

21185_PCT_Seq List_ST25.txt
SEQUENCE LISTING

<110> Sebal, Walter
<120> Novel Mutein Conjugates
<130> 21185-PCT
<150> EP 13003352
<151> 2013-07-02
<160> 12
<170> PatentIn version 3.5
<210> 1
<211> 129
<212> PRT
<213> Artificial Sequence
<220>
<223> Mutant of human IL-4; Cys121
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His Lys Cys Asp Ile Thr Leu Gln Glu Ile Ile Lys Thr Leu Asn Ser
1 5 10 15
Leu Thr Glu Gln Lys Thr Leu Cys Thr Glu Leu Thr Val Thr Asp Ile
20 25 30
Phe Ala Ala Ser Lys Asn Thr Thr Glu Lys Glu Thr Phe Cys Arg Ala
35 40 45
Ala Thr Val Leu Arg Gln Phe Tyr Ser His His Glu Lys Asp Thr Arg
50 55 60
Cys Leu Gly Ala Thr Ala Gln Gln Phe His Arg His Lys Gln Leu Ile
65 70 75 80
Arg Phe Leu Lys Arg Leu Asp Arg Asn Leu Trp Gly Leu Ala Gly Leu
85 90 95
Asn Ser Cys Pro Val Lys Glu Ala Asn Gln Ser Thr Leu Glu Asn Phe
100 105 110
Leu Glu Arg Leu Lys Thr Ile Met Cys Glu Lys Tyr Ser Lys Cys Ser
115 120 125
Ser

<210> 2
<211> 130
<212> PRT
<213> Artificial Sequence
<220>
<223> Mutant of human IL-4; Cys 122

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<400> 2

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

<210> 3

<211> 133

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<213> Artificial Sequence

<220>

<223> Mutant of human IL-2; Cys126, Ala125

<400> 3

Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His
1 5 10 15
Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys
20 25 30
Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys
35 40 45
Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys
50 55 60
Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu
65 70 75 80

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

Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala
100 105 110

Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Cys Ser Ile
115 120 125

Ile Ser Thr Leu Thr
130

<210> 4
<211> 134
<212> PRT
<213> Artificial Sequence

<220>
<223> Mutant of human IL-2; Cys126, Ala125

<400> 4

Met Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu
1 5 10 15

His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr
20 25 30

Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro
35 40 45

Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu
50 55 60

Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His
65 70 75 80

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

Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr
100 105 110

Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ala Cys Ser
115 120 125

Ile Ile Ser Thr Leu Thr
130

<210> 5
<211> 152
<212> PRT
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<220>

