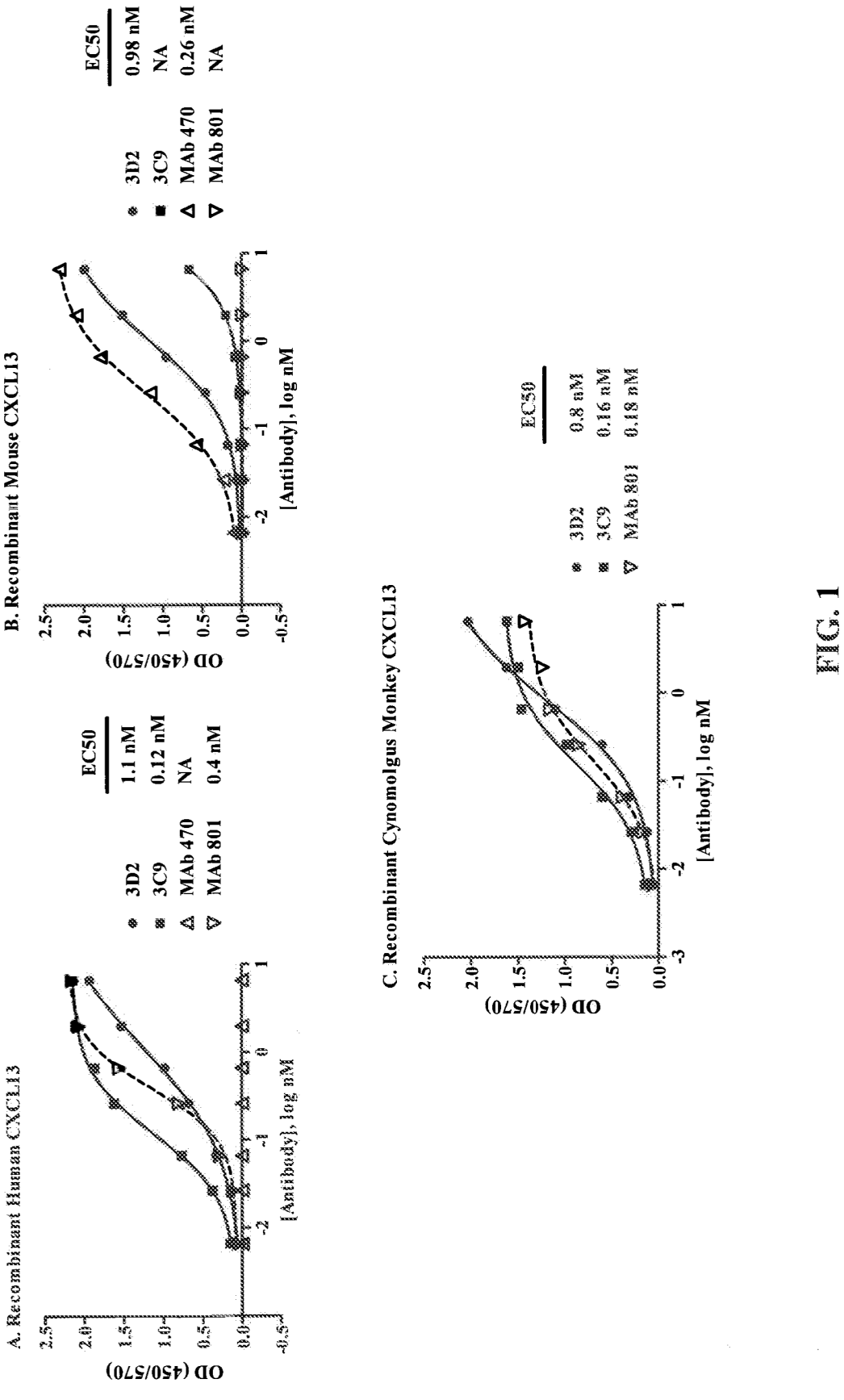

A. Recombinant Human CXCL13
OD (450/570)
[Antibody], log nM
EC50
3D2 1.1 nM
3C9 0.12 nM
MAb 470 NA
MAb 801 0.4 nM
B. Recombinant Mouse CXCL13
OD (450/570)
[Antibody], log nM
EC50
3D2 0.98 nM
3C9 NA
MAb 470 0.26 nM
MAb 801 NA
C. Recombinant Cynomolgus Monkey CXCL13
OD (450/570)
[Antibody], log nM
EC50
3D2 0.8 nM
3C9 0.16 nM
MAb 801 0.18 nM

