

330058.ST25.txt
SEQUENCE LISTING

<110> Goldenberg, David M.
Hansen, Hans J.
Qu, Zhengxing
Chang, Chein-Hsing

<120> Humanized L243 Antibodies

<130> 78258-33058

<140> not yet assigned

<141> 2006-03-02

<160> 25

<170> PatentIn version 3.3

<210> 1

<211> 324

<212> DNA

<213> mouse anti-HLA-DR antibody

<220>

<221> CDS

<222> (1)..(321)

<400> 1

gac atc cag atg act cag tct cca gcc tcc cta tct gta tct gtg gga 48
Asp Ile Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Val Ser Val Gly
1 5 10 15

gaa act gtc acc atc aca tgt cga gca agt gag aat att tac agt aat 96
Glu Thr Val Thr Ile Thr Cys Arg Ala Ser Glu Asn Ile Tyr Ser Asn
20 25 30

tta gca tgg tat cgt cag aaa cag gga aaa tct cct cag ctc ctg gtc 144
Leu Ala Trp Tyr Arg Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val
35 40 45

ttt gct gca tca aac tta gca gat ggt gtg cca tca agg ttc agt ggc 192
Phe Ala Ala Ser Asn Leu Ala Asp Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

agt gga tca ggc aca cag tat tcc ctc aag atc aac agc ctg cag tct 240
Ser Gly Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser
65 70 75 80

gaa gat ttt ggg gat tat tac tgt caa cat ttt tgg act act ccg tgg 288
Glu Asp Phe Gly Asp Tyr Tyr Cys Gln His Phe Trp Thr Thr Pro Trp
85 90 95

gcg ttc ggt gga ggc acc aac ctg gaa atc aaa cgt 324
Ala Phe Gly Gly Gly Thr Asn Leu Glu Ile Lys
100 105

<210> 2

<211> 107

<212> PRT

<213> mouse anti-HLA-DR antibody

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<400> 2

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

<210> 3
 <211> 363
 <212> DNA
 <213> Mouse anti-HLA-DR antibody L243

<220>
 <221> CDS
 <222> (1)..(360)

<400> 3
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 Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
 1 5 10 15
 aca gtc aag atc tcc tgc aag gct tct ggg ttt acc ttc aca aac tat 96
 Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr
 20 25 30
 gga atg aac tgg gtg aag cag gct cca gga aag ggt tta aag tgg atg 144
 Gly Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu Lys Trp Met
 35 40 45
 ggc tgg ata aac acc tac act aga gag cca aca tat gct gat gac ttc 192
 Gly Trp Ile Asn Thr Tyr Thr Arg Glu Pro Thr Tyr Ala Asp Asp Phe
 50 55 60
 aag gga cgg ttt gcc ttc tct ttg gaa acc tct gcc agc act gcc tat 240
 Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr
 65 70 75 80
 ttg cag atc aac aac ctc aaa aat gag gac acg gct aaa tat ttc tgt 288
 Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Lys Tyr Phe Cys
 2

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90

85

95

gca aga gat att act gcg gtt gta cct acg ggt ttt gac tac tgg ggc 336
Ala Arg Asp Ile Thr Ala Val Val Pro Thr Gly Phe Asp Tyr Trp Gly
100 105 110

caa ggc acc act ctc acc gtc tcc tca 363
Gln Gly Thr Thr Leu Thr Val Ser
115 120

<210> 4
<211> 120
<212> PRT
<213> Mouse anti-HLA-DR antibody L243
<400> 4

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 Phe Thr Phe Thr Asn Tyr
20 25 30

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

Gly Trp Ile Asn Thr Tyr Thr Arg Glu Pro 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 Lys Tyr Phe Cys
85 90 95

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

Gln Gly Thr Thr Leu Thr Val Ser
115 120

<210> 5
<211> 324
<212> DNA
<213> humanized mouse antibody

<220>
<221> CDS
<222> (1)..(324)

<400> 5
gac atc cag ctg acc cag tct cca tca tct ctg agc gca tct gtt gga 48
Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
3

