SEQUENCE LISTING

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<120> Dual Variable Domain Immunoglobulin and Uses Thereof

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<160> 133

<170> PatentIn version 3.5

<210> 1
<211> 122
<212> PRT
<213> Mus musculus

<220>
<221> PEPTIDE
<222> (1)..(122)
<223> Murine monoclonal antibody 3D12 binding human Il-1a (VH)

<400> 1

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

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

Gly Met Asn Trp Val Lys Gln Ala Pro Gly Lys Asp Leu Lys Arg Met
35 40 45

Ala Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr Tyr Ala Asp Asp Phe
50 55 60

Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr
65 70 75 80

Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr Tyr Phe Cys
85 90 95

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

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

<210> 2

<211> 108
<212> PRT
<213> Mus musculus

<220>
<221> PEPTIDE
<222> (1)..(108)
<223> Murine monoclonal antibody 3D12 capable of binding human IL-1a
(VL)

<400> 2

Asn Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

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

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
35 40 45

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

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln
65 70 75 80

Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Lys Thr Leu Pro Tyr
85 90 95

Ala Phe Gly Gly Gly Thr Lys Leu Glu Ile Asn Arg
100 105

<210> 3
<211> 118
<212> PRT
<213> Mus musculus

<220>
<221> PEPTIDE
<222> (1)..(118)
<223> Murine monoclonal antibody 18F4 capable of binding human IL-1a
(VH)

<400> 3

Glu 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 Leu Asn Ile Lys Asp Thr
20 25 30

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

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

Leu Gly Lys Ala Thr Ile 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

Ala Arg Gly Asp Gly Asn Phe His Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Leu Thr Val Ser Ser
115

<210> 4
<211> 108
<212> PRT
<213> Mus musculus

<220>
<221> PEPTIDE
<222> (1)..(108)
<223> Murine monoclonal antibody 18F4 capable of binding human IL-1a (VL)

<400> 4

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

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

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

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

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

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

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

<210> 5
<211> 114
<212> PRT
<213> Mus musculus

<220>
<221> PEPTIDE
<222> (1)..(114)
<223> Murine monoclonal antibody 6H3 capable of binding human IL-1a (VH)

<400> 5

Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg Pro Gly Ala
1 5 10 15

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

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

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr Leu Tyr Ser Gln Lys Phe
50 55 60

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

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

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

Ser Ser

<210> 6
<211> 107
<212> PRT
<213> Mus musculus

<220>
<221> PEPTIDE
<222> (1)..(107)
<223> Murine monoclonal antibody 6H3 capable of binding human IL-1a (VL)

<400> 6

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

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

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

Leu Thr Ser Asn 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 Gln Gln Trp Asn Ser Asn Pro Tyr Thr
85 90 95

Phe Gly Gly Gly Thr Lys Leu Glu Met Lys Arg
100 105

<210> 7
<211> 121
<212> PRT
<213> Mus musculus

<220>
<221> PEPTIDE
<222> (1)..(121)
<223> Murine monoclonal antibody 13F5 capable of binding human IL-1b (VH)

<400> 7

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

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

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

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

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

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

Val Arg Phe Pro Thr Gly Asn Asp Tyr Tyr Ala Met Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Ser Val Thr Val Ser Ser
115 120

<210> 8
<211> 112
<212> PRT
<213> Mus musculus

<220>
<221> PEPTIDE
<222> (1)..(112)
<223> Murine monoclonal antibody 13F5 capable of binding human IL-1b (VL)

<400> 8

Asn Ile Val Leu 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 Glu Ser Val Asp Ser Tyr
20 25 30

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

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

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

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

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

<210> 9
<211> 122
<212> PRT
<213> Mus musculus

<220>
<221> PEPTIDE
<222> (1)..(122)
<223> Murine monoclonal antibody 1B12 capable of binding human IL-1b (VH)

<400> 9

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

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

Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Leu Ile Trp Gly Gly Gly Asp Thr Tyr Tyr Asn Ser Pro Leu Lys
50 55 60

Ser Arg Leu Ser Ile Arg Lys Asp Asn Ser Lys Ser Gln Val Phe Leu
65 70 75 80

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

Lys Gln Arg Thr Leu Trp Gly Tyr Asp Leu Tyr Gly Met Asp Tyr Trp
100 105 110

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

<210> 10
<211> 108
<212> PRT
<213> Mouse

<220>
<221> PEPTIDE
<222> (1)..(108)
<223> Murine monoclonal antibody 1B12 capable of binding human IL-1b (VL)

<400> 10

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

Glu Lys Val Thr Ile Arg Cys Ile Thr Ser Thr Asp Ile Asp Val Asp
20 25 30

Met Asn Trp Tyr Gln Gln Lys Pro Gly Glu Pro Pro Lys Leu Leu Ile
35 40 45

Ser Gln Gly Asn Thr Leu Arg Pro Gly Val Pro Ser Arg Phe Ser Ser
50 55 60

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

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

Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Arg
100 105

<210> 11
<211> 118
<212> PRT
<213> Mus musculus

<220>
<221> PEPTIDE
<222> (1)..(118)
<223> Murine monoclonal antibody 6B12 capable of binding human IL-1b (VH)

<400> 11

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

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

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

Gly Tyr Ile Ser Cys Tyr Asn Gly Phe Thr Ser Tyr Asn Pro Lys Phe
50 55 60

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

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

Ala Arg Ser Asp Tyr Tyr Gly Thr Asn Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Leu Thr Val Ser Ser
115

<210> 12
<211> 107
<212> PRT
<213> Mus musculus

<220>
<221> PEPTIDE
<222> (1)..(107)
<223> Murine monoclonal antibody 6B12 capable of binding human IL-1b (VL)

<400> 12

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

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

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

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

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

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Thr Tyr Pro Tyr Thr
85 90 95

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

<210> 13
<211> 22
<212> DNA
<213> Artificial

<220>
<223> PCR primer

<220>
<221> primer
<222> (1)..(22)

<400> 13
atggtgtcca cagctcagtt cc 22

<210> 14
<211> 29
<212> DNA
<213> Artificial

<220>
<223> PCR primer

<220>
<221> primer
<222> (1)..(29)

<400> 14
gcagccaccg tacgccggtt tatttccag 29

<210> 15
<211> 24
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(24)

<400> 15
cgtacggtgg ctgcaccatc tgtc 24

<210> 16
<211> 23
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(23)

<400> 16
tcaacactct cccctgttga agc 23

<210> 17
<211> 22
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(22)

<400> 17
atggcttggg tgtggacctt gc 22

<210> 18
<211> 37

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(35)

<400> 22
gggcccttgg tcgacgctga ggagacggtg actga 35

<210> 23
<211> 24
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(24)

<400> 23
atggtcctca tgtccttgct gttc 24

<210> 24
<211> 34
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(34)

<400> 24
gcagccaccg tacgccgttt tatttccagc tttg 34

<210> 25
<211> 23
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer1
<222> (1)..(23)

<400> 25
cagatccagt tggtgcagtc tgg 23

<210> 26
<211> 35
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<222> (1)..(36)

<400> 30
gccaaaacga caccccaca gatccagttg gtgcag 36

<210> 31
<211> 27
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(27)

<400> 31
tggtgcagca tcagcccgtt ttatttc 27

<210> 32
<211> 33
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(33)

<400> 32
gctgatgctg caccaaatat ccagatgaca cag 33

<210> 33
<211> 243
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VH region

<220>
<221> PEPTIDE
<222> (1)..(243)
<223> DVD heavy variable hIL-1a/bDVD1-Ig region

