Figure 1

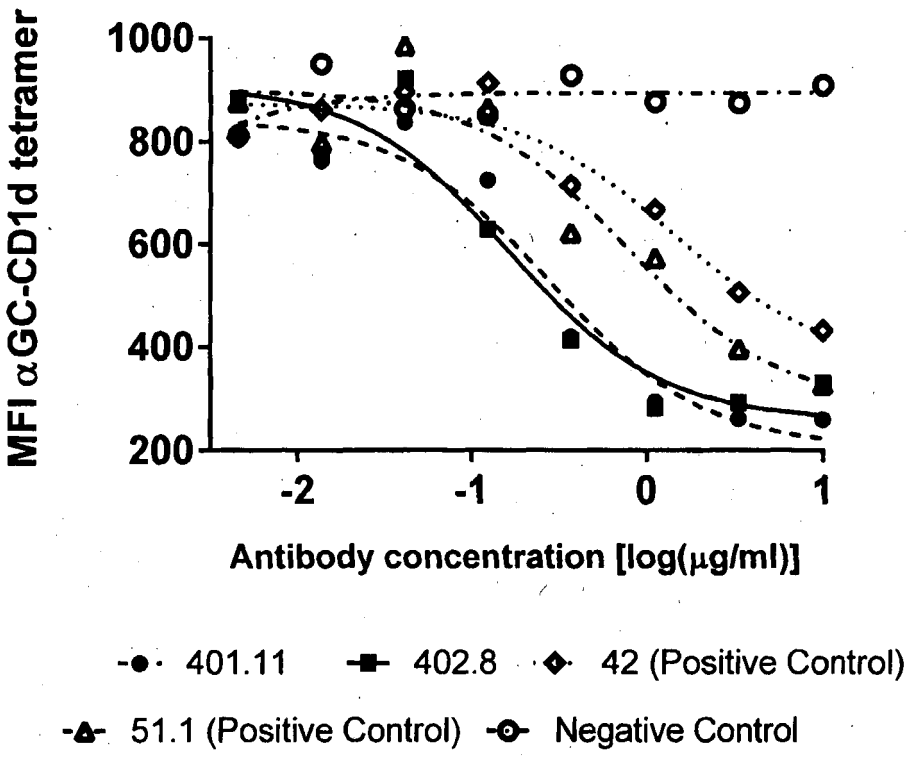

MFI αGC-CD1d tetramer
1000
800
600
400
200
-2
-1
0
1
Antibody concentration [log(μg/ml)]
401.11
402.8
42 (Positive Control)
51.1 (Positive Control)
Negative Control

Figure 2

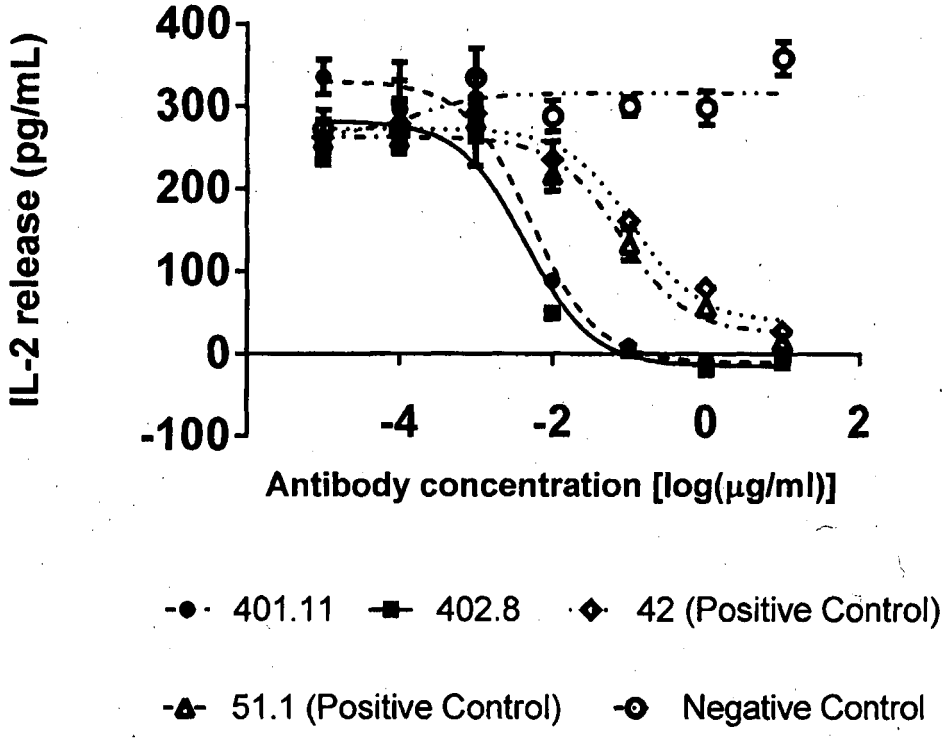

IL-2 release (pg/mL)
400
300
200
100
0
-100
-4
-2
0
2
Antibody concentration [log(µg/ml)]
401.11
402.8
42 (Positive Control)
51.1 (Positive Control)
Negative Control

Figure 3

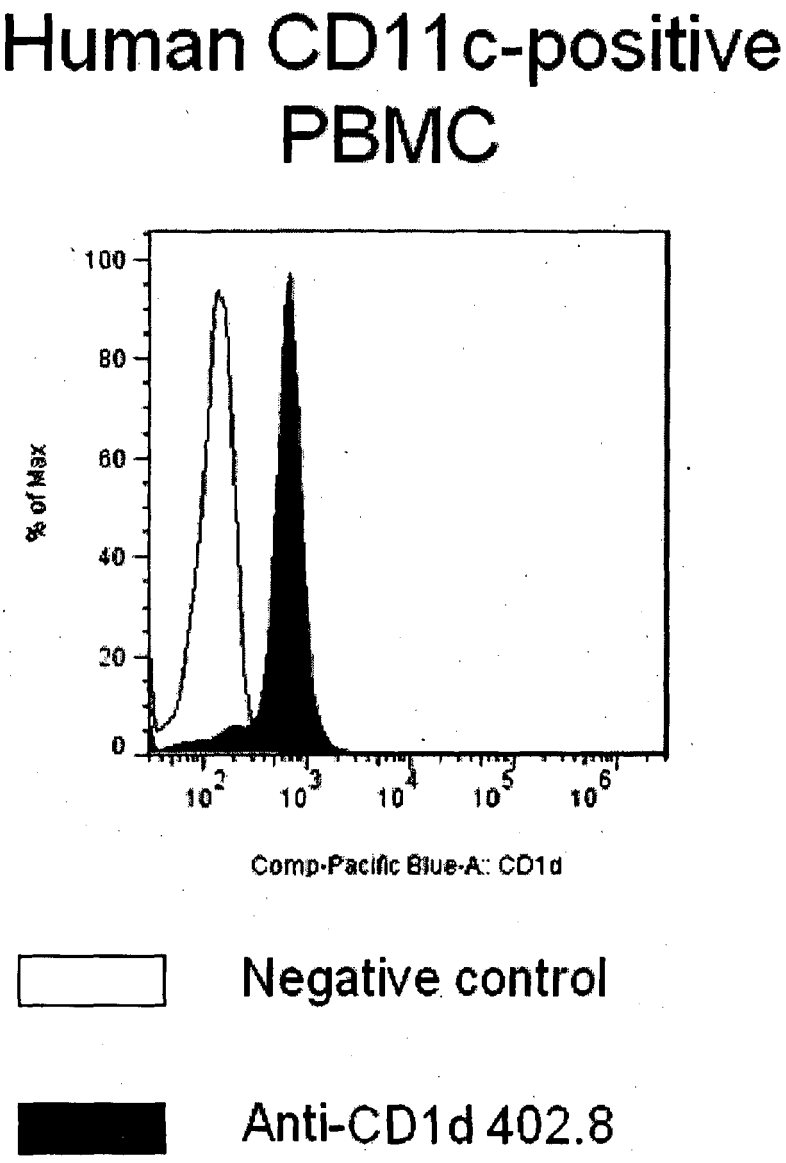

Human CD11c-positive PBMC
100
80
60
40
20
0
% of Max
10^2
10^3
10^4
10^5
10^6
Comp-Pacific Blue-A:: CD1d
Negative control
Anti-CD1d 402.8

Figure 4 (Panels A and B)

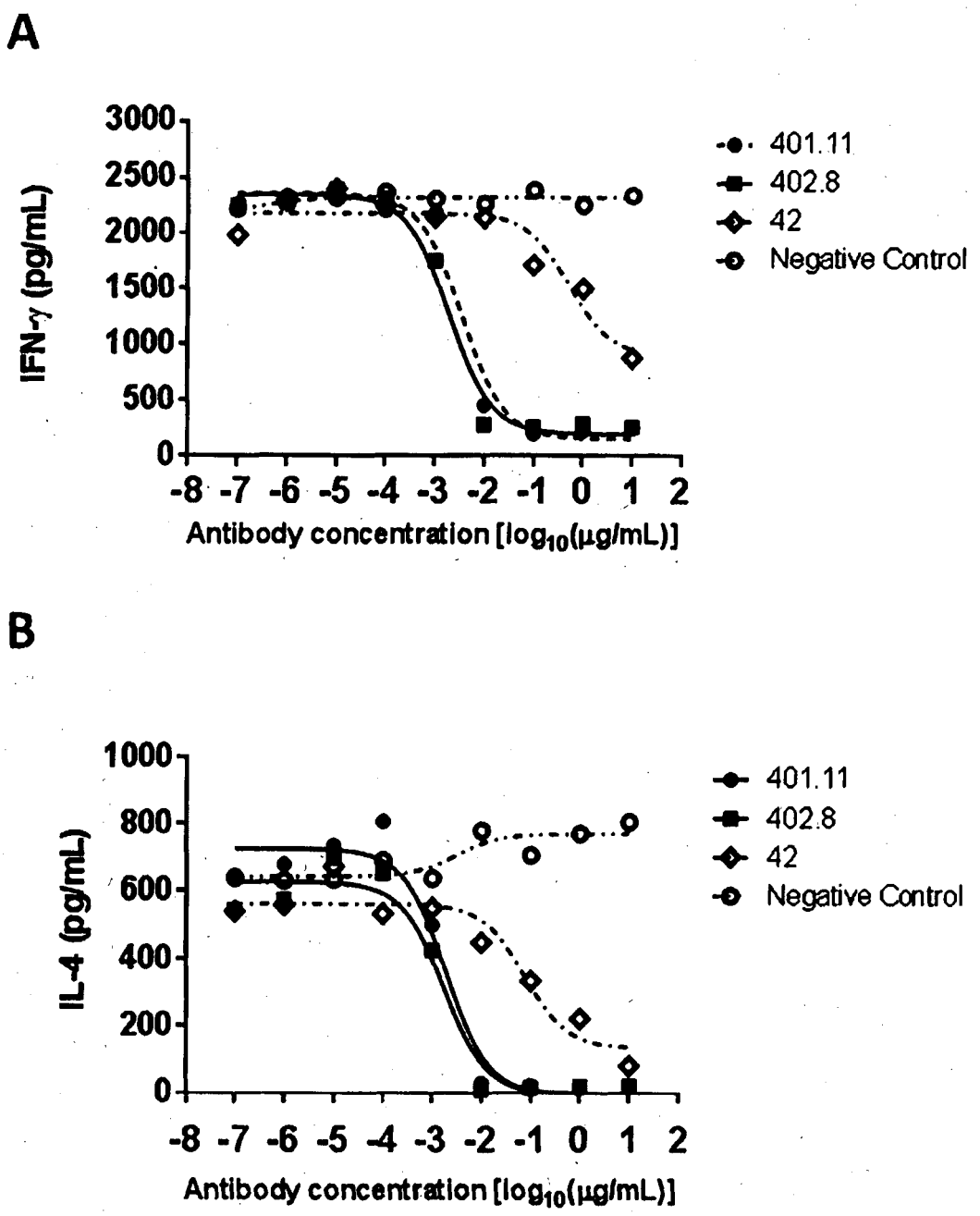


Figure 4 (Panels C and D)

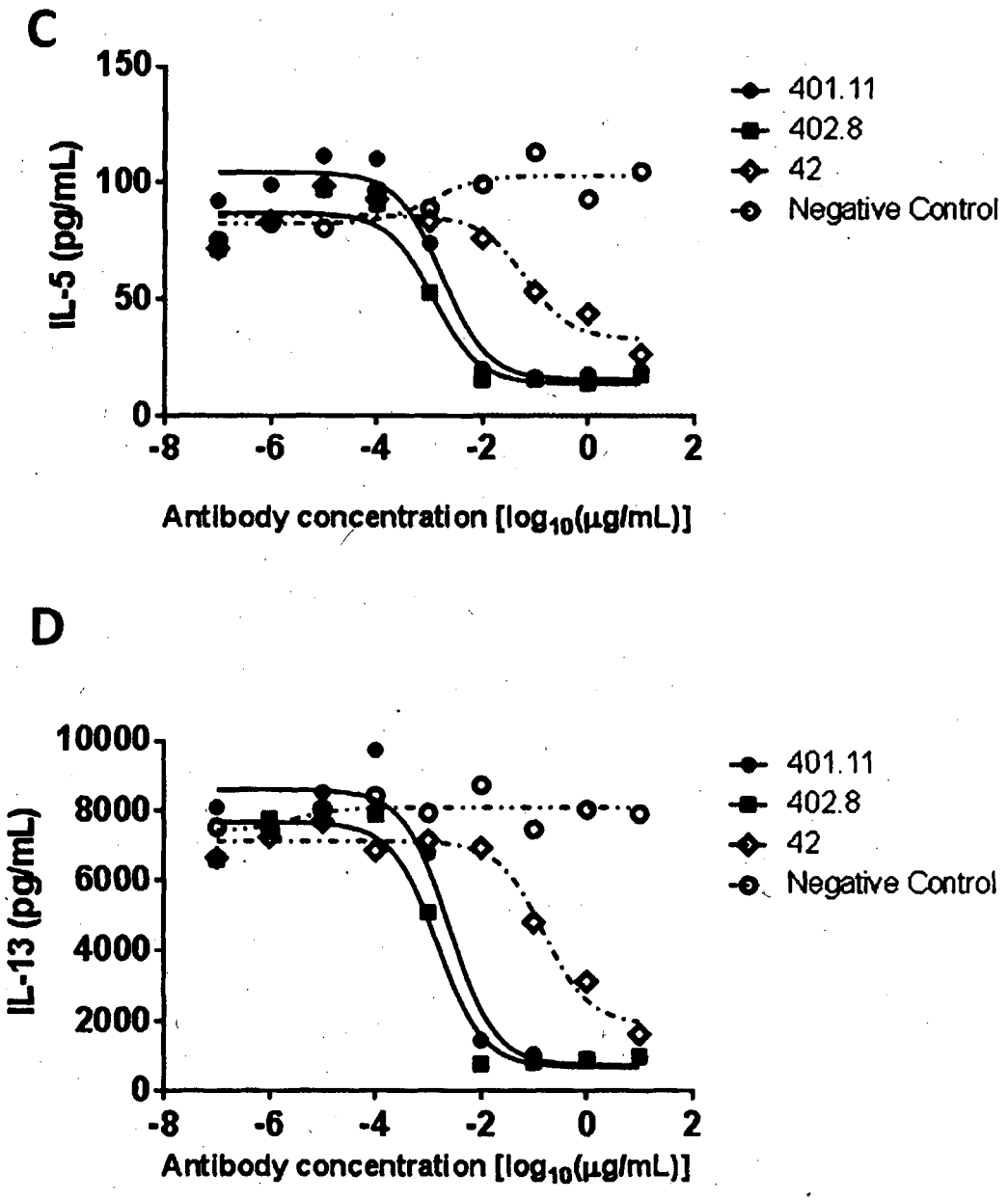


Figure 5 (Panels A and B)

