

P32314-WO_SL_txt
SEQUENCE LISTING

<110> GENENTECH, INC. ET AL.

<120> ANTI-CLL-1 ANTIBODIES AND IMMUNOCONJUGATES

<130> P32314-WO

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<150> 62/049,876

<151> 2014-09-12

<160> 73

<170> PatentIn version 3.5

<210> 1

<211> 265

<212> PRT

<213> Homo sapiens

<400> 1

Met Ser Glu Glu Val Thr Tyr Ala Asp Leu Gln Phe Gln Asn Ser Ser
1 5 10 15

Glu Met Glu Lys Ile Pro Glu Ile Gly Lys Phe Gly Glu Lys Ala Pro
20 25 30

Pro Ala Pro Ser His Val Trp Arg Pro Ala Ala Leu Phe Leu Thr Leu
35 40 45

Leu Cys Leu Leu Leu Leu Ile Gly Leu Gly Val Leu Ala Ser Met Phe
50 55 60

His Val Thr Leu Lys Ile Glu Met Lys Lys Met Asn Lys Leu Gln Asn
65 70 75 80

Ile Ser Glu Glu Leu Gln Arg Asn Ile Ser Leu Gln Leu Met Ser Asn
85 90 95

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Met Asn Ile Ser Asn Lys Ile Arg Asn Leu Ser Thr Thr Leu Gln Thr
100 105 110

Ile Ala Thr Lys Leu Cys Arg Glu Leu Tyr Ser Lys Glu Gln Glu His
115 120 125

Lys Cys Lys Pro Cys Pro Arg Arg Trp Ile Trp His Lys Asp Ser Cys
130 135 140

Tyr Phe Leu Ser Asp Asp Val Gln Thr Trp Gln Glu Ser Lys Met Ala
145 150 155 160

Cys Ala Ala Gln Asn Ala Ser Leu Leu Lys Ile Asn Asn Lys Asn Ala
165 170 175

Leu Glu Phe Ile Lys Ser Gln Ser Arg Ser Tyr Asp Tyr Trp Leu Gly
180 185 190

Leu Ser Pro Glu Glu Asp Ser Thr Arg Gly Met Arg Val Asp Asn Ile
195 200 205

Ile Asn Ser Ser Ala Trp Val Ile Arg Asn Ala Pro Asp Leu Asn Asn
210 215 220

Met Tyr Cys Gly Tyr Ile Asn Arg Leu Tyr Val Gln Tyr Tyr His Cys
225 230 235 240

Thr Tyr Lys Lys Arg Met Ile Cys Glu Lys Met Ala Asn Pro Val Gln
245 250 255

Leu Gly Ser Thr Tyr Phe Arg Glu Ala
260 265

<210> 2

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<213> Homo sapiens

P32314-W0_SL_txt

<400> 2

His Val Thr Leu Lys Ile Glu Met Lys Lys Met Asn Lys Leu Gln Asn
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Ile Ser Glu Glu Leu Gln Arg Asn Ile Ser Leu Gln Leu Met Ser Asn
20 25 30

Met Asn Ile Ser Asn Lys Ile Arg Asn Leu Ser Thr Thr Leu Gln Thr
35 40 45

Ile Ala Thr Lys Leu Cys Arg Glu Leu Tyr Ser Lys Glu Gln Glu His
50 55 60

Lys Cys Lys Pro Cys Pro Arg Arg Trp Ile Trp His Lys Asp Ser Cys
65 70 75 80

Tyr Phe Leu Ser Asp Asp Val Gln Thr Trp Gln Glu Ser Lys Met Ala
85 90 95

Cys Ala Ala Gln Asn Ala Ser Leu Leu Lys Ile Asn Asn Lys Asn Ala
100 105 110

Leu Glu Phe Ile Lys Ser Gln Ser Arg Ser Tyr Asp Tyr Trp Leu Gly
115 120 125

Leu Ser Pro Glu Glu Asp Ser Thr Arg Gly Met Arg Val Asp Asn Ile
130 135 140

Ile Asn Ser Ser Ala Trp Val Ile Arg Asn Ala Pro Asp Leu Asn Asn
145 150 155 160

Met Tyr Cys Gly Tyr Ile Asn Arg Leu Tyr Val Gln Tyr Tyr His Cys
165 170 175

Thr Tyr Lys Lys Arg Met Ile Cys Glu Lys Met Ala Asn Pro Val Gln
180 185 190

P32314-W0_SL_txt

Leu Gly Ser Thr Tyr Phe Arg Glu Ala
195 200

<210> 3
<211> 118
<212> PRT
<213> Homo sapiens

<400> 3
Cys Pro Arg Arg Trp Ile Trp His Lys Asp Ser Cys Tyr Phe Leu Ser
1 5 10 15