<400> 33

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

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

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

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

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

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

Val Arg Phe Pro Thr Gly Asn Asp Tyr Tyr Ala Met Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Ser Val Thr Val Ser Ser Gln Ile Gln Leu Val Gln Ser
115 120 125

Gly Pro Glu Leu Lys Lys Pro Gly Glu Thr Val Lys Ile Ser Cys Lys
130 135 140

Ala Ser Gly Tyr Thr Phe Arg Asn Tyr Gly Met Asn Trp Val Lys Gln
145 150 155 160

Ala Pro Gly Lys Asp Leu Lys Arg Met Ala Trp Ile Asn Thr Tyr Thr
165 170 175

Gly Glu Ser Thr Tyr Ala Asp Asp Phe Lys Gly Arg Phe Ala Phe Ser
180 185 190

Leu Glu Thr Ser Ala Ser Thr Ala Tyr Leu Gln Ile Asn Asn Leu Lys
195 200 205

Asn Glu Asp Thr Ala Thr Tyr Phe Cys Ala Arg Gly Ile Tyr Tyr Tyr
210 215 220

Gly Ser Ser Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr
225 230 235 240

Val Ser Ser

<210> 34
<211> 330
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(330)
<223> Sequence of CH region

<400> 34

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
1 5 10 15

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

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

35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65 70 75 80

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
100 105 110

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
115 120 125

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
130 135 140

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145 150 155 160

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
165 170 175

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
180 185 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
195 200 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
210 215 220

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu
225 230 235 240

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
245 250 255

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
260 265 270

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
275 280 285

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
290 295 300

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
305 310 315 320

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
325 330

<210> 35
<211> 221
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VL region

<220>
<221> PEPTIDE
<222> (1)..(221)
<223> DVD light variable hIL-1a/bDVD1-Ig region

<400> 35

Asn Ile Val Leu 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 Glu Ser Val Asp Ser Tyr
20 25 30

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

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

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

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

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

Asn Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly
115 120 125

Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Ser Asn Cys
130 135 140

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
145 150 155 160

Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
165 170 175

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln
180 185 190

Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Lys Thr Leu Pro Tyr
195 200 205

Ala Phe Gly Gly Gly Thr Lys Leu Glu Ile Asn Arg Arg
210 215 220

<210> 36
<211> 106
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(106)
<223> Sequence of CL region

<400> 36

Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
1 5 10 15

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

Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
35 40 45

Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
50 55 60

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

His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
85 90 95

Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
100 105

<210> 37
<211> 249
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VH region

<220>
<221> PEPTIDE
<222> (1)..(249)
<223> DVD heavy variable hIL-1a/bDVD2-Ig region

<400> 37

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

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

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile

35 40 45

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

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

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

Val Arg Phe Pro Thr Gly Asn Asp Tyr Tyr Ala Met Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Ser Val Thr Val Ser Ser Ala Lys Thr Thr Pro Pro Gln
115 120 125

Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu Thr
130 135 140

Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Arg Asn Tyr Gly
145 150 155 160

Met Asn Trp Val Lys Gln Ala Pro Gly Lys Asp Leu Lys Arg Met Ala
165 170 175

Trp Ile Asn Thr Tyr Thr Gly Glu Ser Thr Tyr Ala Asp Asp Phe Lys
180 185 190

Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr Leu
195 200 205

Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr Tyr Phe Cys Ala
210 215 220

Arg Gly Ile Tyr Tyr Tyr Gly Ser Ser Tyr Ala Met Asp Tyr Trp Gly
225 230 235 240

Gln Gly Thr Ser Val Thr Val Ser Ser
245

<210> 38
<211> 6
<212> PRT
<213> Artificial

<220>
<223> Linker peptide

<220>
<221> PEPTIDE
<222> (1)..(6)
<223> LInker peptide

<400> 38

Ala Lys Thr Thr Pro Pro
1 5

<210> 39
<211> 225
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VL region

<220>
<221> PEPTIDE
<222> (1)..(225)
<223> DVD light variable hIL-1a/bDVD2-Ig region

<400> 39

Asn Ile Val Leu 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 Glu Ser Val Asp Ser Tyr
20 25 30

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

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

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

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

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

Ala Asp Ala Ala Pro Asn Ile Gln Met Thr Gln Thr Thr Ser Ser Leu
115 120 125

Ser Ala Ser Leu Gly Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln
130 135 140

Asp Ile Ser Asn Cys Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr
145 150 155 160

Val Lys Leu Leu Ile Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro
165 170 175

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile
180 185 190

Ser Asn Leu Glu Gln Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly
195 200 205

Lys Thr Leu Pro Tyr Ala Phe Gly Gly Gly Thr Lys Leu Glu Ile Asn
210 215 220

Arg
225

<210> 40
<211> 5
<212> PRT
<213> Artificial

<220>
<223> Linker peptide

<220>
<221> PEPTIDE
<222> (1)..(5)
<223> Linker peptide

<400> 40

Ala Asp Ala Ala Pro
1 5

<210> 41
<211> 246
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VH region

<220>
<221> PEPTIDE
<222> (1)..(246)
<223> DVD heavy variable hIL-1a/b DVD3a-Ig region

<400> 41

Glu 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 Leu Asn Ile Lys Asp Thr
20 25 30

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

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

Leu Gly Lys Ala Thr Ile 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

Ala Arg Gly Asp Gly Asn Phe His Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Leu Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Gln Val His Leu
115 120 125

Lys Glu Ser Gly Pro Gly Leu Val Ala Pro Ser Gln Ser Leu Ser Ile
130 135 140

Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Asp Tyr Gly Val Ser Trp
145 150 155 160

Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu Gly Leu Ile Trp
165 170 175

Gly Gly Gly Asp Thr Tyr Tyr Asn Ser Pro Leu Lys Ser Arg Leu Ser
180 185 190

Ile Arg Lys Asp Asn Ser Lys Ser Gln Val Phe Leu Lys Met Asn Ser
195 200 205

Leu Gln Thr Asp Asp Thr Ala Val Tyr Tyr Cys Ala Lys Gln Arg Thr
210 215 220

Leu Trp Gly Tyr Asp Leu Tyr Gly Met Asp Tyr Trp Gly Gln Gly Thr
225 230 235 240

Ser Val Thr Val Ser Ser
245

<210> 42
<211> 6
<212> PRT
<213> Artificial

<220>
<223> Linker peptide

<220>
<221> PEPTIDE
<222> (1)..(6)
<223> Linker peptide

<400> 42

Ala Ser Thr Lys Gly Pro
1 5

<210> 43
<211> 222
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VL region

<220>
<221> PEPTIDE
<222> (1)..(222)
<223> DVD light variable hIL-1a/b DVD3a-Ig region

<400> 43

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

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

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Glu Thr Thr Val Thr Gln Ser Pro Ala Ser Leu Ser Met Ala Ile
115 120 125

Gly Glu Lys Val Thr Ile Arg Cys Ile Thr Ser Thr Asp Ile Asp Val
130 135 140

Asp Met Asn Trp Tyr Gln Gln Lys Pro Gly Glu Pro Pro Lys Leu Leu
145 150 155 160

Ile Ser Gln Gly Asn Thr Leu Arg Pro Gly Val Pro Ser Arg Phe Ser
165 170 175

Ser Ser Gly Ser Gly Thr Asp Phe Val Phe Ile Ile Glu Asn Met Leu
180 185 190

Ser Glu Asp Val Ala Asp Tyr Tyr Cys Leu Gln Ser Asp Asn Leu Pro
195 200 205

Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Arg Arg
210 215 220

<210> 44
<211> 5
<212> PRT
<213> Artificial

<220>
<223> Linker peptide

<220>
<221> PEPTIDE
<222> (1)..(5)