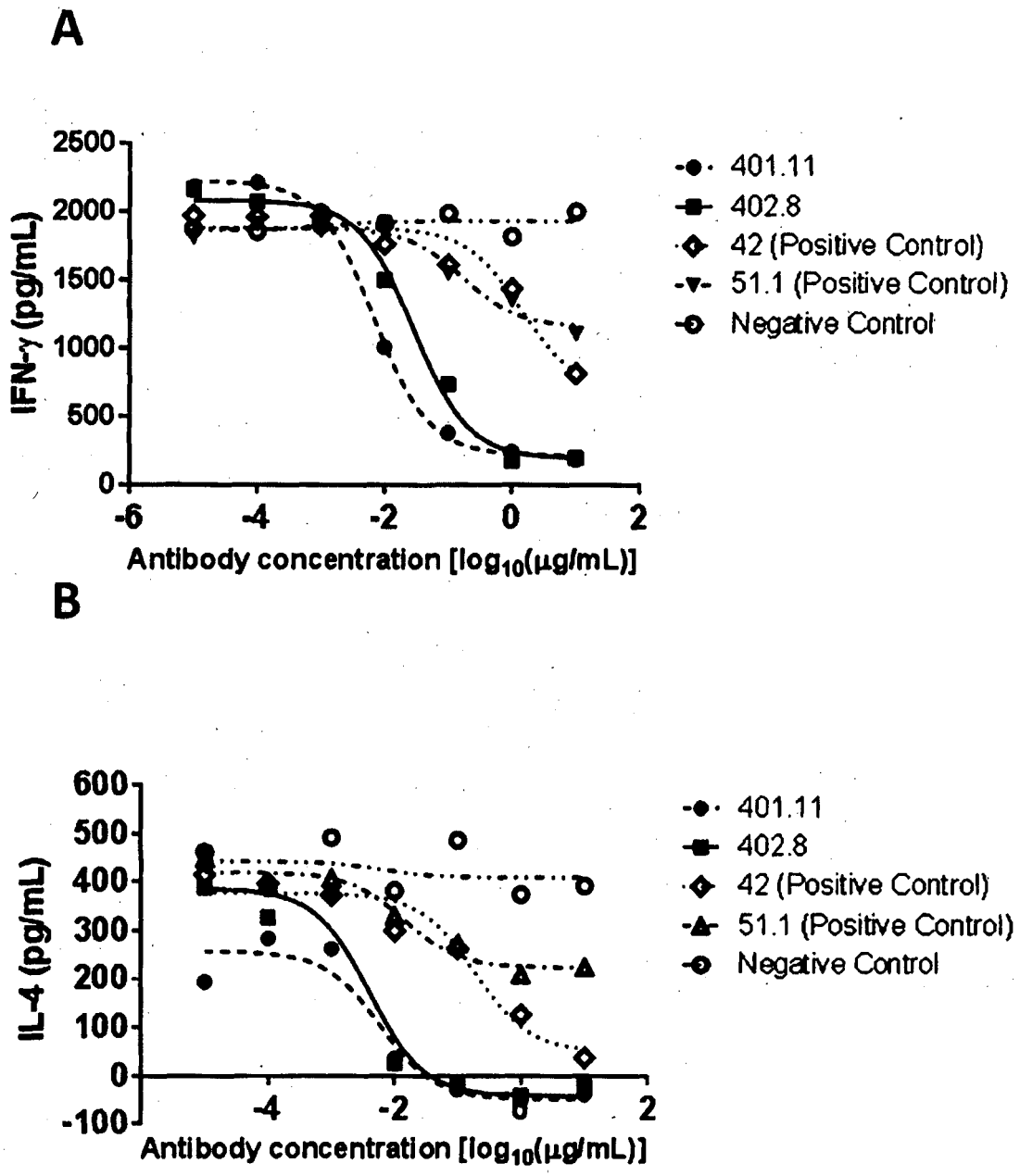
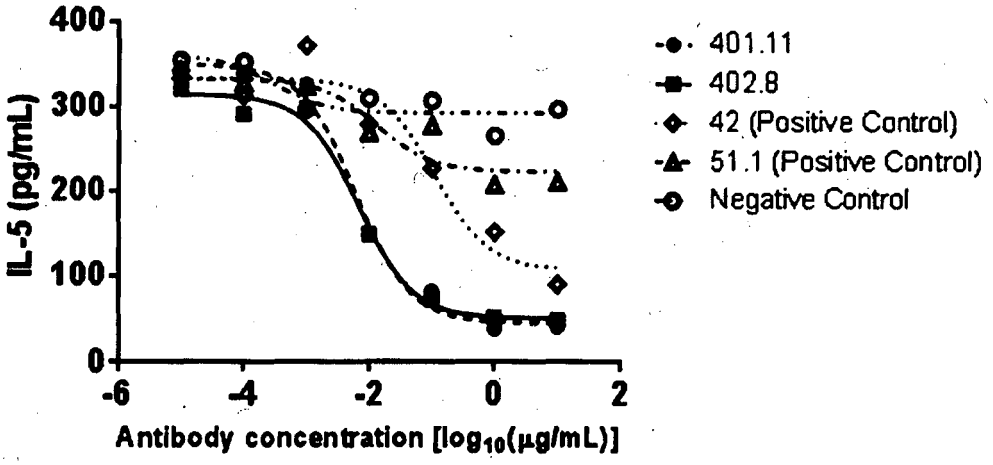


Figure 5 (Panels C and D)

C



D

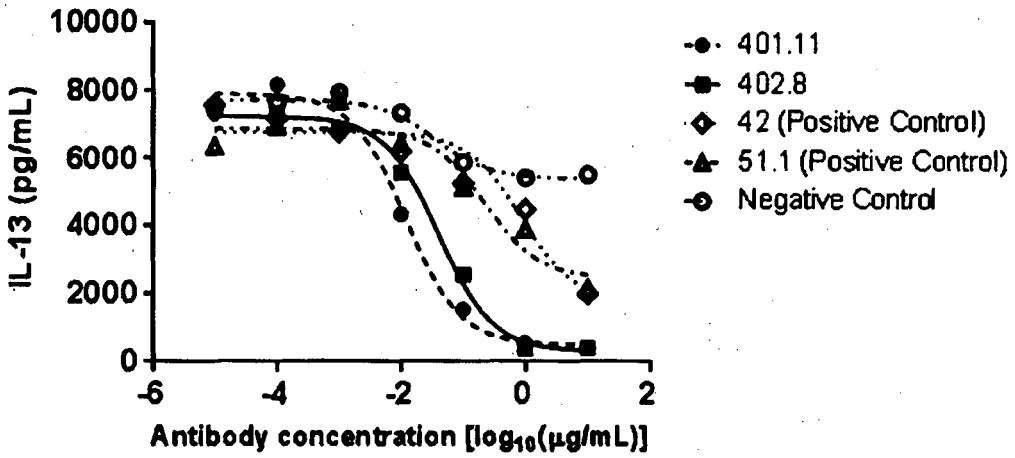


Figure 6

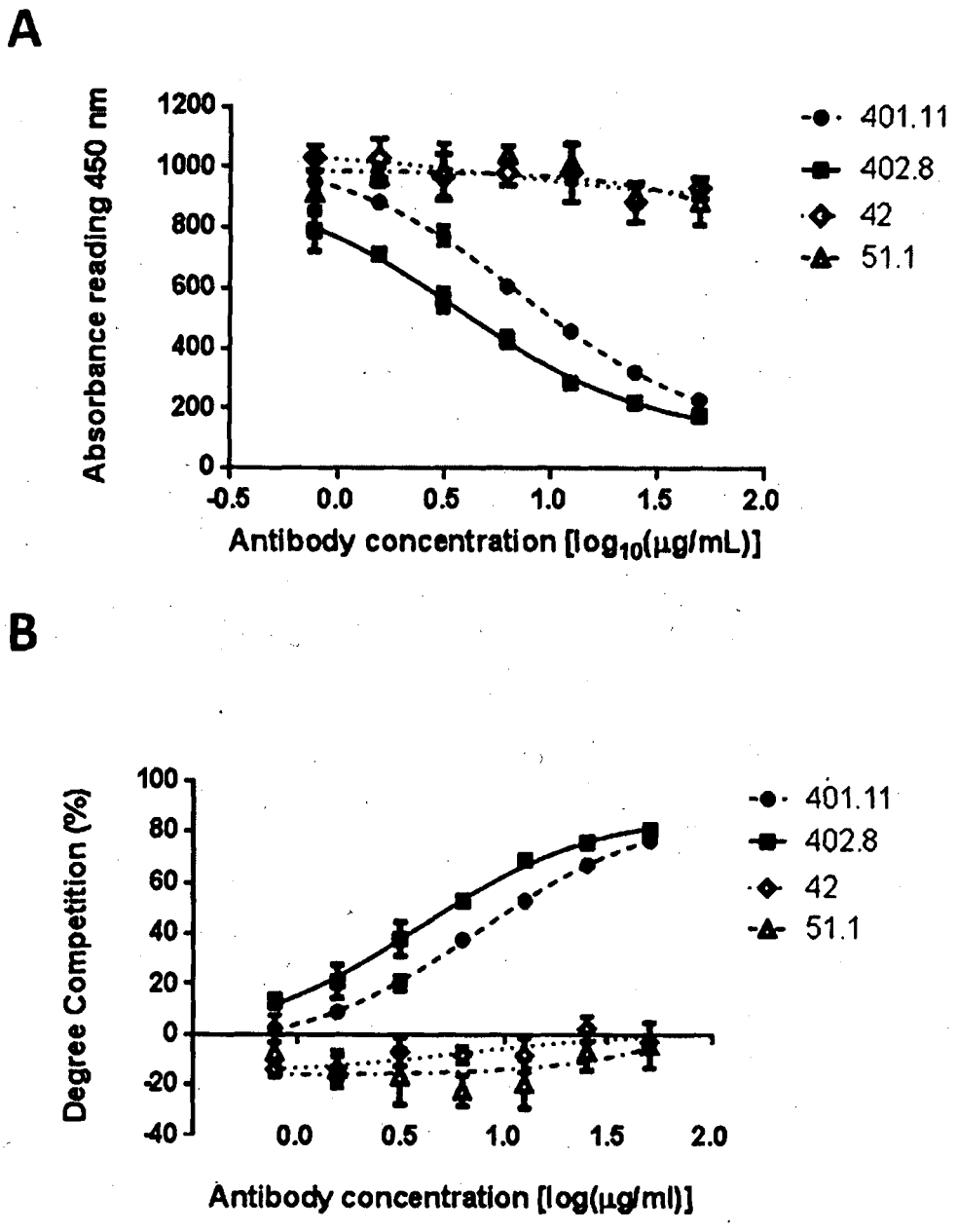

A
Absorbance reading 450 nm
1200
1000
800
600
400
200
0
-0.5
0.0
0.5
1.0
1.5
2.0
Antibody concentration [log10(µg/mL)]
401.11
402.8
42
51.1
B
Degree Competition (%)
100
80
60
40
20
0
-20
-40
0.0
0.5
1.0
1.5
2.0
Antibody concentration [log(µg/ml)]
401.11
402.8
42
51.1

