30

Pro Ala Pro Glu Asp Val Glu Thr Asn Cys Glu Trp Ser Ala Phe Ser
35 40 45

Cys Phe Gln Lys Ala Gln Leu Lys Ser Ala Asn Thr Gly Asn Asn Glu
50 55 60

Arg Ile Ile Asn Val Ser Ile Lys Lys Leu Lys Arg Lys Pro Pro Ser
65 70 75 80

Thr His Arg Leu Thr Cys Pro Ser Cys Asp Ser Tyr Glu Lys Lys Pro
85 90 95

Pro Lys Glu Phe Leu Glu Arg Phe Lys Ser Leu Leu Gln Lys Met Ile
100 105 110

His Gln His Leu Ser Ser Arg Thr His Gly Ser Glu Asp Ser
115 120 125

<210> 7
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<212> PRT
<213> Artificial

<220>
<223> IL-21 variant

<400> 7

Gln Gly Gln Asp Arg His Met Ile Arg Met Arg Gln Leu Ile Asp Ile
1 5 10 15

Val Asp Gln Leu Lys Asn Tyr Val Asn Asp Leu Val Pro Glu Phe Leu
20 25 30

Pro Ala Pro Glu Asp Val Glu Thr Asn Cys Glu Trp Ser Ala Phe Ser
35 40 45

Cys Phe Gln Lys Ala Gln Leu Lys Ser Ala Asn Thr Gly Asn Asn Glu
50 55 60

Arg Ile Ile Asn Val Ser Ile Lys Lys Leu Lys Arg Asn Leu Trp Gly
65 70 75 80

Leu Ala Gly Leu Asn Ser Cys Pro Ser Cys Asp Ser Tyr Glu Lys Lys
85 90 95

Pro Pro Lys Glu Phe Leu Glu Arg Phe Lys Ser Leu Leu Gln Lys Met
100 105 110

Ile His Gln His Leu Ser Ser Arg Thr His Gly Ser Glu Asp Ser
115 120 125

<210> 8

<211> 127

<212> PRT

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<220>

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<400> 8

Gln Gly Gln Asp Arg His Met Ile Arg Met Arg Gln Leu Ile Asp Ile
1 5 10 15

Val Asp Gln Leu Lys Asn Tyr Val Asn Asp Leu Val Pro Glu Phe Leu
20 25 30

Pro Ala Pro Glu Asp Val Glu Thr Asn Cys Glu Trp Ser Ala Phe Ser
35 40 45

Cys Phe Gln Lys Ala Gln Leu Lys Ser Ala Asn Thr Gly Asn Asn Glu
50 55 60

Arg Ile Ile Asn Val Ser Leu Lys Arg Leu Asp Arg Asn Leu Trp Gly
65 70 75 80

Leu Ala Gly Leu Asn Ser Cys Pro Ser Cys Asp Ser Tyr Glu Lys Lys
85 90 95

Pro Pro Lys Glu Phe Leu Glu Arg Phe Lys Ser Leu Leu Gln Lys Met
100 105 110

Ile His Gln His Leu Ser Ser Arg Thr His Gly Ser Glu Asp Ser
115 120 125

<210> 9
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<212> PRT
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<220>
<223> IL-21 variant

<400> 9

Gln Gly Gln Asp Arg His Met Ile Arg Met Arg Gln Leu Ile Asp Ile
1 5 10 15

Val Asp Gln Leu Lys Asn Tyr Val Asn Asp Leu Val Pro Glu Phe Leu
20 25 30

Pro Ala Pro Glu Asp Val Glu Thr Asn Cys Glu Trp Ser Ala Phe Ser
35 40 45

Cys Phe Gln Lys Ala Gln Leu Lys Ser Ala Asn Thr Gly Asn Asn Glu
50 55 60

Arg Ile Ile Asn Val Ser Leu Lys Arg Leu Asp Arg Asn Leu Trp Gly
65 70 75 80

Leu Ala Gly Leu Asn Ser Cys Pro Ser Cys Asp Ser Tyr Glu Lys Lys
85 90 95

Pro Pro Lys Glu Phe Leu Glu Arg Phe Lys Ser Leu Leu Gln Lys Met
100 105 110

Ile His Gln His Leu Ser Ser Arg Thr His Gly Ser Glu Asp Ser
115 120 125

<210> 10
<211> 126
<212> PRT
<213> Artificial

<220>
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<400> 10

Gln Gly Gln Asp Arg His Met Ile Arg Met Arg Gln Leu Ile Asp Ile
1 5 10 15

Val Asp Gln Leu Lys Asn Tyr Val Asn Asp Leu Val Pro Glu Phe Leu
20 25 30

Pro Ala Pro Glu Asp Val Glu Thr Asn Cys Glu Trp Ser Ala Phe Ser
35 40 45

Cys Phe Gln Lys Ala Gln Leu Lys Ser Ala Asn Thr Gly Asn Asn Glu
50 55 60

Arg Ile Ile Asn Val Ser Ile Lys Lys Leu Lys Arg Asn Leu Trp Gly
65 70 75 80

Leu Ala Gly Leu Asn Ser Cys Pro Val Asp Ser Tyr Glu Lys Lys Pro
85 90 95

Pro Lys Glu Phe Leu Glu Arg Phe Lys Ser Leu Leu Gln Lys Met Ile
100 105 110

His Gln His Leu Ser Ser Arg Thr His Gly Ser Glu Asp Ser
115 120 125