<223> Linker peptide

<400> 44

Thr Val Ala Ala Pro
1 5

<210> 45
<211> 246
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VH region

<220>
<221> PEPTIDE
<222> (1)..(246)
<223> DVD heavy variable hIL-1a/b DVD3b-Ig region

<400> 45

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

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

Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Leu Ile Trp Gly Gly Gly Asp Thr Tyr Tyr Asn Ser Pro Leu Lys
50 55 60

Ser Arg Leu Ser Ile Arg Lys Asp Asn Ser Lys Ser Gln Val Phe Leu
65 70 75 80

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

Lys Gln Arg Thr Leu Trp Gly Tyr Asp Leu Tyr Gly Met Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
115 120 125

Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
130 135 140

Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Leu Asn Ile Lys Asp Thr
145 150 155 160

Tyr Met His Trp Leu Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile
165 170 175

Gly Arg Ile Asp Pro Ala Asn Gly Asn Ala Lys Tyr Asp Pro Arg Phe
180 185 190

Leu Gly Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
195 200 205

Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
210 215 220

Ala Arg Gly Asp Gly Asn Phe His Phe Asp Tyr Trp Gly Gln Gly Thr
225 230 235 240

Thr Leu Thr Val Ser Ser
245

<210> 46
<211> 221
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VL region

<220>
<221> PEPTIDE
<222> (1)..(221)
<223> DVD light variable hIL-1a/b DVD3b-Ig region

<400> 46

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

Glu Lys Val Thr Ile Arg Cys Ile Thr Ser Thr Asp Ile Asp Val Asp
20 25 30

Met Asn Trp Tyr Gln Gln Lys Pro Gly Glu Pro Pro Lys Leu Leu Ile
35 40 45

Ser Gln Gly Asn Thr Leu Arg Pro Gly Val Pro Ser Arg Phe Ser Ser
50 55 60

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

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

Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Arg Thr Val Ala Ala
100 105 110

Pro Asp Ile Val Met Thr Gln Ser Gln Arg Phe Met Ser Thr Ser Val
115 120 125

Gly Asp Arg Val Ser Val Thr Cys Lys Ala Ser Gln Asn Val Gly Thr
130 135 140

Asn Ile Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Arg Ala Leu
145 150 155 160

Ile Tyr Ser Ala Ser Tyr Arg Tyr Ser Gly Val Pro Asp Arg Phe Thr
165 170 175

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Asn Val Gln
180 185 190

Ser Val Asp Leu Ala Glu Tyr Phe Cys Gln Gln Tyr Thr Arg Tyr Pro
195 200 205

Leu Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg
210 215 220

<210> 47
<211> 253
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VH region

<220>
<221> PEPTIDE
<222> (1)..(253)
<223> DVD heavy variable hIL-1a/b DVD4a-Ig region

<400> 47

Glu 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 Leu Asn Ile Lys Asp Thr
20 25 30

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

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

Leu Gly Lys Ala Thr Ile 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

Ala Arg Gly Asp Gly Asn Phe His Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Leu Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro
115 120 125

Leu Ala Pro Gln Val His Leu Lys Glu Ser Gly Pro Gly Leu Val Ala
130 135 140

Pro Ser Gln Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu

145 150 155 160

Thr Asp Tyr Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu
165 170 175

Glu Trp Leu Gly Leu Ile Trp Gly Gly Gly Asp Thr Tyr Tyr Asn Ser
180 185 190

Pro Leu Lys Ser Arg Leu Ser Ile Arg Lys Asp Asn Ser Lys Ser Gln
195 200 205

Val Phe Leu Lys Met Asn Ser Leu Gln Thr Asp Asp Thr Ala Val Tyr
210 215 220

Tyr Cys Ala Lys Gln Arg Thr Leu Trp Gly Tyr Asp Leu Tyr Gly Met
225 230 235 240

Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser
245 250

<210> 48
<211> 13
<212> PRT
<213> Artificial

<220>
<223> Linker peptide

<220>
<221> PEPTIDE
<222> (1)..(13)
<223> Linker peptide

<400> 48

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro
1 5 10

<210> 49
<211> 228
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VL region

<220>
<221> PEPTIDE
<222> (1)..(228)
<223> DVD light variable hIL-1a/bDVD4a-Ig region

<400> 49

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

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

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Glu Thr Thr Val Thr Gln Ser Pro
115 120 125

Ala Ser Leu Ser Met Ala Ile Gly Glu Lys Val Thr Ile Arg Cys Ile
130 135 140

Thr Ser Thr Asp Ile Asp Val Asp Met Asn Trp Tyr Gln Gln Lys Pro
145 150 155 160

Gly Glu Pro Pro Lys Leu Leu Ile Ser Gln Gly Asn Thr Leu Arg Pro
165 170 175

Gly Val Pro Ser Arg Phe Ser Ser Ser Gly Ser Gly Thr Asp Phe Val
180 185 190

Phe Ile Ile Glu Asn Met Leu Ser Glu Asp Val Ala Asp Tyr Tyr Cys
195 200 205

Leu Gln Ser Asp Asn Leu Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu
210 215 220

Glu Leu Lys Arg
225

<210> 50
<211> 12
<212> PRT
<213> Artificial

<220>
<223> Linker peptide

<220>
<221> PEPTIDE
<222> (1)..(12)
<223> Linker peptide

<400> 50

Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro
1 5 10

<210> 51
<211> 253
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VH region

<220>
<221> PEPTIDE
<222> (1)..(253)
<223> DVD heavy variable hIL-1a/b DVD4b-Ig region

<400> 51

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

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

Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Leu Ile Trp Gly Gly Gly Asp Thr Tyr Tyr Asn Ser Pro Leu Lys
50 55 60

Ser Arg Leu Ser Ile Arg Lys Asp Asn Ser Lys Ser Gln Val Phe Leu
65 70 75 80

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

Lys Gln Arg Thr Leu Trp Gly Tyr Asp Leu Tyr Gly Met Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
115 120 125

Ser Val Phe Pro Leu Ala Pro Glu Val Gln Leu Gln Gln Ser Gly Ala
130 135 140

Glu Leu Val Lys Pro Gly Ala Ser Val Lys Leu Ser Cys Thr Ala Ser
145 150 155 160

Gly Leu Asn Ile Lys Asp Thr Tyr Met His Trp Leu Lys Gln Arg Pro
165 170 175

Glu Gln Gly Leu Glu Trp Ile Gly Arg Ile Asp Pro Ala Asn Gly Asn
180 185 190

Ala Lys Tyr Asp Pro Arg Phe Leu Gly Lys Ala Thr Ile Thr Ala Asp
195 200 205

Thr Ser Ser Asn Thr Ala Tyr Leu Gln Leu Ser Ser Leu Thr Ser Glu
210 215 220

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Asp Gly Asn Phe His Phe
225 230 235 240

Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
245 250

<210> 52
<211> 228
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VL region

<220>
<221> PEPTIDE
<222> (1)..(228)
<223> DVD light variable hIL-1a/b DVD4b-Ig region

<400> 52

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

Glu Lys Val Thr Ile Arg Cys Ile Thr Ser Thr Asp Ile Asp Val Asp
20 25 30

Met Asn Trp Tyr Gln Gln Lys Pro Gly Glu Pro Pro Lys Leu Leu Ile
35 40 45

Ser Gln Gly Asn Thr Leu Arg Pro Gly Val Pro Ser Arg Phe Ser Ser
50 55 60

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

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

Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Asp Ile Val Met Thr Gln Ser Gln
115 120 125