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1	5	10	15	
gat agg gtc act atc act tgt cga gca agt gag aat att tac agt aat				96
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Glu Asn Ile Tyr Ser Asn	20	25	30	
tta gca tgg tat cgt cag aaa cca ggg aaa gca cct aaa ctg ctg gtc				144
Leu Ala Trp Tyr Arg Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Val	35	40	45	
ttt gct gca tca aac tta gca gat ggt gtg cct tcg cga ttc tct ggc				192
Phe Ala Ala Ser Asn Leu Ala Asp Gly Val Pro Ser Arg Phe Ser Gly	50	55	60	
agc gga tct ggg aca gat tat act ttc acc atc agc tct ctt caa cca				240
Ser Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro	65	70	75	80
gaa gac att gca aca tat tat tgt caa cat ttt tgg act act ccg tgg				288
Glu Asp Ile Ala Thr Tyr Tyr Cys Gln His Phe Trp Thr Thr Pro Trp	85	90	95	
gcg ttc ggt gga ggg acc aag ctg cag atc aaa cgt				324
Ala Phe Gly Gly Gly Thr Lys Leu Gln Ile Lys Arg	100	105		

<210> 6
 <211> 108
 <212> PRT
 <213> humanized mouse antibody
 <400> 6

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

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

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

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

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

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

<210> 7

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<211> 363
 <212> DNA
 <213> humanized mouse antibody

<220>
 <221> CDS
 <222> (1)..(363)

<400> 7
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 Gln Val Gln Leu Gln Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
 1 5 10 15
 tca gtg aag gtt tcc tgc aag gct tct gga ttt acc ttc aca aac tat 96
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr
 20 25 30
 gga atg aac tgg gtg aag cag gcc cct gga caa ggg ctt aag tgg atg 144
 Gly Met Asn Trp Val Lys Gln Ala Pro Gly Gln Gly Leu Lys Trp Met
 35 40 45
 ggc tgg ata aac acc tac act aga gag cca aca tat gct gat gac ttc 192
 Gly Trp Ile Asn Thr Tyr Thr Arg Glu Pro Thr Tyr Ala Asp Asp Phe
 50 55 60
 aag gga cgg ttt gcc ttc tcc ttg gac acc tct gtc agc acg gca tat 240
 Lys Gly Arg Phe Ala Phe Ser Leu Asp Thr Ser Val Ser Thr Ala Tyr
 65 70 75 80
 ctc cag atc agc agc cta aag gct gac gac act gcc gtg tat ttc tgt 288
 Leu Gln Ile Ser Ser Leu Lys Ala Asp Asp Thr Ala Val Tyr Phe Cys
 85 90 95
 gca aga gat att act gcg gtt gta cct acg ggt ttt gac tac tgg ggc 336
 Ala Arg Asp Ile Thr Ala Val Val Pro Thr Gly Phe Asp Tyr Trp Gly
 100 105 110
 caa ggg tcc ctg gtc acc gtc tcc tca 363
 Gln Gly Ser Leu Val Thr Val Ser Ser
 115 120

<210> 8
 <211> 121
 <212> PRT
 <213> humanized mouse antibody

<400> 8
 Gln Val Gln Leu Gln Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr
 20 25 30
 Gly Met Asn Trp Val Lys Gln Ala Pro Gly Gln Gly Leu Lys Trp Met
 35 40 45
 Gly Trp Ile Asn Thr Tyr Thr Arg Glu Pro Thr Tyr Ala Asp Asp Phe
 5

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60

50

55

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

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

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

Gln Gly Ser Leu Val Thr Val Ser Ser
115 120

<210> 9
<211> 108
<212> PRT
<213> homo sapiens
<400> 9

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

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

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

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

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

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

Arg Glu Asp Ser Asn Gly Tyr Lys Ile Phe Asp Tyr
100 105

<210> 10
<211> 121
<212> PRT
<213> Murinae gen. sp.
<400> 10

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

330058.ST25.txt

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

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

Gly Trp Ile Asn Thr Tyr Thr Arg Glu Pro 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 Lys Tyr Phe Cys
 85 90 95