Figure 7

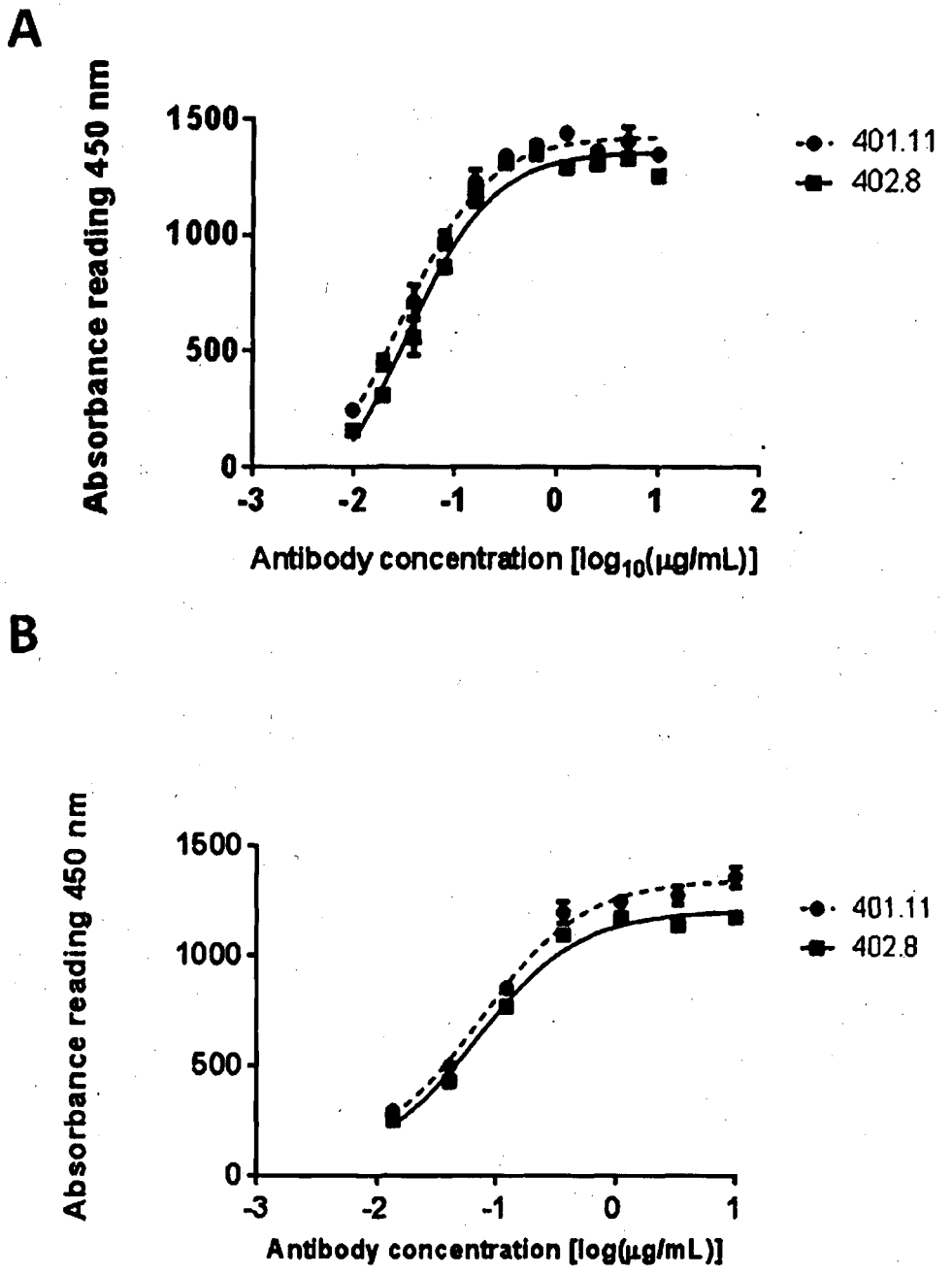

A
Absorbance reading 450 nm
1500
1000
500
0
-3
-2
-1
0
1
2
Antibody concentration [log10(µg/mL)]
401.11
402.8
B
Absorbance reading 450 nm
1500
1000
500
0
-3
-2
-1
0
1
Antibody concentration [log(µg/mL)]
401.11
402.8

Figure 8

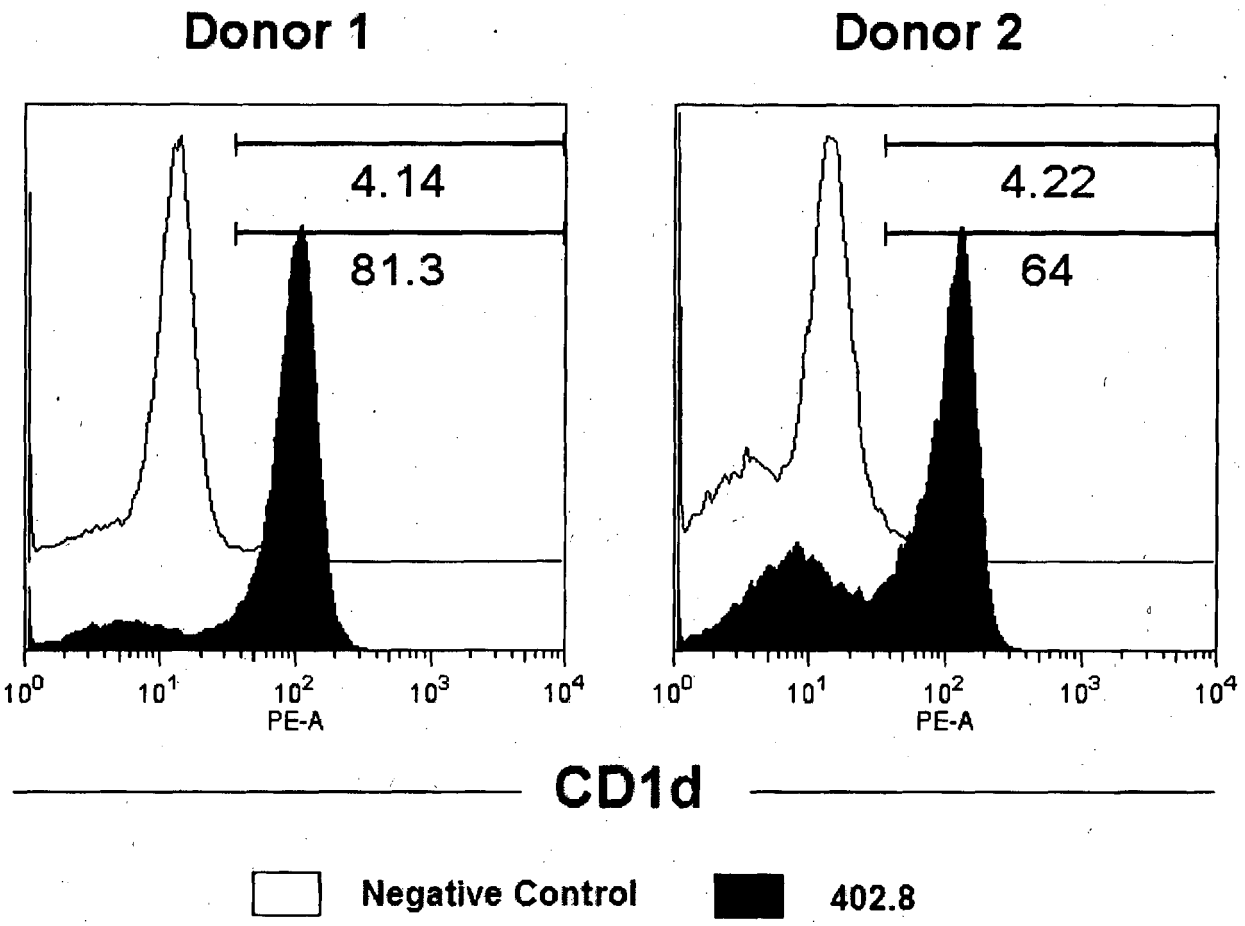

Donor 1
Donor 2
4.14
81.3
4.22
64
10^0
10^1
10^2
10^3
10^4
PE-A
CD1d
Negative Control
402.8

Figure 9

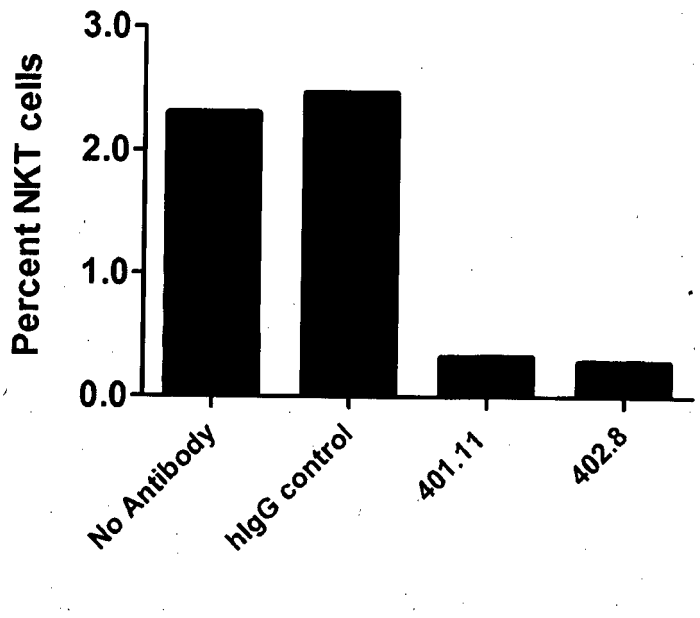

Percent NKT cells
3.0
2.0
1.0
0.0
No Antibody
hIgG control
401.11
402.8

Figure 10

```
                                                CDR1                                                CDR2
402.8 variable heavy chain      QVQLQESGPGLVRPSETLSLTCAVY GGSFSGYYWS WIRQPPGKGLEWIG EINHSGSTNYNPSLKS RVTIS
402.8.45 variable heavy chain   QVQLQESGPGLVKPSETLSLTCAVY GGSFSGYYWS WIRQPPGKGLEWIG EINPSGSTNYNPSLKS RVTIS
402.8.53 variable heavy chain   QVQLQESGPGLVKPSETLSLTCAVY GGSFSGYYWS WIRQPPGKGLEWIG EINHAGSTNYNPSLKS RVTIS
402.8.60 variable heavy chain   QVQLQESGPGLVRPSETLSLTCAVY GGSFSGYYWS WIRQPPGKGLEWIG EINHSGSTNYNPSLKS RVTIS

                                                CDR3
402.8 variable heavy chain      VDTSKNQFSLKLSSVTAADTAVYYCAR GEIYDFWNSYMDV WGKGTTVTVSS
402.8.45 variable heavy chain   VDTSKNQFSLKLSSVTAADTAVYYCAR GEIYDFWKSYMDV WGKGTTVTVSS
402.8.53 variable heavy chain   VDTSKNQFSLKLSSVTAADTAVYYCAR GEIYDFWKSYLDV WGKGTTVTVSS
402.8.60 variable heavy chain   VDTSKNQFSLKLSSVTAADTAVYYCAR GEIYDFYNSYMDV WGKGTTVTVSS

                                                CDR1                                                CDR2
401.11 variable heavy chain     QVQLVGSGGGLVKPGRSLRLSCAAS GFTFDDYAMH WVRQAPGKGLEWVA TIIWNSAIIGYADSVKG RFIV
401.11.28 variable heavy chain  QVQLVGSGGGLVKPGRSLRLSCAAS GFTFDDYAMH WVRQAPGKGLEWVA TIIWNSAIIGYADSVKG RFIV

                                                CDR3
401.11 variable heavy chain     SRDNAKNSLYLQMNSLRAEDMALYYCAK DMCSSSGCPDGYFDS WGQGTLVTVSS
401.11.28 variable heavy chain  SRDNAKNSLYLQMNSLRAEDTALYYCAK DMCSSSGCPDGYFDS WGQGTLVTVSS
```

Figure 11

CDR1 CDR2

401.11 variable light chain DIQMTQSPSSVSASVGDRVTITC RASQHISSWLA WYQQKPGKAPNLLIY AASSLQS GVSSRFSGSGSGTD
401.11.28 variable light chain DIQMTQSPSSVSASVGDRVTITC RASQHISSWLA WYQQKPGKAPNLLIY AASSLQS GVPSRFSGSGSGTD

CDR3

401.11 variable light chain FTLTISSLQPEDFATYYC QQANRFPLT FGGGTKLEIKR
401.11.28 variable light chain FTLTISSLQPEDFATYYC QQANRFPLT FGGGTKLEIKR

CDR1 CDR2

402.8 variable light chain QTVVTQEPSLTVSPGGTVTLTC ASSGAVSSGNFPN WFQQKPGQAPRALIF SASNKHS WTPARFSGSLLG