Arg Phe Met Ser Thr Ser Val Gly Asp Arg Val Ser Val Thr Cys Lys
130 135 140

Ala Ser Gln Asn Val Gly Thr Asn Ile Ala Trp Tyr Gln Gln Lys Pro
145 150 155 160

Gly Gln Ser Pro Arg Ala Leu Ile Tyr Ser Ala Ser Tyr Arg Tyr Ser
165 170 175

Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr

180 185 190

Leu Thr Ile Ser Asn Val Gln Ser Val Asp Leu Ala Glu Tyr Phe Cys
195 200 205

Gln Gln Tyr Thr Arg Tyr Pro Leu Thr Phe Gly Gly Gly Thr Lys Leu
210 215 220

Glu Ile Lys Arg
225

<210> 53
<211> 238
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VH region

<220>
<221> PEPTIDE
<222> (1)..(238)
<223> DVD heavy variable hIL-1a/b DVD5a-Ig region

<400> 53

Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg Pro Gly Ala
1 5 10 15

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

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

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr Leu Tyr Ser Gln Lys Phe
50 55 60

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

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

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

Ser Ser Ala Ser Thr Lys Gly Pro Glu Val Gln Leu Gln Gln Ser Gly
115 120 125

Pro Glu Leu Val Lys Thr Gly Thr Ser Val Lys Ile Ser Cys Lys Ala
130 135 140

Ser Gly Tyr Ser Phe Thr Gly Tyr Tyr Met His Trp Val Arg Gln Ser
145 150 155 160

His Gly Lys Ser Leu Glu Trp Ile Gly Tyr Ile Ser Cys Tyr Asn Gly
165 170 175

Phe Thr Ser Tyr Asn Pro Lys Phe Lys Gly Lys Ala Thr Phe Thr Val
180 185 190

Asp Thr Ser Ser Ser Thr Ala Tyr Ile Gln Phe Ser Arg Leu Thr Ser
195 200 205

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

Asn Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
225 230 235

<210> 54
<211> 219
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VL region

<220>
<221> PEPTIDE
<222> (1)..(219)
<223> DVD light variable hIL-1a/b DVD5a-Ig region

<400> 54

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

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

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

Leu Thr Ser Asn 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 Gln Gln Trp Asn Ser Asn Pro Tyr Thr
85 90 95

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

Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
115 120 125

Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
130 135 140

His Trp Phe Gln Gln Lys Pro Gly Ala Ser Pro Lys Leu Trp Ile Tyr
145 150 155 160

Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
165 170 175

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Val Ser Arg Met Glu Ala Glu
180 185 190

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Thr Tyr Pro Tyr Thr
195 200 205

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg
210 215

<210> 55
<211> 238
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VH region

<220>
<221> PEPTIDE
<222> (1)..(238)
<223> DVD heavy variable hIL-1a/b DVD5b-Ig region

<400> 55

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

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

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

Gly Tyr Ile Ser Cys Tyr Asn Gly Phe Thr Ser Tyr Asn Pro Lys Phe
50 55 60

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

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

Ala Arg Ser Asp Tyr Tyr Gly Thr Asn Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Leu Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Gln Val Gln Leu
115 120 125

Gln Gln Pro Gly Ala Glu Leu Val Arg Pro Gly Ala Ser Val Lys Leu
130 135 140

Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr Trp Met Asn Trp
145 150 155 160

Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile Gly Arg Ile Asp
165 170 175

Pro Tyr Asp Ser Glu Thr Leu Tyr Ser Gln Lys Phe Lys Asp Thr Ala
180 185 190

Ile Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser
195 200 205

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

Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
225 230 235

<210> 56
<211> 219
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VL region

<220>
<221> PEPTIDE
<222> (1)..(219)
<223> DVD light variable hIL-1a/b DVD5b-Ig region

<400> 56

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

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

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

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

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

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Thr Tyr Pro Tyr Thr
85 90 95

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

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

115 120 125

Glu Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Val Asn Tyr Met
130 135 140

Tyr Trp Tyr Gln Gln Lys Pro Arg Ser Ser Pro Lys Pro Trp Ile Tyr
145 150 155 160

Leu Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
165 170 175

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu
180 185 190

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Asn Ser Asn Pro Tyr Thr
195 200 205

Phe Gly Gly Gly Thr Lys Leu Glu Met Lys Arg
210 215

<210> 57
<211> 245
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VH region

<220>
<221> PEPTIDE
<222> (1)..(245)
<223> DVD heavy variable hIL-1a/b DVD6a-Ig region

<400> 57

Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg Pro Gly Ala
1 5 10 15

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

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

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr Leu Tyr Ser Gln Lys Phe
50 55 60

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

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

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

Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Glu
115 120 125

Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Thr Gly Thr Ser
130 135 140

Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr Tyr
145 150 155 160

Met His Trp Val Arg Gln Ser His Gly Lys Ser Leu Glu Trp Ile Gly
165 170 175

Tyr Ile Ser Cys Tyr Asn Gly Phe Thr Ser Tyr Asn Pro Lys Phe Lys
180 185 190

Gly Lys Ala Thr Phe Thr Val Asp Thr Ser Ser Ser Thr Ala Tyr Ile
195 200 205

Gln Phe Ser Arg Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala
210 215 220

Arg Ser Asp Tyr Tyr Gly Thr Asn Asp Tyr Trp Gly Gln Gly Thr Thr
225 230 235 240

Leu Thr Val Ser Ser
245

<210> 58
<211> 227
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VL region

<220>
<221> PEPTIDE
<222> (1)..(227)
<223> DVD light variable hIL-1a/b DVD 6a-Ig region

<400> 58

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

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

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

Leu Thr Ser Asn 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 Gln Gln Trp Asn Ser Asn Pro Tyr Thr
85 90 95

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

Ser Val Phe Ile Phe Pro Pro Gln Ile Val Leu Thr Gln Ser Pro Ala
115 120 125

Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr Ile Thr Cys Ser Ala
130 135 140

Ser Ser Ser Val Ser Tyr Met His Trp Phe Gln Gln Lys Pro Gly Ala
145 150 155 160

Ser Pro Lys Leu Trp Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly Val
165 170 175

Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr
180 185 190

Val Ser Arg Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln
195 200 205

Arg Ser Thr Tyr Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile
210 215 220

Lys Arg Arg
225

<210> 59
<211> 245
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VH region

<220>
<221> PEPTIDE
<222> (1)..(245)
<223> DVD heavy variable hIL-1a/b DVD6b-Ig region

<400> 59

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

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

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

Gly Tyr Ile Ser Cys Tyr Asn Gly Phe Thr Ser Tyr Asn Pro Lys Phe
50 55 60

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

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

Ala Arg Ser Asp Tyr Tyr Gly Thr Asn Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Leu Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro
115 120 125

Leu Ala Pro Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg
130 135 140

Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
145 150 155 160

Thr Thr Tyr Trp Met Asn Trp Val Lys Gln Arg Pro Glu Gln Gly Leu
165 170 175

Glu Trp Ile Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr Leu Tyr Ser
180 185 190

Gln Lys Phe Lys Asp Thr Ala Ile Leu Thr Val Asp Lys Ser Ser Ser
195 200 205

Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val
210 215 220

Tyr Tyr Cys Ala Arg Tyr Gly Phe Asp Tyr Trp Gly Gln Gly Thr Thr
225 230 235 240

Leu Thr Val Ser Ser
245

<210> 60
<211> 227
<212> PRT
<213> Artificial

<220>
<223> Chimeric mouse/human VL region

<220>
<221> PEPTIDE
<222> (1)..(227)
<223> DVD light varibale hIL-1a/b DVD6b-Ig region

<400> 60

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

Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met

20 25 30

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

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

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

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Thr Tyr Pro Tyr Thr
85 90 95