<223> Mutant of human IL-7; Cys143

<400> 5

Asp Cys Asp Ile Glu Gly Lys Asp Gly Lys Gln Tyr Glu Ser Val Leu
1 5 10 15

Met Val Ser Ile Asp Gln Leu Leu Asp Ser Met Lys Glu Ile Gly Ser
20 25 30

Asn Cys Leu Asn Asn Glu Phe Asn Phe Phe Lys Arg His Ile Cys Asp
35 40 45

Ala Asn Lys Glu Gly Met Phe Leu Phe Arg Ala Ala Arg Lys Leu Arg
50 55 60

Gln Phe Leu Lys Met Asn Ser Thr Gly Asp Phe Asp Leu His Leu Leu
65 70 75 80

Lys Val Ser Glu Gly Thr Thr Ile Leu Leu Asn Cys Thr Gly Gln Val
85 90 95

Lys Gly Arg Lys Pro Ala Ala Leu Gly Glu Ala Gln Pro Thr Lys Ser
100 105 110

Leu Glu Glu Asn Lys Ser Leu Lys Glu Gln Lys Lys Leu Asn Asp Leu
115 120 125

Cys Phe Leu Lys Arg Leu Leu Gln Glu Ile Lys Thr Cys Trp Cys Lys
130 135 140

Ile Leu Met Gly Thr Lys Glu His
145 150

<210> 6

<211> 153

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutant of human IL-7; Cys143

<400> 6

Met Asp Cys Asp Ile Glu Gly Lys Asp Gly Lys Gln Tyr Glu Ser Val
1 5 10 15

Leu Met Val Ser Ile Asp Gln Leu Leu Asp Ser Met Lys Glu Ile Gly
20 25 30

Ser Asn Cys Leu Asn Asn Glu Phe Asn Phe Phe Lys Arg His Ile Cys
35 40 45

Asp Ala Asn Lys Glu Gly Met Phe Leu Phe Arg Ala Ala Arg Lys Leu
Seite 4

50

55

60

Arg Gln Phe Leu Lys Met Asn Ser Thr Gly Asp Phe Asp Leu His Leu
65 70 75 80

Leu Lys Val Ser Glu Gly Thr Thr Ile Leu Leu Asn Cys Thr Gly Gln
85 90 95

Val Lys Gly Arg Lys Pro Ala Ala Leu Gly Glu Ala Gln Pro Thr Lys
100 105 110

Ser Leu Glu Glu Asn Lys Ser Leu Lys Glu Gln Lys Lys Leu Asn Asp
115 120 125

Leu Cys Phe Leu Lys Arg Leu Leu Gln Glu Ile Lys Thr Cys Trp Cys
130 135 140

Lys Ile Leu Met Gly Thr Lys Glu His
145 150

<210> 7

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutant of human IL-9; Cys115

<400> 7

Gln Gly Cys Pro Thr Leu Ala Gly Ile Leu Asp Ile Asn Phe Leu Ile
1 5 10 15

Asn Lys Met Gln Glu Asp Pro Ala Ser Lys Cys His Cys Ser Ala Asn
20 25 30

Val Thr Ser Cys Leu Cys Leu Gly Ile Pro Ser Asp Asn Cys Thr Arg
35 40 45

Pro Cys Phe Ser Glu Arg Leu Ser Gln Met Thr Asn Thr Thr Met Gln
50 55 60

Thr Arg Tyr Pro Leu Ile Phe Ser Arg Val Lys Lys Ser Val Glu Val
65 70 75 80

Leu Lys Asn Asn Lys Cys Pro Tyr Phe Ser Cys Glu Gln Pro Cys Asn
85 90 95

Gln Thr Thr Ala Gly Asn Ala Leu Thr Phe Leu Lys Ser Leu Leu Glu
100 105 110

Ile Phe Cys Lys Glu Lys Met Arg Gly Met Arg Gly Lys Ile
115 120 125

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<210> 8
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> Mutant of human IL-9; Cys115

<400> 8
Met Gln Gly Cys Pro Thr Leu Ala Gly Ile Leu Asp Ile Asn Phe Leu
1          5          10          15

Ile Asn Lys Met Gln Glu Asp Pro Ala Ser Lys Cys His Cys Ser Ala
20          25          30

Asn Val Thr Ser Cys Leu Cys Leu Gly Ile Pro Ser Asp Asn Cys Thr
35          40          45

Arg Pro Cys Phe Ser Glu Arg Leu Ser Gln Met Thr Asn Thr Thr Met
50          55          60

Gln Thr Arg Tyr Pro Leu Ile Phe Ser Arg Val Lys Lys Ser Val Glu
65          70          75          80

Val Leu Lys Asn Asn Lys Cys Pro Tyr Phe Ser Cys Glu Gln Pro Cys
85          90          95

Asn Gln Thr Thr Ala Gly Asn Ala Leu Thr Phe Leu Lys Ser Leu Leu
100         105         110

Glu Ile Phe Cys Lys Glu Lys Met Arg Gly Met Arg Gly Lys Ile
115        120        125

<210> 9
<211> 114
<212> PRT
<213> Artificial Sequence

<220>
<223> Mutant of human IL-15; Cys108

<400> 9
Asn Trp Val Asn Val Ile Ser Asp Leu Lys Lys Ile Glu Asp Leu Ile
1          5          10          15

Gln Ser Met His Ile Asp Ala Thr Leu Tyr Thr Glu Ser Asp Val His
20          25          30

Pro Ser Cys Lys Val Thr Ala Met Lys Cys Phe Leu Leu Glu Leu Gln
35          40          45

Val Ile Ser Leu Glu Ser Gly Asp Ala Ser Ile His Asp Thr Val Glu
50          55          60

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Asn Leu Ile Ile Leu Ala Asn Asn Ser Leu Ser Ser Asn Gly Asn Val
65 70 75 80

Thr Glu Ser Gly Cys Lys Glu Cys Glu Glu Leu Glu Glu Lys Asn Ile
85 90 95

Lys Glu Phe Leu Gln Ser Phe Val His Ile Val Cys Met Phe Ile Asn
100 105 110

Thr Ser

<210> 10
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<223> Mutant of human IL-15; Cys108

<400> 10

Met Asn Trp Val Asn Val Ile Ser Asp Leu Lys Lys Ile Glu Asp Leu
1 5 10 15

Ile Gln Ser Met His Ile Asp Ala Thr Leu Tyr Thr Glu Ser Asp Val
20 25 30

His Pro Ser Cys Lys Val Thr Ala Met Lys Cys Phe Leu Leu Glu Leu
35 40 45

Gln Val Ile Ser Leu Glu Ser Gly Asp Ala Ser Ile His Asp Thr Val
50 55 60

Glu Asn Leu Ile Ile Leu Ala Asn Asn Ser Leu Ser Ser Asn Gly Asn
65 70 75 80

Val Thr Glu Ser Gly Cys Lys Glu Cys Glu Glu Leu Glu Glu Lys Asn
85 90 95

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

Asn Thr Ser
115

<210> 11
<211> 133
<212> PRT
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<220>
<223> Mutant of human IL-21; Cys116

<400> 11

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

Gly Ser Glu Asp Ser
130

<210> 12
<211> 134
<212> PRT
<213> Artificial Sequence

<220>
<223> Mutant of human IL-21; Cys116

<400> 12

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

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

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

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

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

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

90

95

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

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

His Gly Ser Glu Asp Ser
 130