CDR3

402.8 variable light chain GKAVLTLSGVQPEDEAEYYC LLYFGDTQLGV FGGGTKVTVLG

Figure 12

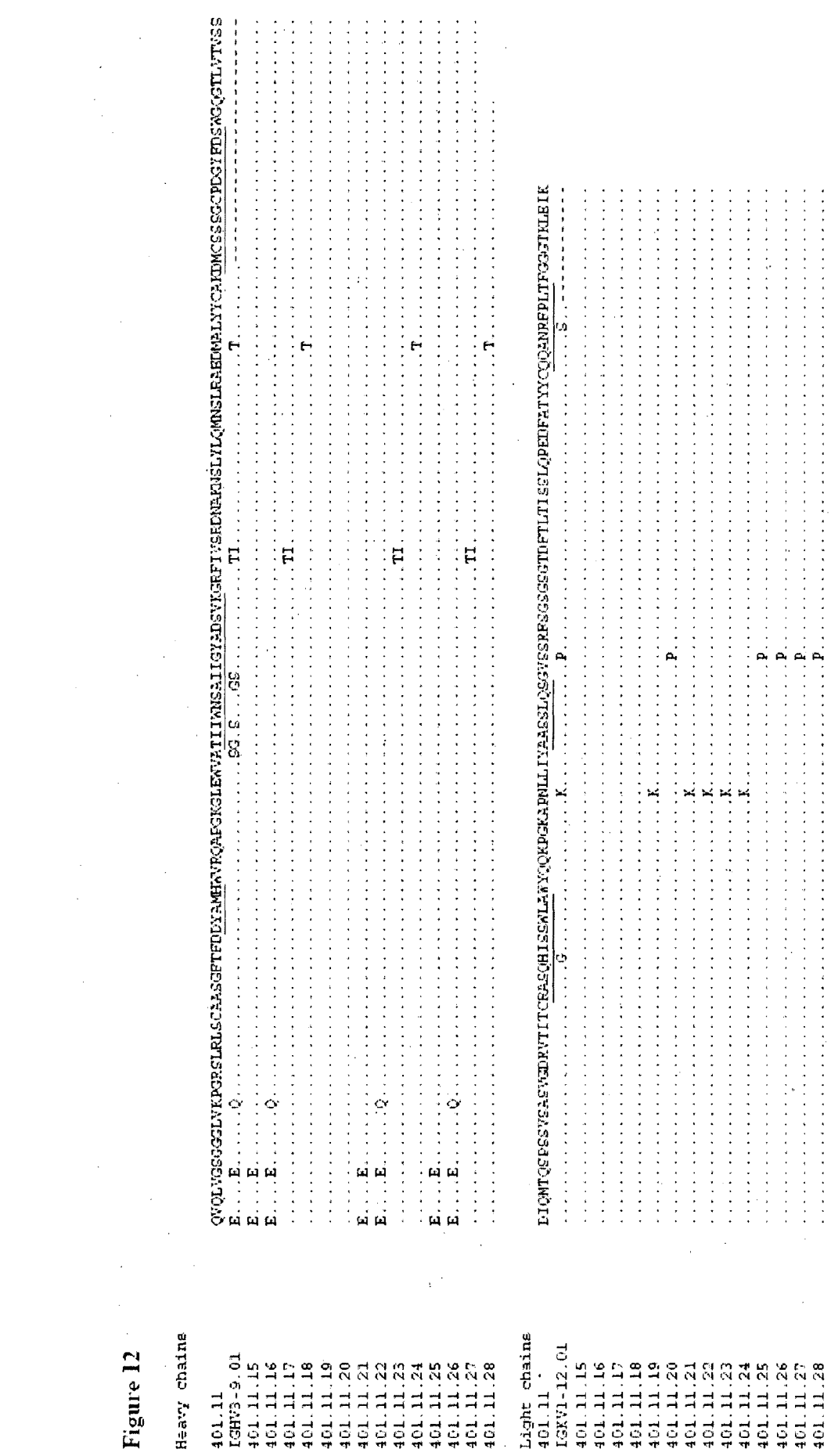
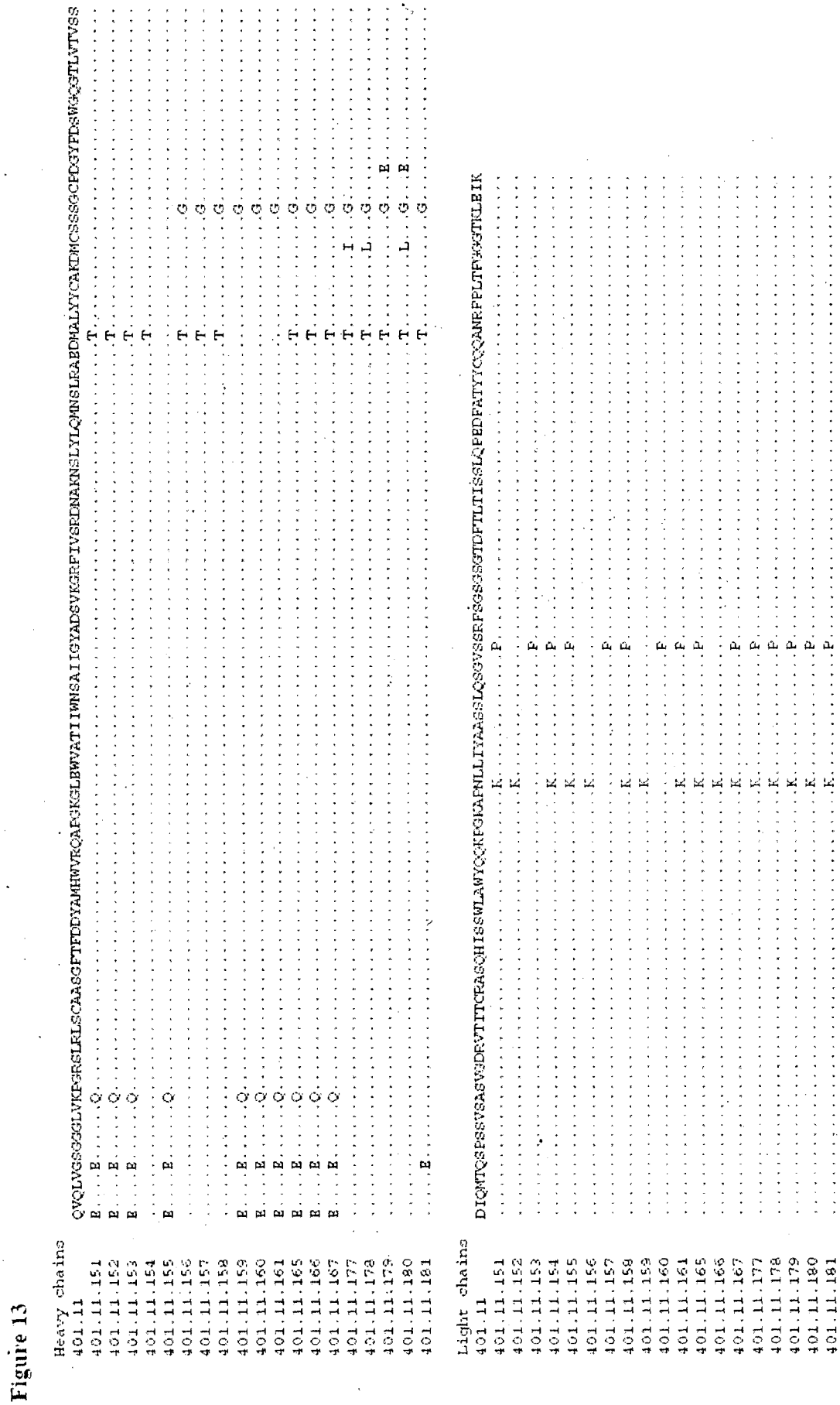
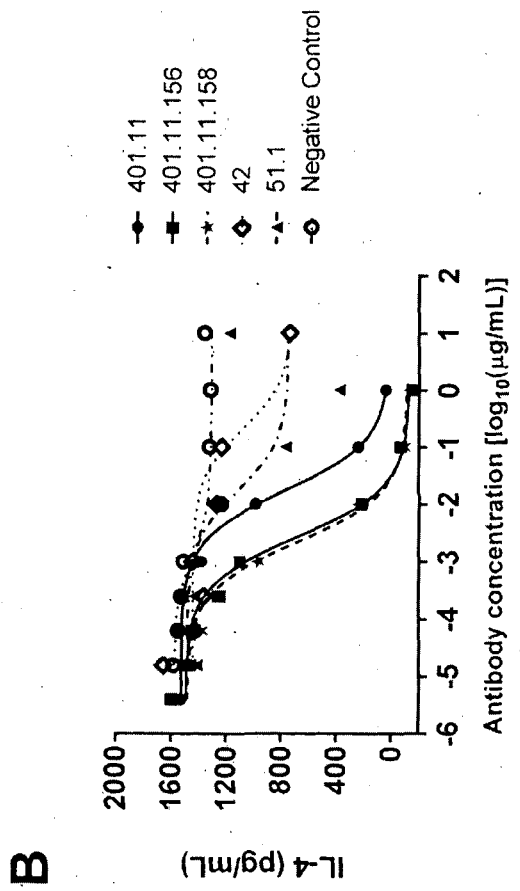

Heavy chains
401.11
IGHV3-9.01
401.11.15
401.11.16
401.11.17
401.11.18
401.11.19
401.11.20
401.11.21
401.11.22
401.11.23
401.11.24
401.11.25
401.11.26
401.11.27
401.11.28
Light chains
401.11
IGKV1-12.01
401.11.15
401.11.16
401.11.17
401.11.18
401.11.19
401.11.20
401.11.21
401.11.22
401.11.23
401.11.24
401.11.25
401.11.26
401.11.27
401.11.28

Figure 13


Heavy chains
401.11
401.11.151
401.11.152
401.11.153
401.11.154
401.11.155
401.11.156
401.11.157
401.11.158
401.11.159
401.11.160
401.11.161
401.11.165
401.11.166
401.11.167
401.11.177
401.11.178
401.11.179
401.11.180
401.11.181
Light chains
401.11
401.11.151
401.11.152
401.11.153
401.11.154
401.11.155
401.11.156
401.11.157
401.11.159
401.11.160
401.11.161
401.11.165
401.11.166
401.11.167
401.11.177
401.11.178
401.11.179
401.11.180
401.11.181


B
IL-4 (pg/mL)
2000
1600
1200
800
400
0
-6 -5 -4 -3 -2 -1 0 1 2
Antibody concentration [log10(µg/mL)]
401.11
401.11.156
401.11.158
42
51.1
Negative Control

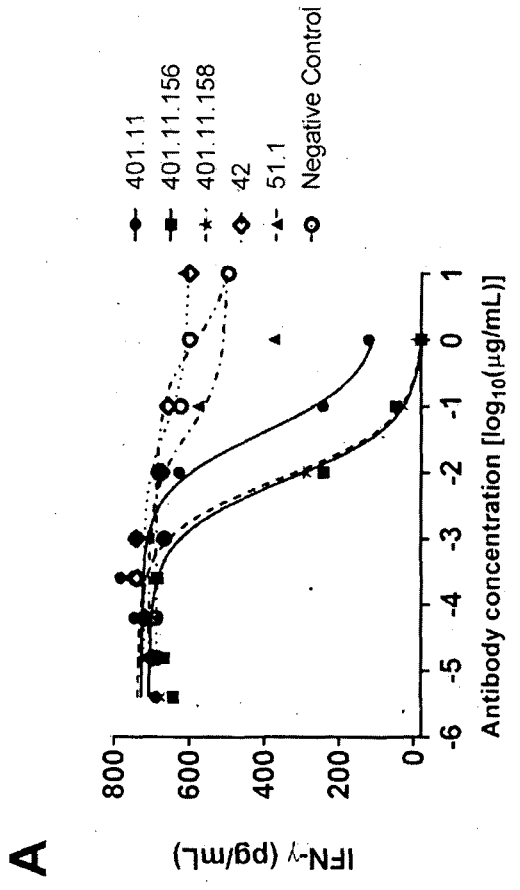

A
IFN-γ (pg/mL)
800
600
400
200
0
-6 -5 -4 -3 -2 -1 0 1
Antibody concentration [log10(µg/mL)]
401.11
401.11.156
401.11.158
42
51.1
Negative Control

Figure 14

Figure 15

```
402.8      QVQLQESGPGLVRPSETLSLTCAVYGGSFSGYYWSWIRQPPGKGLEWIGEINHSGSTNYNPSLKSRVTISVDTSKNQFSLKLSSVTAADTAVYYCARGEIYDPWNSYMDYWGKGTTVTVSS
402.8.53   .....K.....A.....K..L.....
402.8.54   .....K.....A.....K..E.....
402.8.55   .....K.....A.....K.LE.....
402.8.60   .....Y.....
402.8.84   .....K.....A.....YK.L.....
402.8.86   .....K.....A.....Y.....
402.8.87   .....K.....A.....YK.....
```

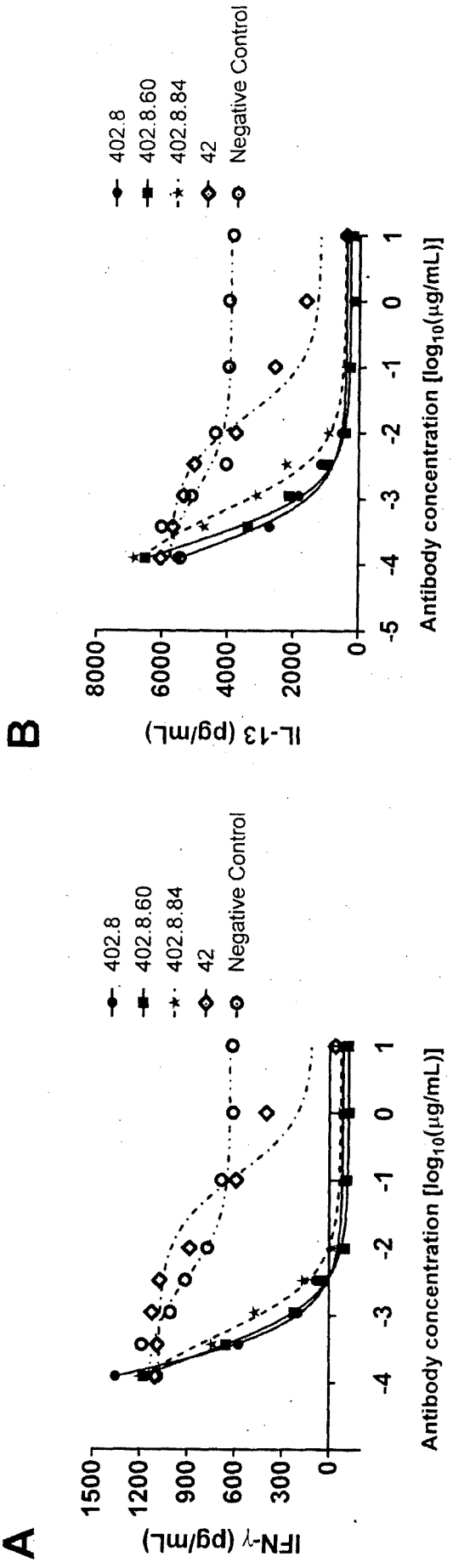

A
IFN-γ (pg/mL)
1500
1200
900
600
300
0
-4
-3
-2
-1
0
1
Antibody concentration [log10(μg/mL)]
402.8
402.8.60
402.8.84
42
Negative Control
B
IL-13 (pg/mL)
8000
6000
4000
2000
0
-5
-4
-3
-2
-1
0
1
Antibody concentration [log10(μg/mL)]
402.8
402.8.60
402.8.84
42
Negative Control