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

Ser Val Phe Ile Phe Pro Pro Gln Ile Val Leu Thr Gln Ser Pro Ala
115 120 125

Leu Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Ser Ala
130 135 140

Ser Ser Ser Val Asn Tyr Met Tyr Trp Tyr Gln Gln Lys Pro Arg Ser
145 150 155 160

Ser Pro Lys Pro Trp Ile Tyr Leu Thr Ser Asn Leu Ala Ser Gly Val
165 170 175

Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr
180 185 190

Ile Ser Ser Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln
195 200 205

Trp Asn Ser Asn Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Met
210 215 220

Lys Arg Arg
225

<210> 61
<211> 62
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(62)

<400> 61
tagagatccc tcgacctcga gatccattgt gcccgggcgc caccatggag tttgggctga 60

gc 62

<210> 62
<211> 45
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(45)

<400> 62
cacctctggg cccttggtcg acgctgaaga gacggtgacc attgt 45

<210> 63
<211> 60
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(60)

<400> 63
gggtgccagg gggaagaccg atgggccctt ggtcgacgct gaagagacgg tgaccattgt 60

<210> 64
<211> 45
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(45)

<400> 64
tcttcagcgt cgaccaaggg cccagaggtg cagctggtgc agtct 45

<210> 65
<211> 60
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(60)

<400> 65
gcgtcgacca agggcccatc ggtcttcccc ctggcacccg aggtgcagct ggtgcagtct 60

<211> 45
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(45)

<400> 70
ctaggtcagc ccaaggctgc ccccgaaata gtgatgacgc agtct 45

<210> 71
<211> 60
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(60)

<400> 71
cagcccaagg ctgccccctc ggtcactctg ttcccgcccg aaatagtgat gacgcagtct 60

<210> 72
<211> 59
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(59)

<400> 72
gtcccaggtg gggaccctca ctctagagtc gcggccgcct aacactctcc cctgttgaa 59

<210> 73
<211> 45
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(45)

<400> 73
cacctgtggg cccttggtcg acgctgaaga gacggtgacc attgt 45

<210> 74
<211> 60
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(60)

<400> 74
gggtgccagg gggaagaccg atgggccctt ggtcgacgct gaagagacgg tgaccattgt 60

<210> 75
<211> 45
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(45)

<400> 75
tcttcagcgt cgaccaaggg cccacaggtg cagctggtgg agtct 45

<210> 76
<211> 60
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(60)

<400> 76
gcgtcgacca agggcccatc ggtcttcccc ctggcacccc aggtgcagct ggtggagtct 60

<210> 77
<211> 65
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(65)

<400> 77
tagagatccc tcgacctcga gatccattgt gcccgggcgc caccatggaa gccccagcgc 60

agctt 65

<210> 78
<211> 42
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(42)

<400> 78
agactgtggt gcagccacag ttcgtttaat ctccagtcgt gt 42

<210> 79
<211> 57
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(57)

<400> 79
tggcgggaag atgaagacag atggtgcagc cacagttcgt ttaatctcca gtcgtgt 57

<210> 80
<211> 42
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(42)

<400> 80
aaacgaactg tggctgcacc acagtctgtg ctgactcagc cc 42

<210> 81
<211> 57
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(57)

<400> 81
actgtggctg caccatctgt cttcatcttc ccgccacagt ctgtgctgac tcagccc 57

<210> 82
<211> 59
<212> DNA
<213> Artificial

<220>
<223> PCR Primer

<220>
<221> primer
<222> (1)..(59)

<400> 82
gtcccaggtg gggaccctca ctctagagtc gcggccgctc atgaacattc tgtaggggc 59

<210> 83
<211> 242
<212> PRT
<213> Artificial

<220>
<223> antibody VH region

<220>
<221> PEPTIDE
<222> (1)..(242)
<223> DVD heavy variable DVD1218HC-SL region

<400> 83

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

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

Ala Phe Ile Arg Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
50 55 60

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

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

Lys Thr His Gly Ser His Asp Asn Trp Gly Gln Gly Thr Met Val Thr
100 105 110

Val Ser Ser Ala Ser Thr Lys Gly Pro Glu Val Gln Leu Val Gln Ser
115 120 125

Gly Thr Glu Val Lys Lys Pro Gly Glu Ser Leu Lys Ile Ser Cys Lys
130 135 140

Gly Ser Gly Tyr Thr Val Thr Ser Tyr Trp Ile Gly Trp Val Arg Gln
145 150 155 160

Met Pro Gly Lys Gly Leu Glu Trp Met Gly Phe Ile Tyr Pro Gly Asp
165 170 175

Ser Glu Thr Arg Tyr Ser Pro Thr Phe Gln Gly Gln Val Thr Ile Ser
180 185 190

Ala Asp Lys Ser Phe Asn Thr Ala Phe Leu Gln Trp Ser Ser Leu Lys
195 200 205

Ala Ser Asp Thr Ala Met Tyr Tyr Cys Ala Arg Val Gly Ser Gly Trp
210 215 220

Tyr Pro Tyr Thr Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val
225 230 235 240

Ser Ser

<210> 84
<211> 115
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(115)
<223> Sequence of ABT-874 VH region

<400> 84

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

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

Ala Phe Ile Arg Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
50 55 60

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

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

Lys Thr His Gly Ser His Asp Asn Trp Gly Gln Gly Thr Met Val Thr
100 105 110

Val Ser Ser
115

<210> 85
<211> 121
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE

<222> (1)..(121)
<223> Sequence of ABT-325 VH region

<400> 85

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

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

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

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

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

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Val Gly Ser Gly Trp Tyr Pro Tyr Thr Phe Asp Ile Trp Gly
100 105 110

Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 86
<211> 247
<212> PRT
<213> Artificial

<220>
<223> antibody VL region

<220>
<221> PEPTIDE
<222> (1)..(247)
<223> DVD light variable DVD1218LC-SL region

<400> 86

Met Thr Trp Thr Pro Leu Leu Phe Leu Thr Leu Leu Leu His Cys Thr
1 5 10 15

Gly Ser Leu Ser Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Gly
20 25 30

Ala Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Arg Ser Asn
35 40 45

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

Pro Lys Leu Leu Ile Tyr Tyr Asn Asp Gln Arg Pro Ser Gly Val Pro
65 70 75 80

Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile
85 90 95

Thr Gly Leu Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr
100 105 110

Asp Arg Tyr Thr His Pro Ala Leu Leu Phe Gly Thr Gly Thr Lys Val
115 120 125

Thr Val Leu Gly Gln Pro Lys Ala Ala Pro Glu Ile Val Met Thr Gln
130 135 140

Ser Pro Ala Thr Leu Ser Val Ser Pro Gly Glu Arg Ala Thr Leu Ser
145 150 155 160

Cys Arg Ala Ser Glu Ser Ile Ser Ser Asn Leu Ala Trp Tyr Gln Gln
165 170 175

Lys Pro Gly Gln Ala Pro Arg Leu Phe Ile Tyr Thr Ala Ser Thr Arg
180 185 190

Ala Thr Asp Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu
195 200 205

Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser Glu Asp Phe Ala Val Tyr
210 215 220

Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Ser Ile Thr Phe Gly Gln Gly
225 230 235 240

Thr Arg Leu Glu Ile Lys Arg
245

<210> 87
<211> 112
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(112)
<223> Sequence of ABT-874 VL region

<400> 87

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

Arg Val Thr Ile Ser Cys Ser Gly Ser Arg Ser Asn Ile Gly Ser Asn
20 25 30

Thr Val Lys Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
35 40 45

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

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Thr Gly Leu Gln
65 70 75 80

Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Arg Tyr Thr
85 90 95

His Pro Ala Leu Leu Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly
100 105 110