Asp Asp Val Gln Thr Trp Gln Glu Ser Lys Met Ala Cys Ala Ala Gln
20 25 30

Asn Ala Ser Leu Leu Lys Ile Asn Asn Lys Asn Ala Leu Glu Phe Ile
35 40 45

Lys Ser Gln Ser Arg Ser Tyr Asp Tyr Trp Leu Gly Leu Ser Pro Glu
50 55 60

Glu Asp Ser Thr Arg Gly Met Arg Val Asp Asn Ile Ile Asn Ser Ser
65 70 75 80

Ala Trp Val Ile Arg Asn Ala Pro Asp Leu Asn Asn Met Tyr Cys Gly
85 90 95

Tyr Ile Asn Arg Leu Tyr Val Gln Tyr Tyr His Cys Thr Tyr Lys Lys
100 105 110

Arg Met Ile Cys Glu Lys
115

<210> 4
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P32314-W0_SL_txt

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<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 4

Met Ser Glu Glu Val Thr Tyr Ala Asp Leu Lys Phe Gln Asn Ser Ser
1 5 10 15

Glu Thr Glu Lys Ile Gln Glu Ile Ala Lys Phe Gly Gly Lys Ala Pro
20 25 30

Pro Ala Pro Ser Cys Val Trp Arg Pro Ala Ala Leu Phe Leu Thr Val
35 40 45

Leu Cys Leu Leu Met Leu Ile Gly Leu Gly Val Leu Gly Ser Met Phe
50 55 60

His Ile Thr Leu Lys Thr Ala Met Lys Lys Met Asn Lys Leu Gln Asn
65 70 75 80

Ile Asn Glu Glu Leu Gln Arg Asn Val Ser Leu Gln Leu Met Ser Asn
85 90 95

Met Asn Ser Ser Asn Lys Ile Arg Asn Leu Ser Thr Thr Leu Gln Thr
100 105 110

Ile Ala Thr Arg Leu Cys Arg Glu Leu Tyr Ser Lys Glu Gln Glu His
115 120 125

Lys Cys Lys Pro Cys Pro Arg Arg Trp Ile Trp His Lys Asp Ser Cys
130 135 140

Tyr Phe Leu Ser Asp Asp Val Arg Thr Trp Gln Glu Ser Arg Met Ala
145 150 155 160

Cys Ala Ala Gln Asn Ala Ser Leu Leu Lys Ile Asn Asn Lys Asn Ala

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165

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175

Leu Glu Phe Ile Lys Ser Gln Ser Thr Ser Tyr Pro Tyr Trp Leu Gly
180 185 190

Leu Ser Pro Glu Lys Asp Tyr Ser Tyr Gly Thr Ser Val Asp Asp Ile
195 200 205

Ile Asn Ser Ser Ala Trp Val Thr Arg Asn Ala Ser Asp Leu Asn Asn
210 215 220

Met Phe Cys Gly Tyr Ile Asn Arg Ile Tyr Val His Tyr Asp Tyr Cys
225 230 235 240

Ile Tyr Arg Lys Lys Met Ile Cys Glu Lys Met Ala Asn Pro Val Gln
245 250 255

Leu Gly Phe Ile His Phe Arg Glu Ala
260 265

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<213> Artificial Sequence

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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 5
Arg Ala Ser Gln Ser Val Ser Thr Ser Ser Tyr Asn Tyr Met His
1 5 10 15

<210> 6
<211> 7
<212> PRT
<213> Artificial Sequence

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<400> 6
 Tyr Ala Ser Asn Leu Glu Ser
 1 5

<210> 7
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 <212> PRT
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<400> 7
 Gln His Ser Trp Glu Ile Pro Leu Thr
 1 5