Figure 16

Figure 17

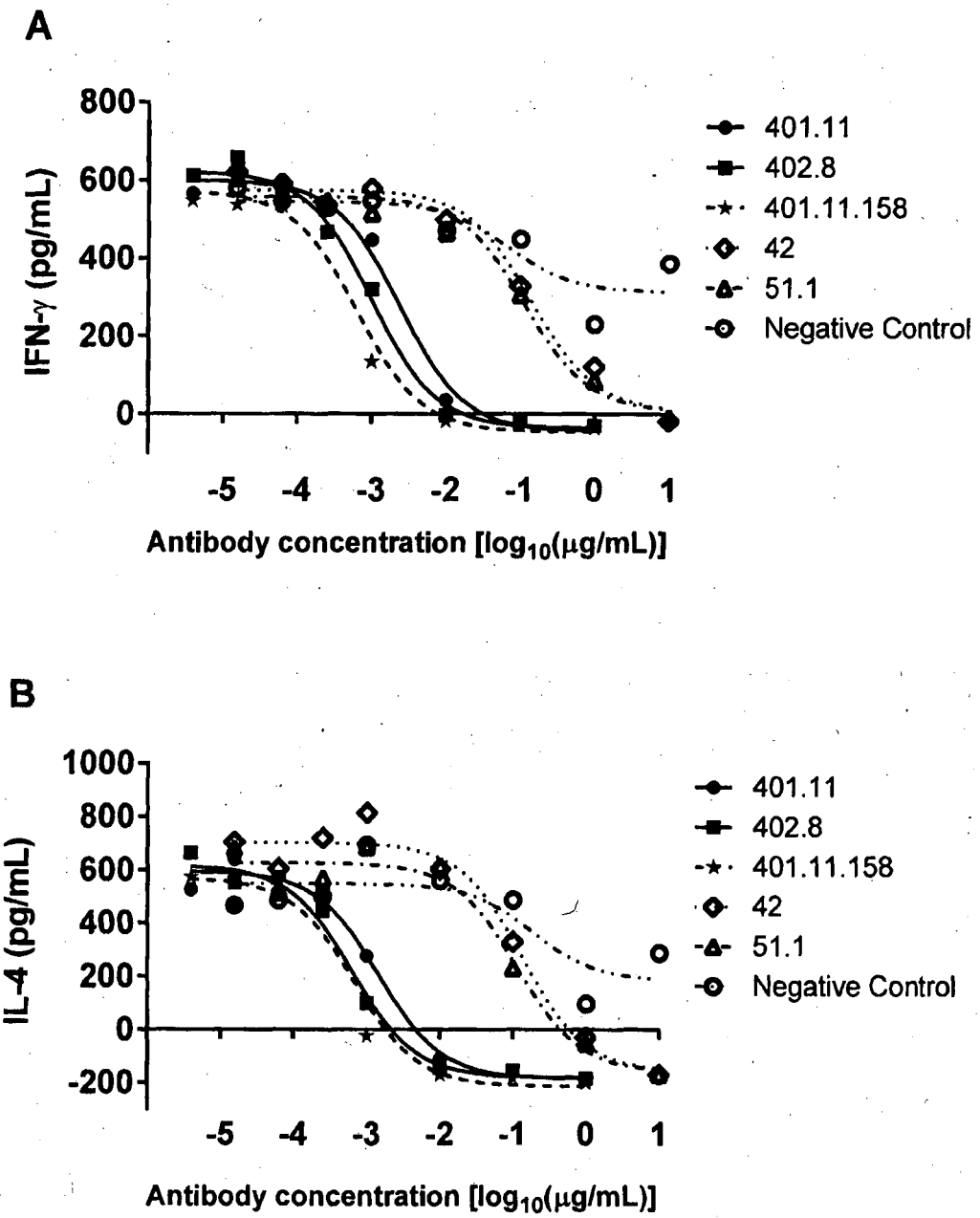

A
800
600
400
200
0
IFN-γ (pg/mL)
-5 -4 -3 -2 -1 0 1
Antibody concentration [log10(μg/mL)]
401.11
402.8
401.11.158
42
51.1
Negative Control
B
1000
800
600
400
200
0
-200
IL-4 (pg/mL)
-5 -4 -3 -2 -1 0 1
Antibody concentration [log10(μg/mL)]
401.11
402.8
401.11.158
42
51.1
Negative Control

Figure 18

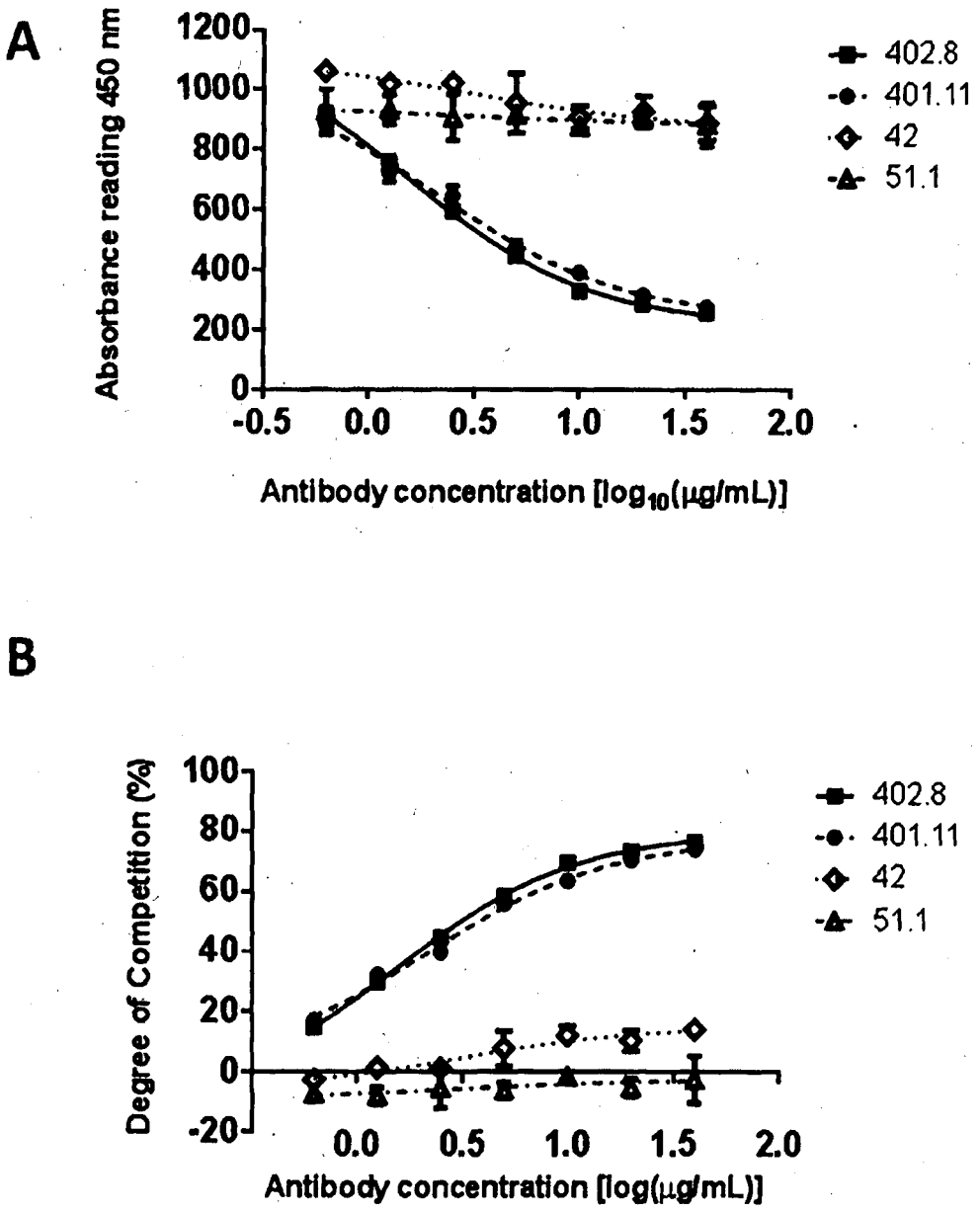

A
Absorbance reading 450 nm
1200
1000
800
600
400
200
0
-0.5
0.0
0.5
1.0
1.5
2.0
Antibody concentration [log10(µg/mL)]
402.8
401.11
42
51.1
B
Degree of Competition (%)
100
80
60
40
20
0
-20
0.0
0.5
1.0
1.5
2.0
Antibody concentration [log(µg/mL)]
402.8
401.11
42
51.1

Figure 19

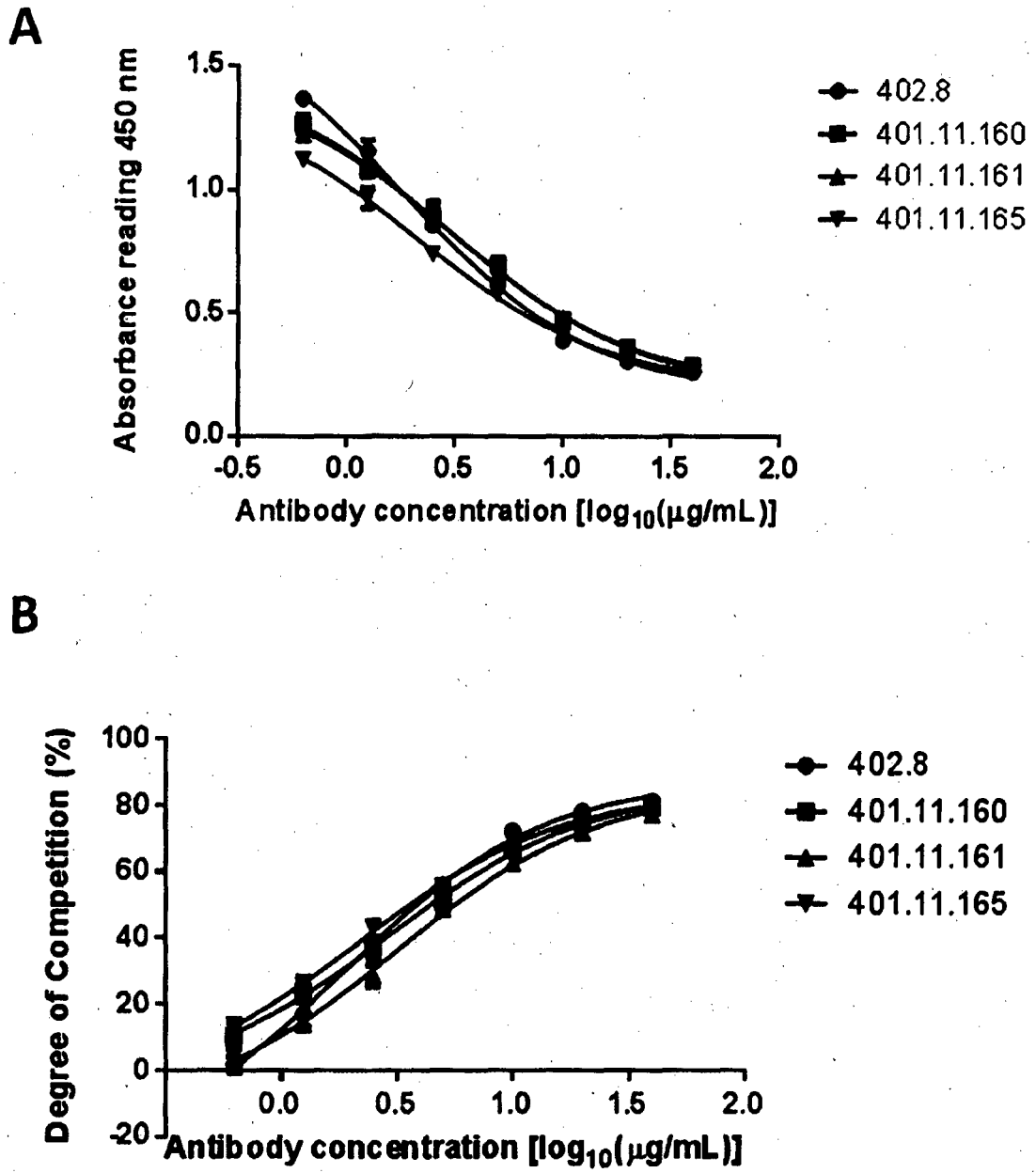

A
Absorbance reading 450 nm
1.5
1.0
0.5
0.0
-0.5
0.0
0.5
1.0
1.5
2.0
Antibody concentration [log10(µg/mL)]
402.8
401.11.160
401.11.161
401.11.165
B
Degree of Competition (%)
100
80
60
40
20
0
-20
0.0
0.5
1.0
1.5
2.0
Antibody concentration [log10(µg/mL)]
402.8
401.11.160
401.11.161
401.11.165

Figure 20

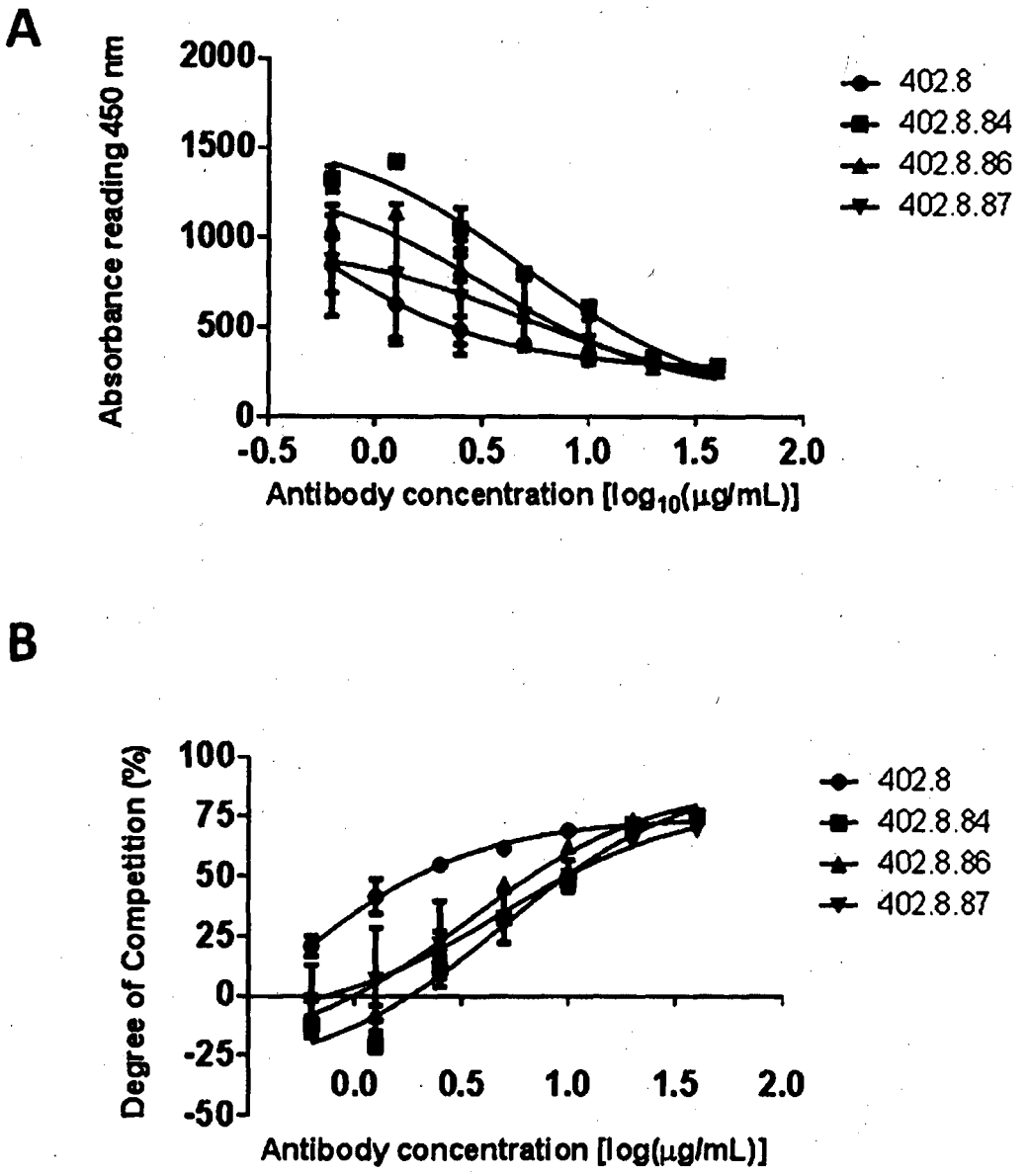

A
Absorbance reading 450 nm
2000
1500
1000
500
0
-0.5
0.0
0.5
1.0
1.5
2.0
Antibody concentration [log10(µg/mL)]
402.8
402.8.84
402.8.86
402.8.87
B
Degree of Competition (%)
100
75
50
25
0
-25
-50
0.0
0.5
1.0
1.5
2.0
Antibody concentration [log(µg/mL)]
402.8
402.8.84
402.8.86
402.8.87