<210> 88
<211> 6
<212> PRT
<213> Artificial

<220>
<223> linker region

<220>
<221> PEPTIDE
<222> (1)..(6)
<223> Linker peptide

<400> 88

Gln Pro Lys Ala Ala Pro
1 5

<210> 89
<211> 109
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(109)
<223> Sequence of ABT-325 VL region

<400> 89

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Ile Ser Ser Asn
20 25 30

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

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

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Ser
85 90 95

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

<210> 90
<211> 249
<212> PRT
<213> Artificial

<220>
<223> antibody VH region

<220>
<221> PEPTIDE
<222> (1)..(109)
<223> DVD heavy variable DVD1218LC-LL region

<400> 90

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

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

Ala Phe Ile Arg Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
50 55 60

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

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

Lys Thr His Gly Ser His Asp Asn Trp Gly Gln Gly Thr Met Val Thr
100 105 110

Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro
115 120 125

Glu Val Gln Leu Val Gln Ser Gly Thr Glu Val Lys Lys Pro Gly Glu
130 135 140

Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Thr Val Thr Ser Tyr
145 150 155 160

Trp Ile Gly Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met
165 170 175

Gly Phe Ile Tyr Pro Gly Asp Ser Glu Thr Arg Tyr Ser Pro Thr Phe
180 185 190

Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Phe Asn Thr Ala Phe

195 200 205

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
210 215 220

Ala Arg Val Gly Ser Gly Trp Tyr Pro Tyr Thr Phe Asp Ile Trp Gly
225 230 235 240

Gln Gly Thr Met Val Thr Val Ser Ser
245

<210> 91
<211> 234
<212> PRT
<213> Artificial

<220>
<223> antibody VL region

<220>
<221> PEPTIDE
<222> (1)..(234)
<223> DVD light variable DVD1218LC-LL region

<400> 91

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

Arg Val Thr Ile Ser Cys Ser Gly Ser Arg Ser Asn Ile Gly Ser Asn
20 25 30

Thr Val Lys Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
35 40 45

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

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Thr Gly Leu Gln
65 70 75 80

Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Arg Tyr Thr
85 90 95

His Pro Ala Leu Leu Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly
100 105 110

Gln Pro Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Glu Ile Val
115 120 125

Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly Glu Arg Ala
130 135 140

Thr Leu Ser Cys Arg Ala Ser Glu Ser Ile Ser Ser Asn Leu Ala Trp
145 150 155 160

Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Phe Ile Tyr Thr Ala
165 170 175

Ser Thr Arg Ala Thr Asp Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser
180 185 190

Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser Glu Asp Phe
195 200 205

Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Ser Ile Thr Phe
210 215 220

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
225 230

<210> 92
<211> 13
<212> PRT
<213> Artificial

<220>
<223> linker region

<220>
<221> PEPTIDE
<222> (1)..(13)
<223> Linker peptide

<400> 92

Gln Pro Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro
1 5 10

<210> 93
<211> 242
<212> PRT
<213> Artificial

<220>
<223> antibody VH region

<220>
<221> PEPTIDE
<222> (1)..(242)
<223> DVD heavy variable DVD1812HC-SL region

<400> 93

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

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

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

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

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

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Val Gly Ser Gly Trp Tyr Pro Tyr Thr Phe Asp Ile Trp Gly
100 105 110

Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Gln
115 120 125

Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg Ser
130 135 140

Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr Gly
145 150 155 160

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

Phe Ile Arg Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys
180 185 190

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
195 200 205

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Lys
210 215 220

Thr His Gly Ser His Asp Asn Trp Gly Gln Gly Thr Met Val Thr Val
225 230 235 240

Ser Ser

<210> 94
<211> 226
<212> PRT
<213> Artificial

<220>
<223> antibody VL region

<220>
<221> PEPTIDE
<222> (1)..(226)
<223> DVD light variable DVD1812LC-SL region

<400> 94

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Ile Ser Ser Asn
20 25 30

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

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

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Ser
85 90 95

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

Ala Pro Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Gly Ala Pro
115 120 125

Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Ser Arg Ser Asn Ile Gly
130 135 140

Ser Asn Thr Val Lys Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys
145 150 155 160

Leu Leu Ile Tyr Tyr Asn Asp Gln Arg Pro Ser Gly Val Pro Asp Arg
165 170 175

Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Thr Gly
180 185 190

Leu Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Arg
195 200 205

Tyr Thr His Pro Ala Leu Leu Phe Gly Thr Gly Thr Lys Val Thr Val
210 215 220

Leu Gly
225

<210> 95
<211> 249
<212> PRT
<213> Artificial

<220>
<223> antibody VH region

<220>
<221> PEPTIDE
<222> (1)..(249)
<223> DVD heavy variable DVD1812HC-LL region

<400> 95

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

1 5 10 15

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

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

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

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

Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Ala Arg Val Gly Ser Gly Trp Tyr Pro Tyr Thr Phe Asp Ile Trp Gly
100 105 110

Gln Gly Thr Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
115 120 125

Val Phe Pro Leu Ala Pro Gln Val Gln Leu Val Glu Ser Gly Gly Gly
130 135 140

Val Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
145 150 155 160

Phe Thr Phe Ser Ser Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly
165 170 175

Lys Gly Leu Glu Trp Val Ala Phe Ile Arg Tyr Asp Gly Ser Asn Lys
180 185 190

Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn
195 200 205

Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
210 215 220

Thr Ala Val Tyr Tyr Cys Lys Thr His Gly Ser His Asp Asn Trp Gly
225 230 235 240

Gln Gly Thr Met Val Thr Val Ser Ser
245

<210> 96
<211> 233
<212> PRT
<213> Artificial

<220>
<223> antibody VL region

<220>
<221> PEPTIDE
<222> (1)..(233)
<223> DVD light variable DVD1812LC-LL region

<400> 96

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Ile Ser Ser Asn
20 25 30

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

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

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Ser
85 90 95

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

Ala Pro Ser Val Phe Ile Phe Pro Pro Gln Ser Val Leu Thr Gln Pro
115 120 125

Pro Ser Val Ser Gly Ala Pro Gly Gln Arg Val Thr Ile Ser Cys Ser
130 135 140

Gly Ser Arg Ser Asn Ile Gly Ser Asn Thr Val Lys Trp Tyr Gln Gln
145 150 155 160

Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr Tyr Asn Asp Gln Arg
165 170 175

Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser
180 185 190

Ala Ser Leu Ala Ile Thr Gly Leu Gln Ala Glu Asp Glu Ala Asp Tyr
195 200 205

Tyr Cys Gln Ser Tyr Asp Arg Tyr Thr His Pro Ala Leu Leu Phe Gly
210 215 220

Thr Gly Thr Lys Val Thr Val Leu Gly
225 230

<210> 97
<211> 254
<212> PRT

<213> Artificial

<220>
<223> antibody VH region

<220>
<221> PEPTIDE
<222> (1)..(254)
<223> DVD heavy variable CD20CD3DVD-Ig region

<400> 97

Gln Val Gln Leu Arg Gln Pro Gly Ala 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 Ser Tyr
20 25 30

Asn Met His Trp Val Lys Gln Thr Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

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

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

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

Ala Arg Ser His Tyr Gly Ser Asn Tyr Val Asp Tyr Phe Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Ala Lys Thr Thr Ala Pro
115 120 125

Ser Val Tyr Pro Leu Ala Pro Gln Val Gln Leu Gln Gln Ser Gly Ala
130 135 140

Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys Ala Ser
145 150 155 160

Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro
165 170 175

Gly Gln Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr
180 185 190

Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp
195 200 205

Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu
210 215 220

Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Cys
225 230 235 240

Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
245 250

<210> 98
<211> 122
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(122)
<223> Sequence of 5F1 VH region