<210> 8
 <211> 5
 <212> PRT
 <213> Artificial Sequence

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<400> 8
 Asp Tyr Tyr Met His
 1 5

<210> 9
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 <223> /note="Description of Artificial Sequence: Synthetic peptide"

P32314-W0_SL_txt

<400> 9

Arg Ile Asn Pro Tyr Asn Gly Ala Ala Phe Tyr Ser Gln Asn Phe Lys
1 5 10 15

Asp

<210> 10

<211> 13

<212> PRT

<213> Artificial Sequence

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<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 10

Glu Arg Gly Ala Asp Leu Glu Gly Tyr Ala Met Asp Tyr
1 5 10

<210> 11

<211> 17

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<220>

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<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 11

Arg Ile Asn Pro Tyr Ala Gly Ala Ala Phe Tyr Ser Gln Asn Phe Lys
1 5 10 15

Asp

<210> 12

<211> 10

<212> PRT

<213> Artificial Sequence

<220>
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<400> 12
 Ser Ala Ser Ser Ser Ile Ser Tyr Met Tyr
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<210> 13
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<400> 13
 Asp Thr Ser Lys Leu Ala Ser
 1 5

<210> 14
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<400> 14
 His Gln Arg Ser Ser Trp Thr
 1 5

<210> 15
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<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 15

Ser Tyr Asp Ile Asn
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<210> 16

<211> 17

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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 16

Trp Ile Tyr Pro Gly Asp Gly Thr Thr Glu Tyr Asn Glu Arg Phe Lys
1 5 10 15

Gly

<210> 17

<211> 10

<212> PRT

<213> Artificial Sequence

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<400> 17

Ser Tyr Asp Tyr Asp Tyr Ala Met Asp Tyr
1 5 10

<210> 18

<211> 11

<212> PRT

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<400> 18
 Lys Ala Ser Gln Asp Val Ser Thr Ala Val Ala
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<210> 19
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<400> 19
 Ser Pro Ser Tyr Arg Tyr Thr
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<210> 20
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<400> 20
 Gln Gln Leu Tyr Ser Thr Pro Tyr Thr
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 Asp Tyr Tyr Leu Asp
 1 5

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<400> 22
 Arg Val Asn Pro Tyr Asn Gly Gly Thr Ile Tyr Asn Gln Lys Phe Lys
 1 5 10 15

Gly

<210> 23
 <211> 11
 <212> PRT
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<400> 23
 Asp His Tyr Arg Tyr Asp Pro Leu Leu Asp Tyr
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<210> 24
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<220>
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peptide"

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Arg Ala Ser Gln Ser Val Ser Ser Ser Ser Tyr Ser Tyr Met His
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<210> 25

<211> 7

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<220>

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<223> /note="Description of Artificial Sequence: Synthetic peptide"

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Tyr Ala Ser Asn Leu Glu Ser
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<210> 26

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<212> PRT

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<223> /note="Description of Artificial Sequence: Synthetic peptide"

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<210> 27

<211> 5

<212> PRT

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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 27

Asp Thr Tyr Met His
1 5

<210> 28
<211> 17
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<213> Artificial Sequence

<220>
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<400> 28
Arg Ile Asp Pro Ala Asn Gly Asp Thr Asp Tyr Asp Pro Lys Phe Gln
1 5 10 15

Gly

<210> 29
<211> 10
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<213> Artificial Sequence

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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 29
Ser Gly Pro Pro Tyr Tyr Val Met Asp Tyr
1 5 10

<210> 30
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<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

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<400> 30

Asp Ile Val Leu Thr Gln Ser Pro Ser Ser Leu Ile Val Ser Leu Gly
1 5 10 15

Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Gln Ser Val Ser Thr Ser
20 25 30

Ser Tyr Asn Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
35 40 45

Lys Leu Leu Leu Lys Tyr Ala Ser Asn Leu Glu Ser Gly Val Pro Ala
50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Asn Ile His
65 70 75 80

Pro Val Glu Glu Glu Asp Thr Ala Thr Tyr Tyr Cys Gln His Ser Trp
85 90 95

Glu Ile Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 31

<211> 122

<212> PRT

<213> Artificial Sequence

<220>

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<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 31