Figure 21

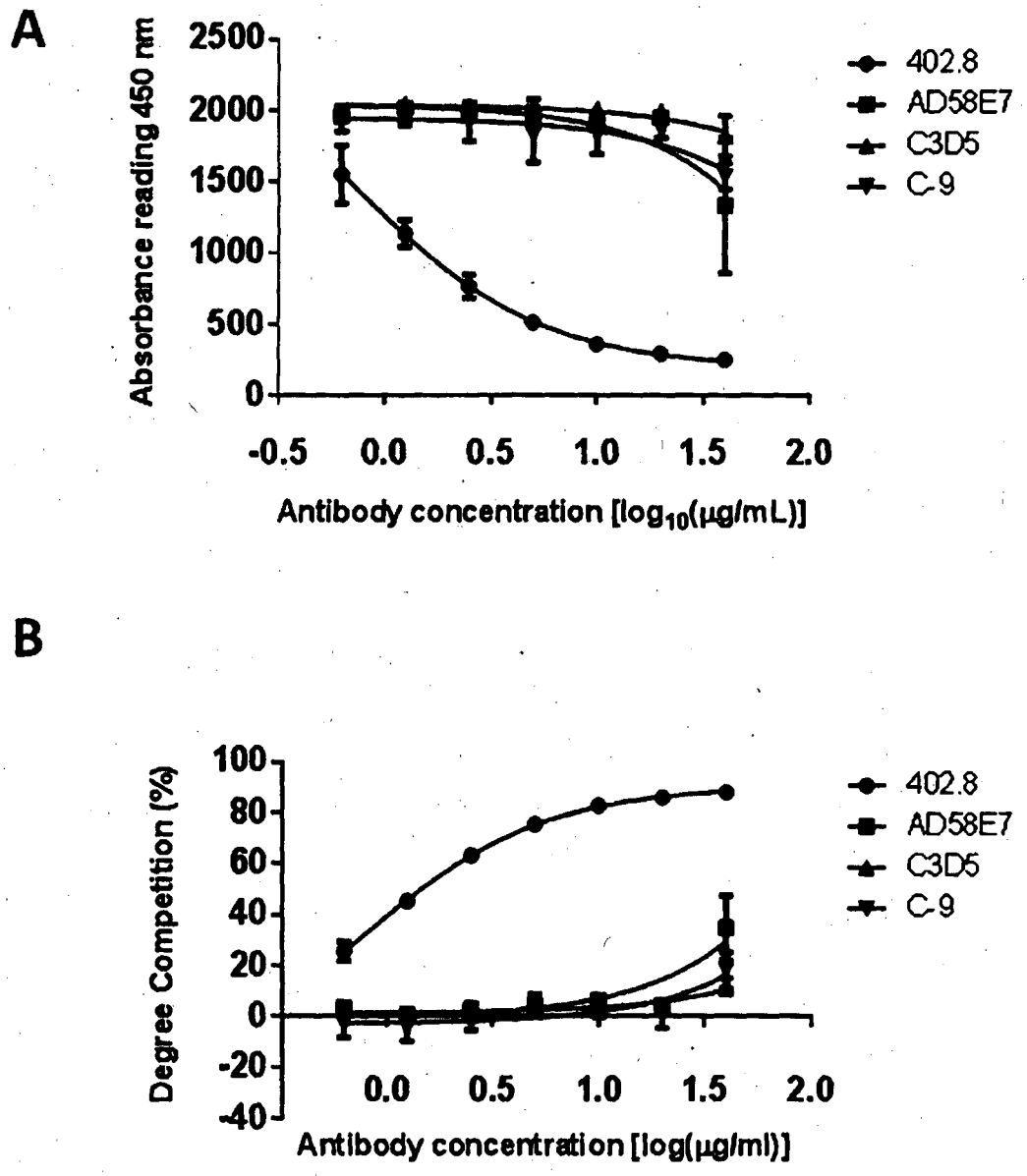

A
Absorbance reading 450 nm
2500
2000
1500
1000
500
0
-0.5
0.0
0.5
1.0
1.5
2.0
Antibody concentration [log10(µg/mL)]
402.8
AD58E7
C3D5
C-9
B
Degree Competition (%)
100
80
60
40
20
0
-20
-40
0.0
0.5
1.0
1.5
2.0
Antibody concentration [log(µg/ml)]
402.8
AD58E7
C3D5
C-9

Figure 22

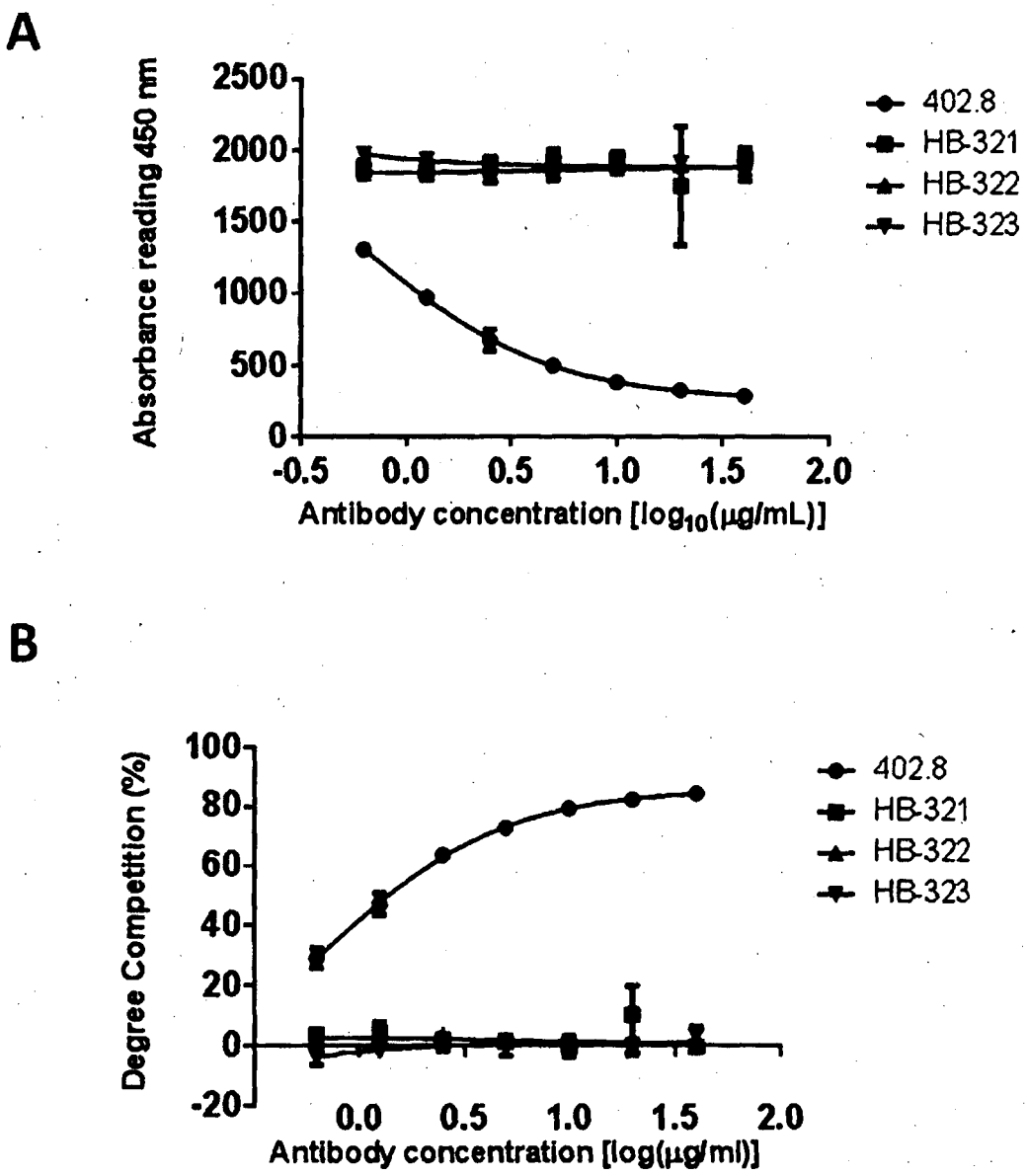

A
Absorbance reading 450 nm
2500
2000
1500
1000
500
0
-0.5
0.0
0.5
1.0
1.5
2.0
Antibody concentration [log10(µg/mL)]
402.8
HB-321
HB-322
HB-323
B
Degree Competition (%)
100
80
60
40
20
0
-20
0.0
0.5
1.0
1.5
2.0
Antibody concentration [log(µg/ml)]
402.8
HB-321
HB-322
HB-323

Figure 23

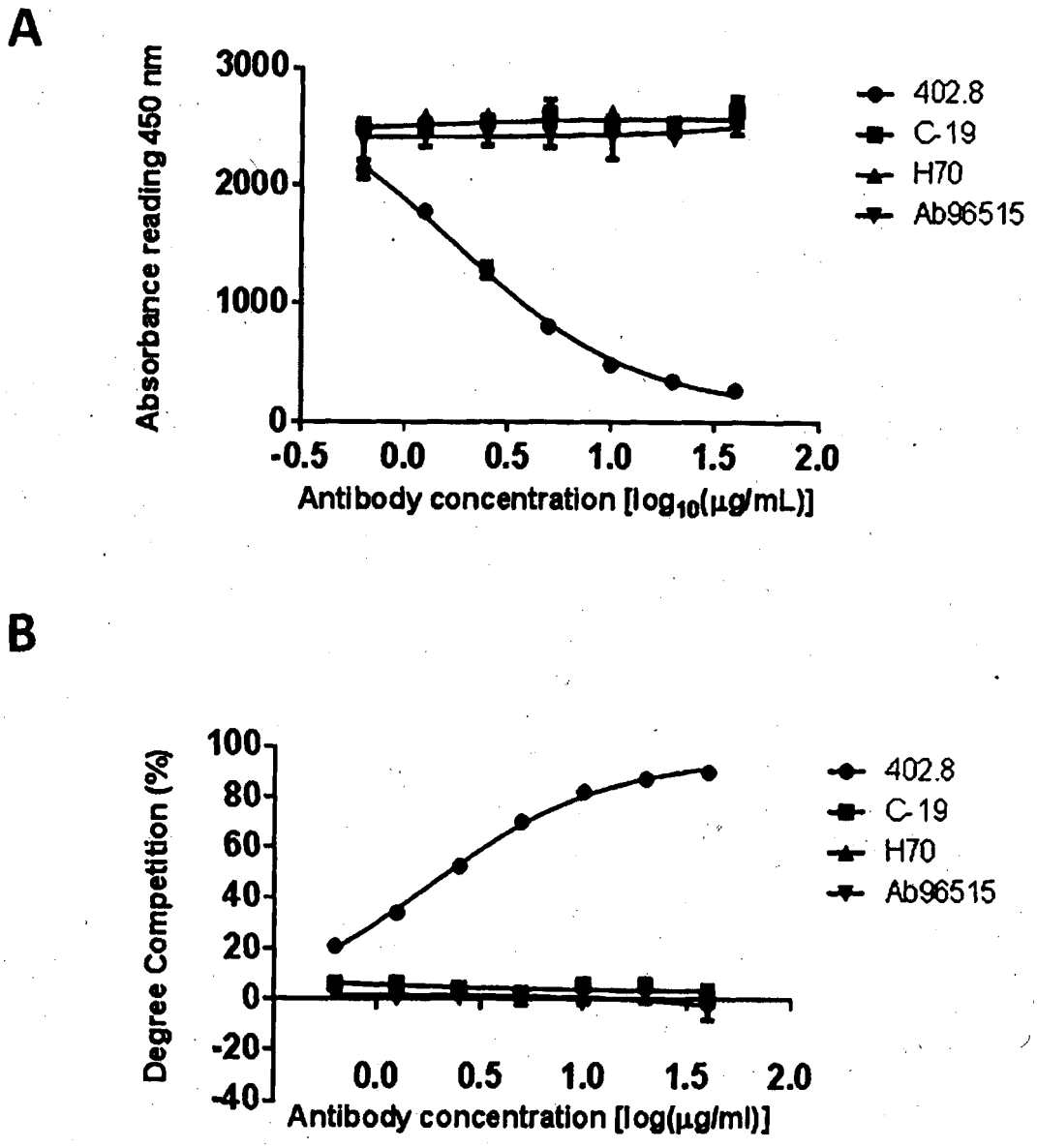

A
Absorbance reading 450 nm
3000
2000
1000
0
-0.5
0.0
0.5
1.0
1.5
2.0
Antibody concentration [log10(µg/mL)]
402.8
C-19
H70
Ab96515
B
Degree Competition (%)
100
80
60
40
20
0
-20
-40
0.0
0.5
1.0
1.5
2.0
Antibody concentration [log(µg/ml)]
402.8
C-19
H70
Ab96515