<400> 98

Gln Val Gln Leu Arg Gln Pro Gly Ala 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 Ser Tyr
20 25 30

Asn Met His Trp Val Lys Gln Thr Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

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

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

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

Ala Arg Ser His Tyr Gly Ser Asn Tyr Val Asp Tyr Phe Asp Tyr Trp
100 105 110

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

<210> 99
<211> 13
<212> PRT
<213> Artificial

<220>
<223> linker region

<220>
<221> PEPTIDE
<222> (1)..(13)
<223> Linker peptide

<400> 99

Ala Lys Thr Thr Ala Pro Ser Val Tyr Pro Leu Ala Pro
1 5 10

<210> 100
<211> 119
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(119)
<223> Sequence of OKT3 VH region

<400> 100

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

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

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

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

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

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

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

Thr Thr Leu Thr Val Ser Ser
115

<210> 101
<211> 226
<212> PRT
<213> Artificial

<220>
<223> antibody VL region

<220>
<221> PEPTIDE
<222> (1)..(226)
<223> Sequence of CD20CD3DVD-Ig light variable region

<400> 101

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

Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Leu Ser Phe Met
20 25 30

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

Ala Thr Ser Asn 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 Arg Val Glu Ala Glu
65 70 75 80

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

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

Thr Val Ser Ile Phe Pro Pro Gln Ile Val Leu Thr Gln Ser Pro Ala
115 120 125

Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Ser Ala
130 135 140

Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr
145 150 155 160

Ser Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser Gly Val
165 170 175

Pro Ala His Phe Arg Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr
180 185 190

Ile Ser Gly Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln
195 200 205

Trp Ser Ser Asn Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile
210 215 220

Asn Arg
225

<210> 102
<211> 107
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(107)
<223> Sequence of 5F1 VL region

<400> 102

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

Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Leu Ser Phe Met
20 25 30

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

Ala Thr Ser Asn 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 Arg Val Glu Ala Glu
65 70 75 80

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

Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Arg
100 105

<210> 103
<211> 12
<212> PRT
<213> Artificial

<220>
<223> linker region

<220>
<221> PEPTIDE
<222> (1)..(12)
<223> Linker peptide

<400> 103

Ala Asp Ala Ala Pro Thr Val Ser Ile Phe Pro Pro
1 5 10

<210> 104
<211> 107
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(107)
<223> Sequence of OKT3 VL region

<400> 104

Gln 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 Val Ser Tyr Met
20 25 30

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

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

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

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Phe Thr
85 90 95

Phe Gly Ser Gly Thr Lys Leu Glu Ile Asn Arg
100 105

<210> 105
<211> 249
<212> PRT
<213> Artificial

<220>
<223> antibody VH region

<220>
<221> PEPTIDE
<222> (1)..(243)
<223> Sequence of mIL-1a/b DVD-Ig heavy variable region

<400> 105

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

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

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

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

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

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

Ala Arg Arg Asn Glu Tyr Tyr Gly Ser Ser Phe Phe Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Thr Leu Thr Val Ser Ser Ala Lys Thr Thr Ala Pro Ser
115 120 125

Val Tyr Pro Leu Ala Pro Gln Val Ile Leu Lys Glu Ser Gly Pro Gly
130 135 140

Ile Leu Gln Pro Ser Gln Thr Leu Ser Leu Thr Cys Ser Phe Ser Gly
145 150 155 160

Phe Ser Leu Ser Thr Tyr Gly Thr Ala Val Asn Trp Ile Arg Gln Pro
165 170 175

Ser Gly Lys Gly Leu Glu Trp Leu Ala Gln Ile Gly Ser Asp Asp Arg

180 185 190

Lys Leu Tyr Asn Pro Phe Leu Lys Ser Arg Ile Thr Leu Ser Glu Asp
195 200 205

Thr Ser Asn Ser Gln Val Phe Leu Lys Ile Thr Ser Val Asp Thr Glu
210 215 220

Asp Ser Ala Thr Tyr Tyr Cys Ala Asn Gly Val Met Glu Tyr Trp Gly
225 230 235 240

Leu Gly Thr Ser Val Thr Val Ser Ser
245

<210> 106
<211> 121
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(121)
<223> Sequence of 10G11 VH region

<400> 106

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

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

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

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

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

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

Ala Arg Arg Asn Glu Tyr Tyr Gly Ser Ser Phe Phe Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Thr Leu Thr Val Ser Ser
115 120

<210> 107
<211> 115
<212> PRT
<213> Homo sapiens

<220>

<221> PEPTIDE
<222> (1)..(115)
<223> Sequence of 9H10 VH region

<400> 107

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

Thr Leu Ser Leu Thr Cys Ser Phe Ser Gly Phe Ser Leu Ser Thr Tyr
20 25 30

Gly Thr Ala Val Asn Trp Ile Arg Gln Pro Ser Gly Lys Gly Leu Glu
35 40 45

Trp Leu Ala Gln Ile Gly Ser Asp Asp Arg Lys Leu Tyr Asn Pro Phe
50 55 60

Leu Lys Ser Arg Ile Thr Leu Ser Glu Asp Thr Ser Asn Ser Gln Val
65 70 75 80

Phe Leu Lys Ile Thr Ser Val Asp Thr Glu Asp Ser Ala Thr Tyr Tyr
85 90 95

Cys Ala Asn Gly Val Met Glu Tyr Trp Gly Leu Gly Thr Ser Val Thr
100 105 110

Val Ser Ser
115

<210> 108
<211> 330
<212> PRT
<213> Mus musculus

<220>
<221> PEPTIDE
<222> (1)..(320)
<223> Sequence of CH region

<400> 108

Ala Lys Thr Thr Ala Pro Ser Val Tyr Pro Leu Ala Pro Val Cys Gly
1 5 10 15

Asp Thr Thr Gly Ser Ser Val Thr Leu Gly Cys Leu Val Lys Gly Tyr
20 25 30

Phe Pro Glu Pro Val Thr Leu Thr Trp Asn Ser Gly Ser Leu Ser Ser
35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Asp Leu Tyr Thr Leu
50 55 60

Ser Ser Ser Val Thr Val Thr Ser Ser Thr Trp Pro Ser Gln Ser Ile
65 70 75 80

Thr Cys Asn Val Ala His Pro Ala Ser Ser Thr Lys Val Asp Lys Lys
85 90 95

Ile Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys Pro Pro Cys Lys Cys
100 105 110

Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val Phe Ile Phe Pro Pro
115 120 125

Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser Pro Ile Val Thr Cys
130 135 140

Val Val Val Asp Val Ser Glu Asp Asp Pro Asp Val Gln Ile Ser Trp
145 150 155 160

Phe Val Asn Asn Val Glu Val His Thr Ala Gln Thr Gln Thr His Arg
165 170 175

Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser Ala Leu Pro Ile Gln
180 185 190

His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys Cys Lys Val Asn Asn
195 200 205

Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile Ser Lys Pro Lys Gly
210 215 220

Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro Pro Pro Glu Glu Glu
225 230 235 240

Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met Val Thr Asp Phe Met
245 250 255

Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn Asn Gly Lys Thr Glu Leu
260 265 270

Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe
275 280 285

Met Tyr Ser Lys Leu Arg Val Glu Lys Lys Asn Trp Val Glu Arg Asn
290 295 300

Ser Tyr Ser Cys Ser Val Val His Glu Gly Leu His Asn His His Thr
305 310 315 320

Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
325 330

<210> 109
<211> 228
<212> PRT
<213> Artificial

<220>
<223> antibody VL region

<220>
<221> PEPTIDE
<222> (1)..(228)
<223> Sequence of mIL-1a/b DVD-Ig light variable region