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Asp Tyr
20 25 30

P32314-W0_SL_txt

Tyr Met His Trp Val Lys Gln Ser His Ile Lys Ser Leu Glu Trp Ile
 35 40 45

Gly Arg Ile Asn Pro Tyr Asn Gly Ala Ala Phe Tyr Ser Gln Asn Phe
 50 55 60

Lys Asp Lys Ala Ser Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
 65 70 75 80

Met Glu Leu His Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
 85 90 95

Ala Ile Glu Arg Gly Ala Asp Leu Glu Gly Tyr Ala Met Asp Tyr Trp
 100 105 110

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
 115 120

<210> 32

<211> 111

<212> PRT

<213> Artificial Sequence

<220>

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<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 32

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Val Ser Thr Ser
 20 25 30

Ser Tyr Asn Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Lys Pro Pro
 35 40 45

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

P32314-W0_SL_txt

50

55

60

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

Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln His Ser Trp
85 90 95

Glu Ile Pro Leu Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 33

<211> 122

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 33

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Asp Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Arg Ile Asn Pro Tyr Asn Gly Ala Ala Phe Tyr Ser Gln Asn Phe
50 55 60

Lys Asp Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Leu Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

P32314-W0_SL_txt

Ala Ile Glu Arg Gly Ala Asp Leu Glu Gly Tyr Ala Met Asp Tyr Trp
 100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 34
 <211> 122
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 <213> Artificial Sequence

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 polypeptide"

<400> 34
 Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Asp Tyr
 20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45

Gly Arg Ile Asn Pro Tyr Ala Gly Ala Ala Phe Tyr Ser Gln Asn Phe
 50 55 60

Lys Asp Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80

Leu Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Ile Glu Arg Gly Ala Asp Leu Glu Gly Tyr Ala Met Asp Tyr Trp
 100 105 110

P32314-W0_SL_txt

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 35
 <211> 104
 <212> PRT
 <213> Artificial Sequence

<220>
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 <223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 35
 Asp Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
 1 5 10 15

Glu Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Ile Ser Tyr Met
 20 25 30

Tyr Trp Tyr Gln Gln Lys Pro Gly Thr Ser Pro Lys Arg Trp Ile Tyr
 35 40 45

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
 50 55 60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu
 65 70 75 80

Asp Ala Ala Thr Tyr Tyr Cys His Gln Arg Ser Ser Trp Thr Phe Gly
 85 90 95

Gly Gly Thr Lys Leu Glu Ile Lys
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<210> 36
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 <212> PRT
 <213> Artificial Sequence

P32314-W0_SL_txt

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<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 36

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Leu Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Asp Ile Asn Trp Leu Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Trp Ile Tyr Pro Gly Asp Gly Thr Thr Glu Tyr Asn Glu Arg Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Leu Gln Leu Ser Ser Leu Thr Ser Glu Asn Ser Ala Val Tyr Phe Cys
85 90 95

Ala Arg Ser Tyr Asp Tyr Asp Tyr Ala Met Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Ser Val Thr Val Ser Ser
115

<210> 37

<211> 107

<212> PRT

<213> Artificial Sequence

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<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

P32314-W0_SL_txt

<400> 37

Asp Ile Gln Met Thr Gln Ser His Lys Phe Met Ser Thr Ser Val Gly
1 5 10 15

Asp Arg Val Ser Ile Thr Cys Lys Ala Ser Gln Asp Val Ser Thr Ala
20 25 30

Val Ala Trp Phe Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile
35 40 45

Tyr Ser Pro Ser Tyr Arg Tyr Thr Gly Val Pro Asp Arg Phe Thr Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Val Gln Ala
65 70 75 80

Glu Asp Leu Ala Val Tyr Tyr Cys Gln Gln Leu Tyr Ser Thr Pro Tyr
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 38

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

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<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 38

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

P32314-W0_SL_txt

Tyr Leu Asp Trp Val Lys Gln Ser His Gly Glu Ser Phe Glu Trp Ile
35 40 45

Gly Arg Val Asn Pro Tyr Asn Gly Gly Thr Ile Tyr Asn Gln Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Asp Leu Asn Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp His Tyr Arg Tyr Asp Pro Leu Leu Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Thr Leu Thr Val Ser Ser
115 120

<210> 39

<211> 107

<212> PRT

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<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 39