Figure 24

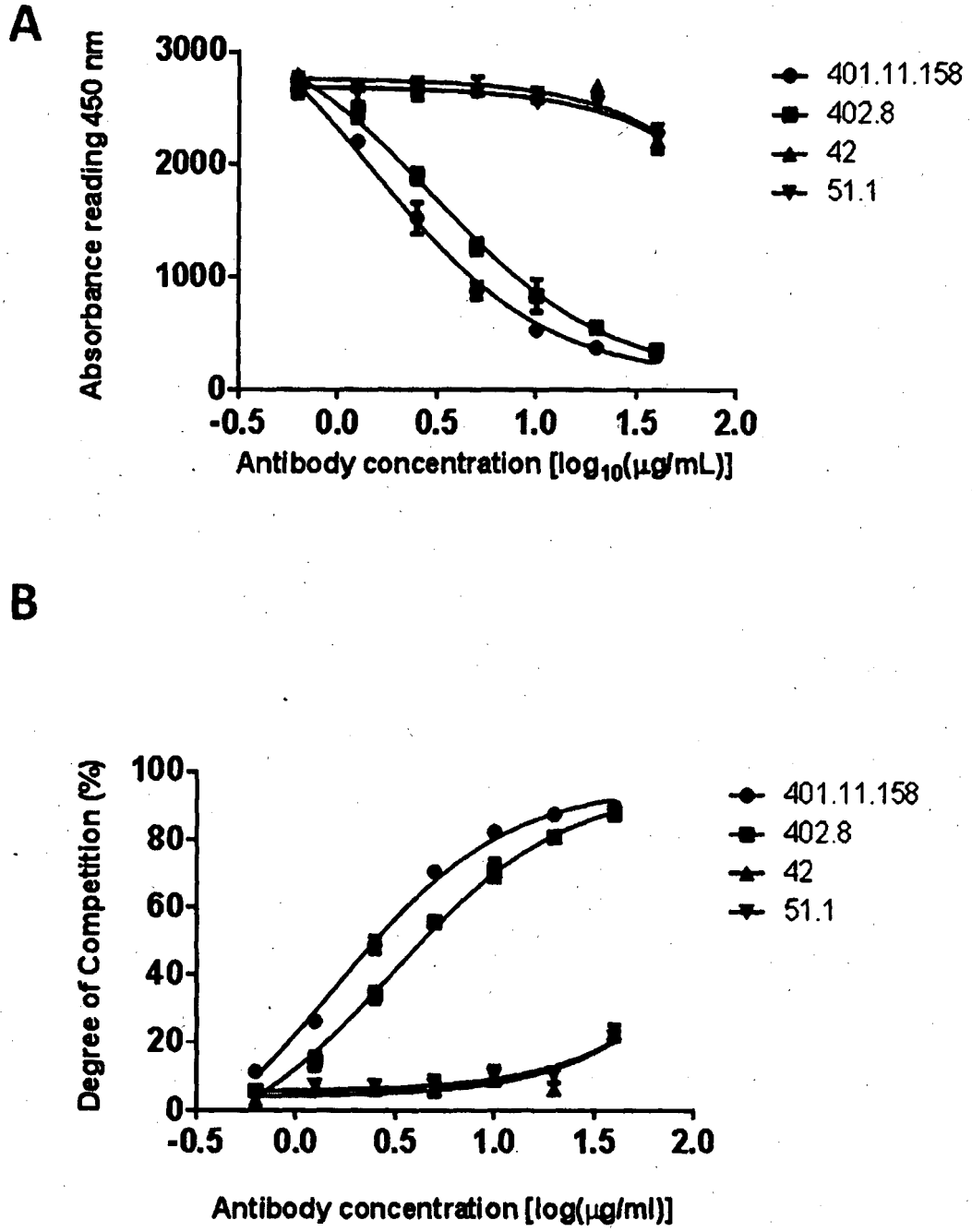
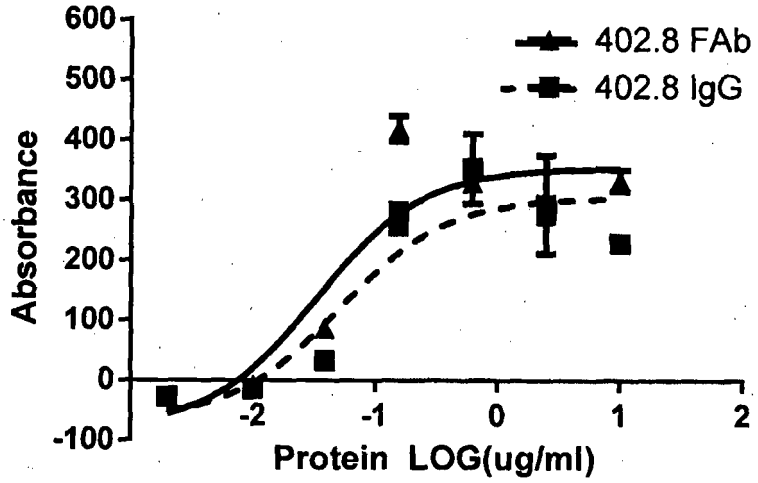

A
Absorbance reading 450 nm
3000
2000
1000
0
-0.5
0.0
0.5
1.0
1.5
2.0
Antibody concentration [log10(µg/mL)]
401.11.158
402.8
42
51.1
B
Degree of Competition (%)
100
80
60
40
20
0
-0.5
0.0
0.5
1.0
1.5
2.0
Antibody concentration [log(µg/ml)]
401.11.158
402.8
42
51.1

Figure 25


600
500
400
300
200
100
0
-100
Absorbance
-2
-1
0
1
2
Protein LOG(ug/ml)
402.8 FAb
402.8 IgG

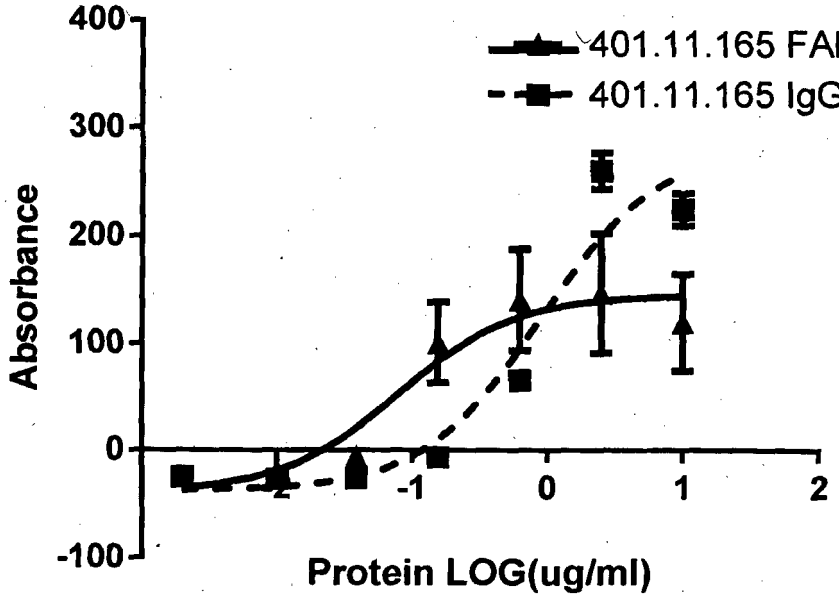

400
300
200
100
0
-100
Absorbance
-2
-1
0
1
2
Protein LOG(ug/ml)
401.11.165 FAb
401.11.165 IgG

Figure 26

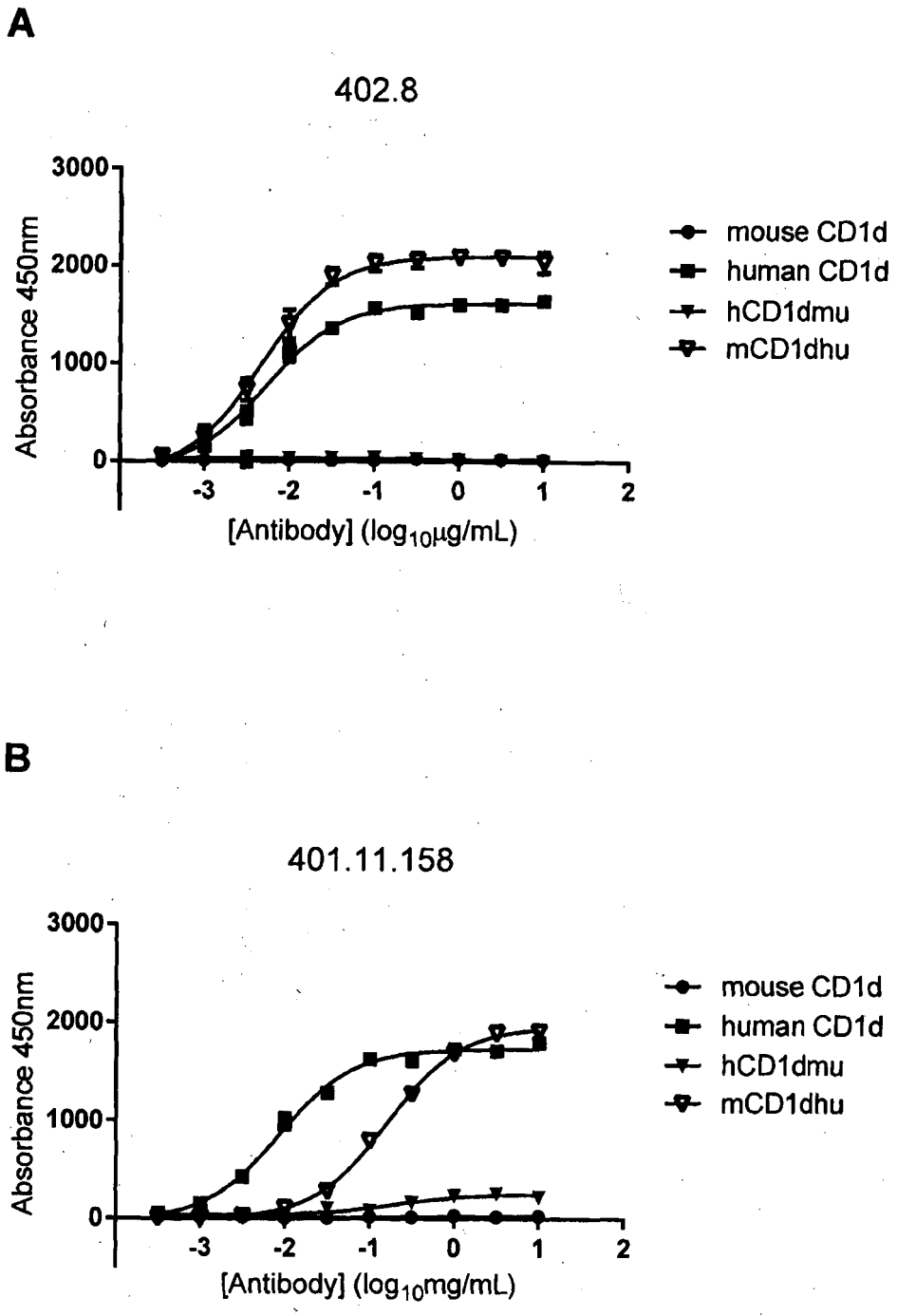
```
human CD1d    EVPQRLFPLRCLQISSFANSSWTRTDGLAWLGELQTHSWSNDSDTVRSLKPWSQGTFSDQQWETLQHIFRVYRSSFTRDV
mouse CD1d    --Q.KNYTF....M.....R..S...SVV...D....R.....A.ISFT.....KL.N....K...M.Q...V.....I
mCD1dhu       --Q.KNYTF....M.....R..S...SVV...D....R.....A.ISFT.....KL.N....K...M.Q...V.....I
hCD1dmu       ..............................................................................

human CD1d    KEFAKM LRLS--YPL ELQWSAGCEVHPGNASNNFFHVAFQGKDILSFQGTSWEPTQEAPLWV NLA IQVLNQDKWTRETVQ
mouse CD1d    Q.LV.. MSPKED..I .I.L.....MY.....ES.L.....YVVR.W....QTVPG..S.L D.P .K...A.QG.SA...
mCD1dhu       Q.LV.. ....-....  .I.L.....MY.....ES.L.....YVVR.W....QTVPG..S..  .... .K...A.QG.SA...
hCD1dmu       ...... MSPKED..I ..............................................  D.P ..............

human CD1d    WLLNGTCPQFVSGLLESGKSELKKQVKPKAWLSRGPSPGPGRLLLVCHVSGFYPKPVWVKWMRGEQEQQGTQPGDILPNA
mouse CD1d    M...D....L..R.....A....D.E..E..V.....SV..SAD.HRQ.....................M.....D.......HR..F.....
mCD1dhu       M...D....L..R.....A....D.E..E..V.....SV..SAD.HRQ.....................M.....D.......HR..F.....
hCD1dmu       ..............................................................................

human CD1d    DETWYLRATLDVVAGEAAGLSCRVKHSSLEGQDIVLYWGGSYTS
mouse CD1d    .....Q.....E...E...A.....G.....I...DARQAPVG
mCD1dhu       .....Q.....E...E...A.....G.....I...DARQAPVG
hCD1dmu       ..............................
```

Figure 27


A
402.8
3000
2000
1000
0
Absorbance 450nm
-3
-2
-1
0
1
2
[Antibody] (log10µg/mL)
mouse CD1d
human CD1d
hCD1dmu
mCD1dhu
B
401.11.158
3000
2000
1000
0
Absorbance 450nm
-3
-2
-1
0
1
2
[Antibody] (log10mg/mL)
mouse CD1d
human CD1d
hCD1dmu
mCD1dhu