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

Gln Gly Thr Thr Leu Thr Val Ser Ser
 115 120

- <210> 11
- <211> 121
- <212> PRT
- <213> humanized antibody

<400> 11

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

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

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

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

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

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

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

330058.ST25.txt

Gln Gly Ser Leu Val Thr Val Ser Ser
 115 120

<210> 12
 <211> 119
 <212> PRT
 <213> Homo sapiens
 <400> 12

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

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

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

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

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

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

Arg Glu Asp Ser Asn Gly Tyr Lys Ile Phe Asp Tyr Trp Gly Gln Gly
 100 105 110

Ser Leu Val Thr Val Ser Ser
 115

<210> 13
 <211> 107
 <212> PRT
 <213> homo sapiens
 <400> 13

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 Gln Ala Ser Gln Asp Ile Ile Lys Tyr
 20 25 30

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

330058.ST25.txt

Tyr Glu Ala Ser Asn Leu Gln Ala Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

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

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

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

<210> 14
 <211> 108
 <212> PRT
 <213> mouse

<400> 14

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

Glu Thr Val Thr Ile Thr Cys Arg Ala Ser Glu Asn Ile Tyr Ser Asn
 20 25 30

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

Phe Ala Ala Ser Asn 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 Ser
 65 70 75 80

Glu Asp Phe Gly Asp Tyr Tyr Cys Gln His Phe Trp Thr Thr Pro Trp
 85 90 95

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

<210> 15
 <211> 108
 <212> PRT
 <213> humanized mouse

<400> 15

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

330058.ST25.txt

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

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

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

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

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

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

<210> 16
<211> 175
<212> DNA
<213> humanized mouse

<400> 16
ggctctgagtt gaagaagcct ggggcctcag tgaaggtttc ctgcaaggct tctggattta 60
ccttcacaaa ctatggaatg aactgggtga agcaggcccc tggacaaggg cttaagtgga 120
tgggctggat aaacacctac actagagagc caacatatgc tgatgacttc aaggg 175

<210> 17
<211> 168
<212> DNA
<213> humanized mouse

<400> 17
acccttgGCC ccagtagtca aaaccgtag gtacaaccgc agtaatatct cttgcacaga 60
aatacacggc agtgtcgtca gcctttaggg tgctgatctg gagatatgcc gtgctgacag 120
aggtgtccaa ggagaaggca aaccgtccct tgaagtcatc agcatatg 168

<210> 18
<211> 38
<212> DNA
<213> humanized mouse

<400> 18
gtgggtgctgc agcaatctgg gtctgagttg aagaagcc 38

<210> 19
<211> 38
<212> DNA
<213> humanized mouse

330058.ST25.txt

<400> 19
 tgaggagacg gtgaccaggg acccttgccc ccagtagt 38

<210> 20
 <211> 155
 <212> DNA
 <213> humanized mouse

<400> 20
 tccatcatct ctgagcgcac ctggttgaga tagggctact atcacttgtc gagcaagtga 60
 gaatatttac agtaatttag catggtatcg tcagaaacca gggaaagcac ctaaactgct 120
 ggtctttgct gcatcaaact tagcagatgg tgtgc 155

<210> 21
 <211> 159
 <212> DNA
 <213> humanized mouse

<400> 21
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 tgcaatgtct tctggttgaa gagagctgat ggtgaaagta taatctgtcc cagatccgct 120
 gccagagaat cgcaaggca caccatctgc taagtttga 159

<210> 22
 <211> 38
 <212> DNA
 <213> humanized mouse

<400> 22
 gacattcagc tgaccagtc tccatcatct ctgagcgc 38

<210> 23
 <211> 31
 <212> DNA
 <213> humanized mouse

<400> 23
 ccggcagatc tgcagcttgg tccctccacc g 31

<210> 24
 <211> 47
 <212> DNA
 <213> mouse

<400> 24
 ccgcggtcac atggcaccac ctctcttgca gcttccacca agggccc 47

<210> 25
 <211> 33
 <212> DNA
 <213> mouse

330058.ST25.txt

<400> 25
ccggccgtcg cactcattta cccagagaca ggg

33