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val Ser Thr Ala
20 25 30

Val Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

P32314-W0_SL_txt

Tyr Ser Pro Ser Tyr Arg Tyr Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Leu Tyr Ser Thr Pro Tyr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 40

<211> 120

<212> PRT

<213> Artificial Sequence

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<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 40

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Tyr Leu Asp Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Arg Val Asn Pro Tyr Asn Gly Gly Thr Ile Tyr Asn Gln Lys Phe
50 55 60

Lys Gly Arg Val Thr Leu Thr Arg Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Leu Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys

85

90

95

Ala Arg Asp His Tyr Arg Tyr Asp Pro Leu Leu Asp Tyr Trp Gly Gln
 100 105 110

Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 41

<211> 111

<212> PRT

<213> Artificial Sequence

<220>

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<223> /note="Description of Artificial Sequence: Synthetic
 polypeptide"

<400> 41

Asp Ile Gln Met Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Leu Gly
 1 5 10 15

Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
 20 25 30

Ser Tyr Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45

Lys Leu Leu Ile Lys Tyr Ala Ser Asn Leu Glu Ser Gly Val Pro Ala
 50 55 60

Arg Phe Ser Gly Arg Gly Ser Gly Thr Asp Phe Thr Leu Asn Ile His
 65 70 75 80

Pro Val Glu Glu Glu Asp Thr Ala Thr Tyr Tyr Cys Gln His Ser Trp
 85 90 95

Glu Ile Pro Tyr Thr Phe Gly Gly Gly Thr Arg Leu Glu Ile Lys
 100 105 110

P32314-W0_SL_txt

<210> 42

<211> 119

<212> PRT

<213> Artificial Sequence

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<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 42

Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Thr
20 25 30

Tyr Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile
35 40 45

Gly Arg Ile Asp Pro Ala Asn Gly Asp Thr Asp Tyr Asp Pro Lys Phe
50 55 60

Gln Gly Lys Ala Thr Val Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
65 70 75 80

Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Thr Ile Ser Gly Pro Pro Tyr Tyr Val Met Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Ser Val Thr Val Ser Ser
115

<210> 43

<211> 17

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<213> Artificial Sequence

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<400> 43

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

<210> 44

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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 44

Arg	Ile	Asn	Pro	Tyr	Ser	Gly	Ala	Ala	Phe	Tyr	Ser	Gln	Asn	Phe	Lys
1				5					10					15	

Asp

<210> 45

<211> 17

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<223> /note="Description of Artificial Sequence: Synthetic peptide"

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<221> VARIANT

P32314-W0_SL_txt

<222> (6)..(6)

<223> /replace="Glu" or "Ser" or "Asn"

<220>

<221> misc_feature

<222> (1)..(17)

<223> /note="Variant residues given in the sequence have no preference with respect to those in the annotations for variant positions"

<400> 45

Arg	Ile	Asn	Pro	Tyr	Ala	Gly	Ala	Ala	Phe	Tyr	Ser	Gln	Asn	Phe	Lys
1				5					10					15	

Asp

<210> 46

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<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

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<221> VARIANT

<222> (55)..(55)

<223> /replace="Glu" or "Ser" or "Asn"

<220>

<221> misc_feature

<222> (1)..(122)

<223> /note="Variant residues given in the sequence have no preference with respect to those in the annotations for variant positions"

<400> 46

Glu	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Ala
1				5					10					15	

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Asp Tyr

20

25

30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45

Gly Arg Ile Asn Pro Tyr Ala Gly Ala Ala Phe Tyr Ser Gln Asn Phe
 50 55 60

Lys Asp Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80

Leu Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Ile Glu Arg Gly Ala Asp Leu Glu Gly Tyr Ala Met Asp Tyr Trp
 100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 47

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
 peptide"

<220>

<221> VARIANT

<222> (6)..(6)

<223> /replace="Glu" or "Ser"

<220>

<221> misc_feature

<222> (1)..(17)

<223> /note="Variant residues given in the sequence have no
 preference with respect to those in the annotations for

variant positions"

<400> 47

Arg	Ile	Asn	Pro	Tyr	Ala	Gly	Ala	Ala	Phe	Tyr	Ser	Gln	Asn	Phe	Lys
1				5					10					15	

Asp

<210> 48

<211> 122

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<220>

<221> VARIANT

<222> (55)..(55)

<223> /replace="Glu" or "Ser"

