

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  
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<212> DNA  
<213> mouse anti-HLA-DR antibody

<220>  
<221> CDS  
<222> (1)..(321)

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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  
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 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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 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  
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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 48  
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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)

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 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

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

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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  
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 <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  
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 <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  
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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  
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 <213> humanized mouse

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 ccttcacaaa ctatggaatg aactgggtga agcaggcccc tggacaaggg cttaagtgga 120  
 tgggctggat aaacacctac actagagagc caacatatgc tgatgacttc aaggg 175

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

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 aatacaggc agtgtcgtca gcctttaggc 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

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<400> 19  
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<210> 20  
 <211> 155  
 <212> DNA  
 <213> humanized mouse

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 gaatatttac agtaatttag catggtatcg tcagaaacca gggaaagcac ctaaactgct 120  
 ggtctttgct gcatcaaact tagcagatgg tgtgc 155

<210> 21  
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 <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  
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<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