<400> 109

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

Glu Thr Val Thr Ile Thr Cys Arg Gly Ser Gly Ile Leu His Asn Tyr
20 25 30

Leu Val Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val
35 40 45

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

Ser Gly Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Pro
65 70 75 80

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

Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala
100 105 110

Pro Thr Val Ser Ile Phe Pro Pro Ser Ile Val Met Thr Gln Thr Pro
115 120 125

Lys Phe Leu Leu Val Ser Ala Gly Asp Arg Val Thr Ile Thr Cys Lys
130 135 140

Ala Ser Gln Ser Val Asn His Asp Val Ala Trp Tyr Gln Gln Met Pro
145 150 155 160

Gly Gln Ser Pro Lys Leu Leu Ile Tyr Phe Ala Ser Asn Arg Tyr Thr
165 170 175

Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Tyr Gly Thr Asp Phe Thr
180 185 190

Phe Thr Ile Ser Thr Val Gln Ala Glu Asp Leu Ala Val Tyr Phe Cys
195 200 205

Gln Gln Asp Tyr Ser Ser Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu
210 215 220

Glu Ile Lys Arg
225

<210> 110
<211> 108

<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(108)
<223> Sequence of 10G11 VL region

<400> 110

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

Glu Thr Val Thr Ile Thr Cys Arg Gly Ser Gly Ile Leu His Asn Tyr
20 25 30

Leu Val Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val
35 40 45

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

Ser Gly Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Pro
65 70 75 80

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

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

<210> 111
<211> 12
<212> PRT
<213> Artificial

<220>
<223> linker region

<220>
<221> PEPTIDE
<222> (1)..(12)
<223> Linker peptide

<400> 111

Ala Asp Ala Ala Pro Thr Val Ser Ile Phe Pro Pro
1 5 10

<210> 112
<211> 108
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(108)
<223> Sequence of 9H10 VL region

<400> 112

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

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

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

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

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

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

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

<210> 113
<211> 106
<212> PRT
<213> Mus musculus

<220>
<221> PEPTIDE
<222> (1)..(106)
<223> Sequence of CL region

<400> 113

Ala Asp Ala Ala Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu Gln
1 5 10 15

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

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

Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr
50 55 60

Tyr Ser Met Ser Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg
65 70 75 80

His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser Pro
85 90 95

Ile Val Lys Ser Phe Asn Arg Asn Glu Cys
100 105

<210> 114

<211> 246
<212> PRT
<213> Artificial

<220>
<223> antibody VH region

<220>
<221> PEPTIDE
<222> (1)..(246)
<223> Sequence of 1D4.1-ABT325 DVD-Ig heavy variable region

<400> 114

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

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Lys Ser
20 25 30

Val Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala His Ile Tyr Trp Asp Asp Asp Lys Tyr Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

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

Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Glu Val Gln
115 120 125

Leu Val Gln Ser Gly Thr Glu Val Lys Lys Pro Gly Glu Ser Leu Lys
130 135 140

Ile Ser Cys Lys Gly Ser Gly Tyr Thr Val Thr Ser Tyr Trp Ile Gly
145 150 155 160

Trp Val Arg Gln Met Pro Gly Lys Gly Leu Glu Trp Met Gly Phe Ile
165 170 175

Tyr Pro Gly Asp Ser Glu Thr Arg Tyr Ser Pro Thr Phe Gln Gly Gln
180 185 190

Val Thr Ile Ser Ala Asp Lys Ser Phe Asn Thr Ala Phe Leu Gln Trp
195 200 205

Ser Ser Leu Lys Ala Ser Asp Thr Ala Met Tyr Tyr Cys Ala Arg Val
210 215 220

Gly Ser Gly Trp Tyr Pro Tyr Thr Phe Asp Ile Trp Gly Gln Gly Thr
225 230 235 240

Met Val Thr Val Ser Ser
245

<210> 115
<211> 119
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(119)
<223> Sequence of 1D4.1 VH region

<400> 115

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

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Lys Ser
20 25 30

Val Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala His Ile Tyr Trp Asp Asp Asp Lys Tyr Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

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

Thr Thr Val Thr Val Ser Ser
115

<210> 116
<211> 222
<212> PRT
<213> Artificial

<220>
<223> antibody VL region

<220>
<221> PEPTIDE
<222> (1)..(222)
<223> Sequence of 1D4.1-ABT325 DVD-Ig light variable region

<400> 116

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

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

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro
115 120 125

Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Ile Ser Ser
130 135 140

Asn Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Phe
145 150 155 160

Ile Tyr Thr Ala Ser Thr Arg Ala Thr Asp Ile Pro Ala Arg Phe Ser
165 170 175

Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln
180 185 190

Ser Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro
195 200 205

Ser Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
210 215 220

<210> 117
<211> 108
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(108)
<223> Seqeunce of 1D4.1 VL region

<400> 117

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

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

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

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

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

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

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

<210> 118
<211> 16
<212> PRT
<213> Artificial

<220>
<223> linker peptide

<400> 118

Ala Lys Thr Thr Pro Lys Leu Glu Glu Gly Glu Phe Ser Glu Ala Arg
1 5 10 15

<210> 119
<211> 17
<212> PRT
<213> Artificial

<220>
<223> linker peptide

<400> 119

Ala Lys Thr Thr Pro Lys Leu Glu Glu Gly Glu Phe Ser Glu Ala Arg
1 5 10 15

Val

<210> 120
<211> 9
<212> PRT
<213> Artificial

<220>
<223> linker peptide

<400> 120

Ala Lys Thr Thr Pro Lys Leu Gly Gly
1 5

<210> 121

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

<220>
<223> linker peptide

<400> 121

Ser Ala Lys Thr Thr Pro Lys Leu Gly Gly
1 5 10

<210> 122
<211> 6
<212> PRT
<213> Artificial

<220>
<223> linker peptide

<400> 122

Ser Ala Lys Thr Thr Pro
1 5

<210> 123
<211> 6
<212> PRT
<213> Artificial

<220>
<223> linker peptide

<400> 123

Arg Ala Asp Ala Ala Pro
1 5

<210> 124
<211> 9
<212> PRT
<213> Artificial

<220>
<223> linker peptide

<400> 124

Arg Ala Asp Ala Ala Pro Thr Val Ser
1 5

<210> 125
<211> 12
<212> PRT
<213> Artificial

<220>
<223> linker peptide

<400> 125

Arg Ala Asp Ala Ala Ala Ala Gly Gly Pro Gly Ser
1 5 10

<210> 126
<211> 27

<212> PRT
<213> Artificial

<220>
<223> linker peptide

<400> 126

Arg Ala Asp Ala Ala Ala Ala Gly Gly Gly Gly Ser Gly Gly Gly Gly
1 5 10 15

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
20 25

<210> 127
<211> 18
<212> PRT
<213> Artificial

<220>
<223> linker peptide

<400> 127

Ser Ala Lys Thr Thr Pro Lys Leu Glu Glu Gly Glu Phe Ser Glu Ala
1 5 10 15

Arg Val

<210> 128
<211> 13
<212> PRT
<213> Artificial

<220>
<223> linker peptide

<400> 128

Ala Lys Thr Thr Pro Pro Ser Val Thr Pro Leu Ala Pro
1 5 10

<210> 129
<211> 6
<212> PRT
<213> Artificial

<220>
<223> linker peptide

<400> 129

Ala Lys Thr Thr Ala Pro
1 5

<210> 130
<211> 15
<212> PRT
<213> Artificial

<220>
<223> linker peptide

<400> 130