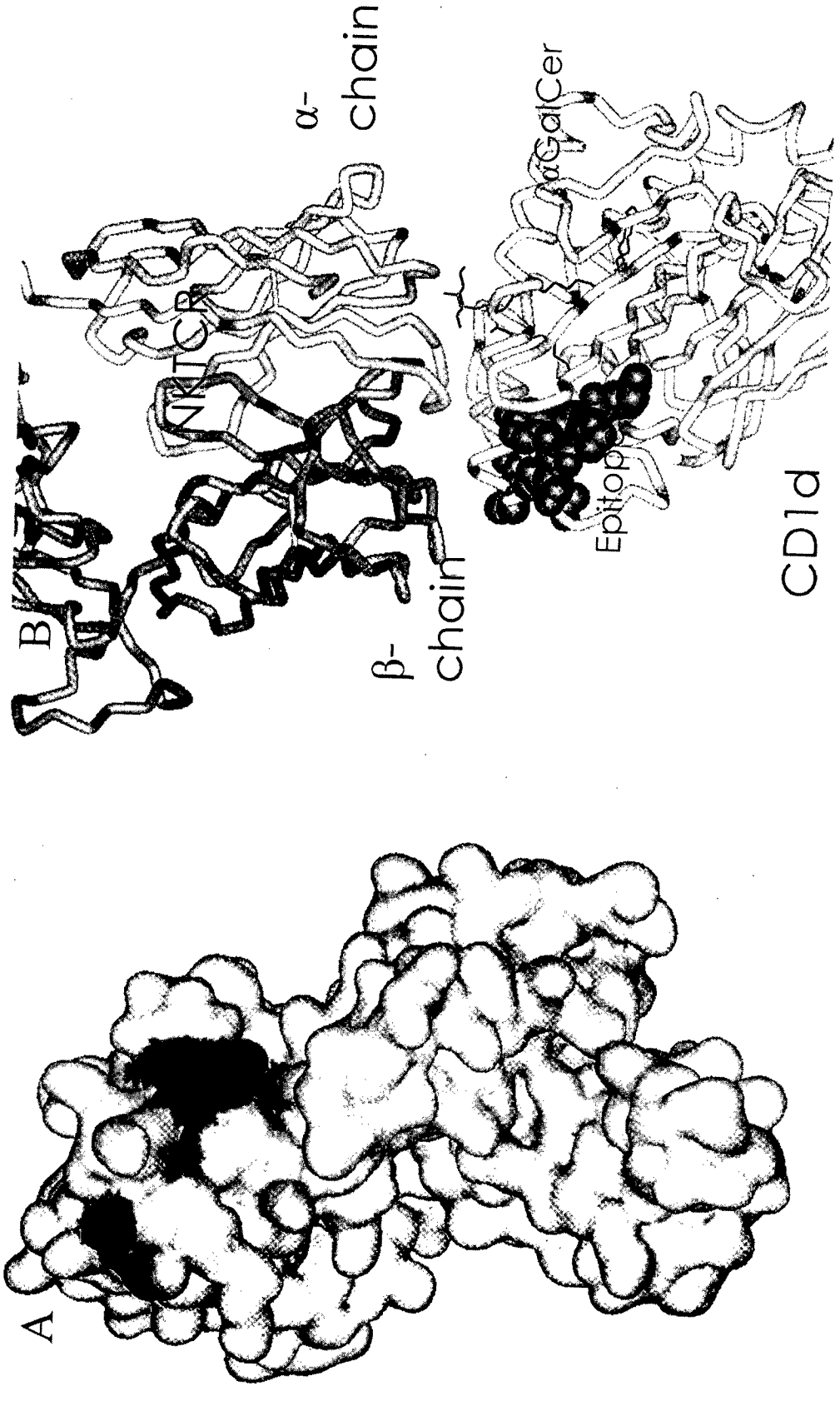


Figure 28

Figure 29A

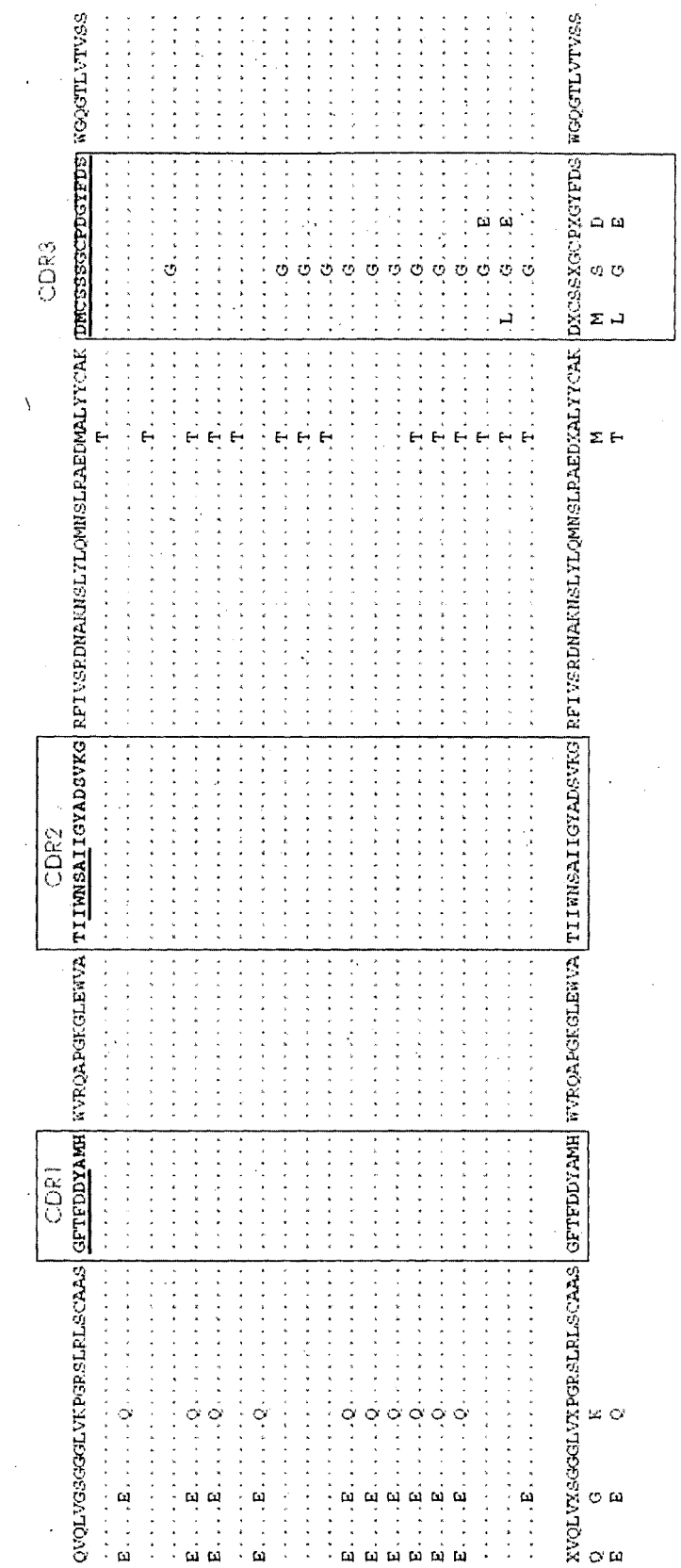

CDR1
CDR2
CDR3
401.11 QVQLVQSGGGLVKPGRSLRLSCAAS GFTFDDYAMH WVRQAPGKGLEWVA TIIWNSAIIGYADSVKG RFTVSRDNAKNSLYLQMNSLRAEDMALYYCAK DMCSSSSCPDGYFDS WGQGTLVTVSS
401.11.24 ....
401.11.25 E....E.....Q..... ....
401.11.28 ....
401.11.86 ....
401.11.151 E....E.....Q..... ....
401.11.152 E....E.....Q..... ....
401.11.154 ....
401.11.155 E....E.....Q..... ....
401.11.156 ....
401.11.157 ....
401.11.158 ....
401.11.159 E....E.....Q..... ....
401.11.160 E....E.....Q..... ....
401.11.161 E....E.....Q..... ....
401.11.165 E....E.....Q..... ....
401.11.166 E....E.....Q..... ....
401.11.167 E....E.....Q..... ....
401.11.179 ....
401.11.180 ....
401.11.181 .....E..... ....
Consensus XVQLVXSGGGLVXPGRSLRLSCAAS GFTFDDYAMH WVRQAPGKGLEWVA TIIWNSAIIGYADSVKG RFTVSRDNAKNSLYLQMNSLRAEDXALYYCAK DXCSSXSCPXGYFDS WGQGTLVTVSS
Q G K M M S D
E E Q T T L G E

Figure 29B

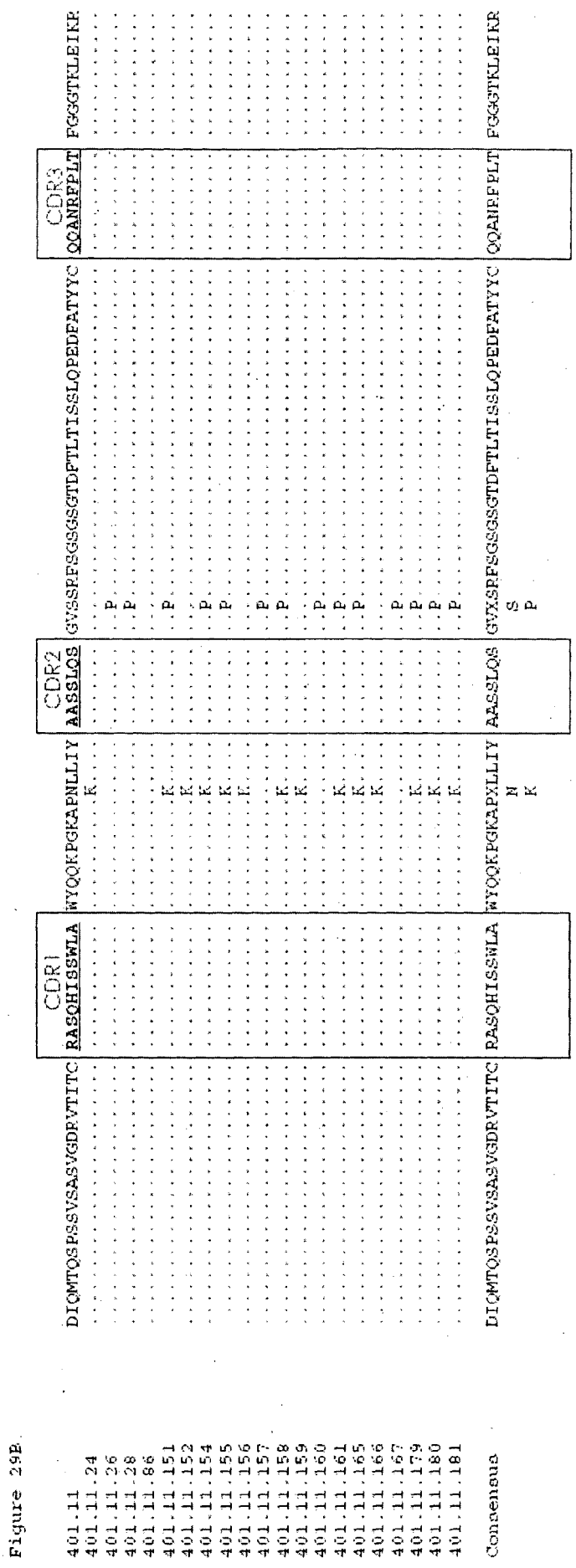

CDR1
RASQHISSWLA
CDR2
AASSLQS
CDR3
QQANRFPLT
DIQMTQSPSSVSASVGDRVTITC
WYQQKPGKAPNLLIY
GVPSRFSGSGSGTDFTLTISSLQPEDFATYYC
FGGGTKLEIKR
401.11
401.11.24
401.11.26
401.11.28
401.11.86
401.11.151
401.11.152
401.11.154
401.11.155
401.11.156
401.11.157
401.11.158
401.11.159
401.11.160
401.11.161
401.11.165
401.11.166
401.11.167
401.11.179
401.11.180
401.11.181
Consensus

Figure 30A

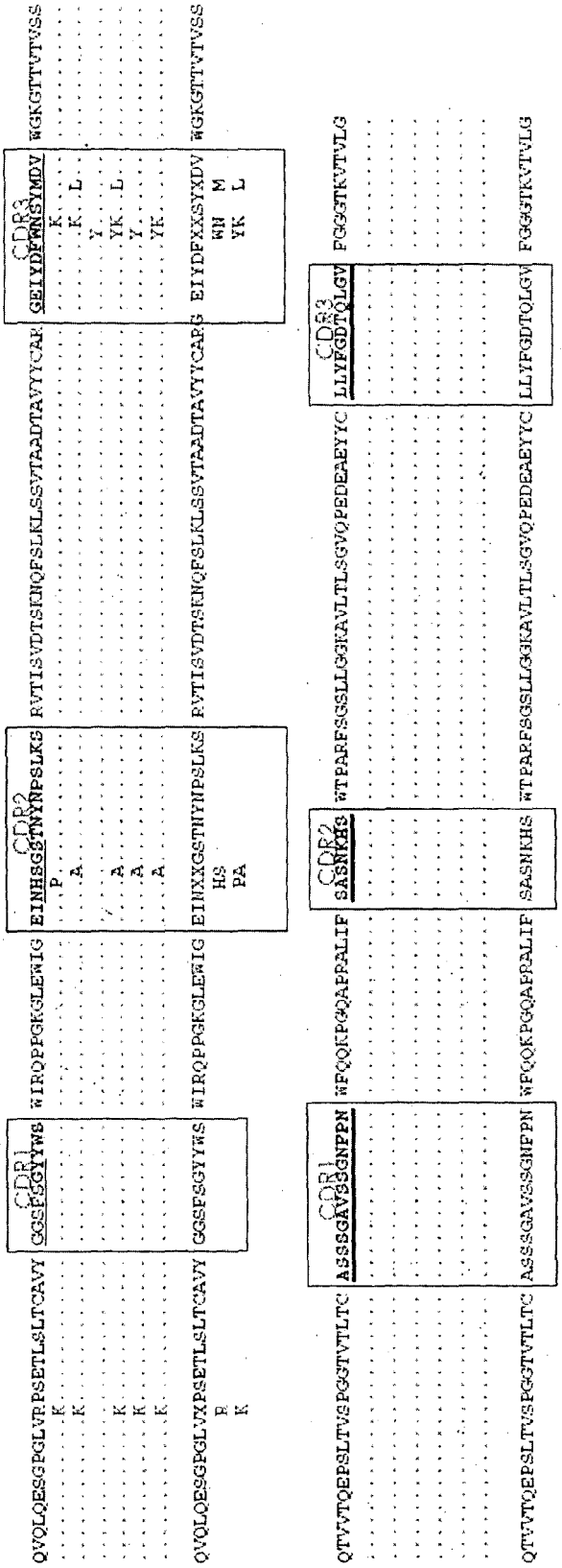


Figure 30B