<220>

<221> misc_feature

<222> (1)..(122)

<223> /note="Variant residues given in the sequence have no preference with respect to those in the annotations for variant positions"

<400> 48

Glu	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Ala
1				5					10					15	

Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Ser	Phe	Thr	Asp	Tyr
				20				25					30		

Tyr	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Ile
		35					40					45			

Gly Arg Ile Asn Pro Tyr Ala Gly Ala Ala Phe Tyr Ser Gln Asn Phe

50

55

60

Lys Asp Arg Val Thr Leu Thr Val Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80

Leu Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Ile Glu Arg Gly Ala Asp Leu Glu Gly Tyr Ala Met Asp Tyr Trp
 100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 49

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
 peptide"

<400> 49

Asp Ser Cys Tyr Phe Leu Ser Asp Asp Val Gln Thr Trp Gln Glu Ser
 1 5 10 15

Lys

<210> 50

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic
 peptide"

P32314-W0_SL_txt

<400> 50

Ile Arg Asn Leu Ser Thr Thr Leu Gln Thr Ile Ala Thr Lys
1 5 10

<210> 51

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 51

Asn Leu Ser Thr Thr Leu Gln Thr Ile Ala Thr Lys
1 5 10

<210> 52

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 52

Asp Tyr Lys Asp Asp Asp Asp Lys Leu Glu His Val Thr Leu Lys
1 5 10 15

<210> 53

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 53

Asp Asp Asp Asp Lys Leu Glu His Val Thr Leu Lys
1 5 10

<210> 54
 <211> 13
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 54
 Met Asn Lys Leu Gln Asn Ile Ser Glu Glu Leu Gln Arg
 1 5 10

<210> 55
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 55
 Leu Gln Asn Ile Ser Glu Glu Leu Gln Arg
 1 5 10

<210> 56
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 56
 Asn Ile Ser Leu Gln Leu Met Ser Asn Met Asn Ile Ser Asn Lys
 1 5 10 15

<210> 57

P32314-W0_SL_txt

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 57

Asn	Leu	Ser	Thr	Thr	Leu	Gln	Thr	Ile	Ala	Thr	Lys	Leu	Cys	Arg
1				5					10					15

<210> 58

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 58

Glu	Leu	Tyr	Ser	Lys
1			5	

<210> 59

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 59

Trp	Ile	Trp	His	Lys
1			5	

<210> 60

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 60

Met Ala Cys Ala Ala Gln Asn Ala Ser Leu Leu Lys
1 5 10

<210> 61

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 61

Ile Asn Asn Lys Asn Ala Leu Glu Phe Ile Lys
1 5 10

<210> 62

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 62

Asn Ala Leu Glu Phe Ile Lys
1 5

<210> 63

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 63

Asn Ala Leu Glu Phe Ile Lys Ser Gln Ser Arg
1 5 10

<210> 64

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 64

Ser Tyr Asp Tyr Trp Leu Gly Leu Ser Pro Glu Glu Asp Ser Thr Arg
1 5 10 15

<210> 65

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 65

Ser Tyr Asp Tyr Trp Leu Gly Leu Ser Pro Glu Glu Asp Ser Thr Arg
1 5 10 15

Gly Met Arg

<210> 66

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 66
 Val Asp Asn Ile Ile Asn Ser Ser Ala Trp Val Ile Arg
 1 5 10

<210> 67
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 67
 Asn Ala Pro Asp Leu Asn Asn Met Tyr Cys Gly Tyr Ile Asn Arg
 1 5 10 15

<210> 68
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 68
 Leu Tyr Val Gln Tyr Tyr His Cys Thr Tyr Lys
 1 5 10

<210> 69
 <211> 5
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 69

Met Ile Cys Glu Lys

1 5

<210> 70

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 70

Met Ala Asn Pro Val Gln Leu Gly Ser Thr Tyr Phe Arg

1 5 10

<210> 71

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 71

Asp Tyr Lys Asp Asp Asp Asp Lys

1 5

<210> 72

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<221> source

<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 72

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

P32314-W0_SL_txt

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

<210> 73
 <211> 112
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> source
 <223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 73
Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

P32314-W0_SL_txt

Gly Trp Ile Asn Pro Gly Ser Gly Asn Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Arg Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Leu Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
100 105 110