FIG. 1

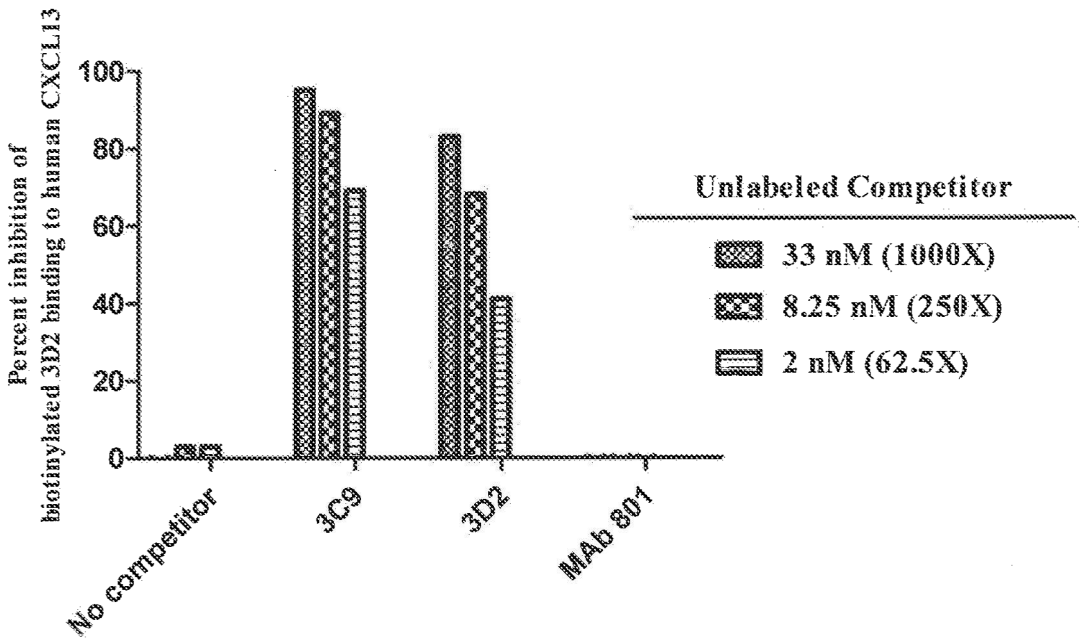

Percent inhibition of biotinylated 3D2 binding to human CXCL13
100
80
60
40
20
0
No competitor
3C9
3D2
MAb 801
Unlabeled Competitor
33 nM (1000X)
8.25 nM (250X)
2 nM (62.5X)

FIG. 2

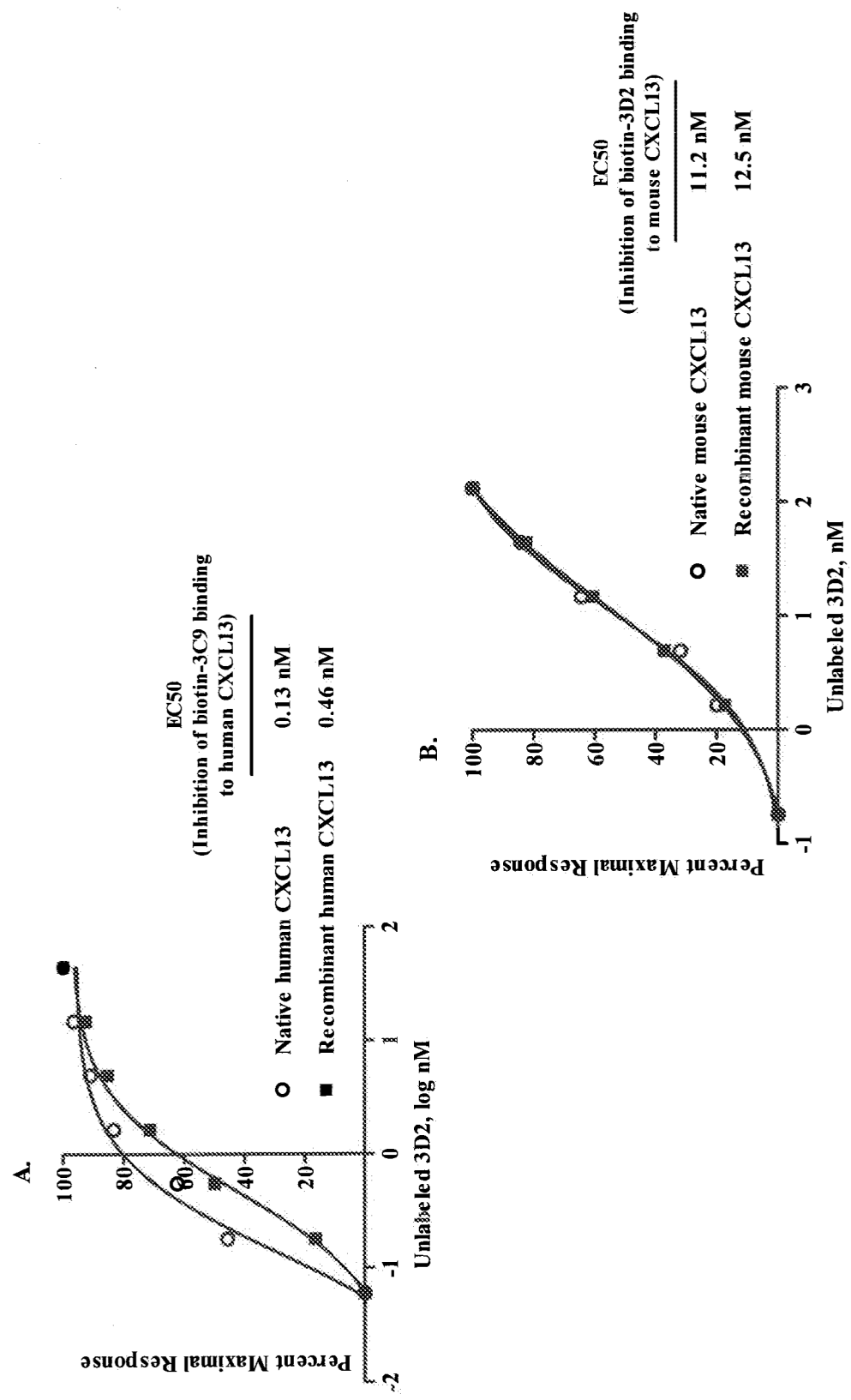

A.
Percent Maximal Response
Unlabeled 3D2, log nM
EC50
(Inhibition of biotin-3C9 binding to human CXCL13)
Native human CXCL13 0.13 nM
Recombinant human CXCL13 0.46 nM
B.
Percent Maximal Response
Unlabeled 3D2, nM
EC50
(Inhibition of biotin-3D2 binding to mouse CXCL13)
Native mouse CXCL13 11.2 nM
Recombinant mouse CXCL13 12.5 nM

FIG. 3

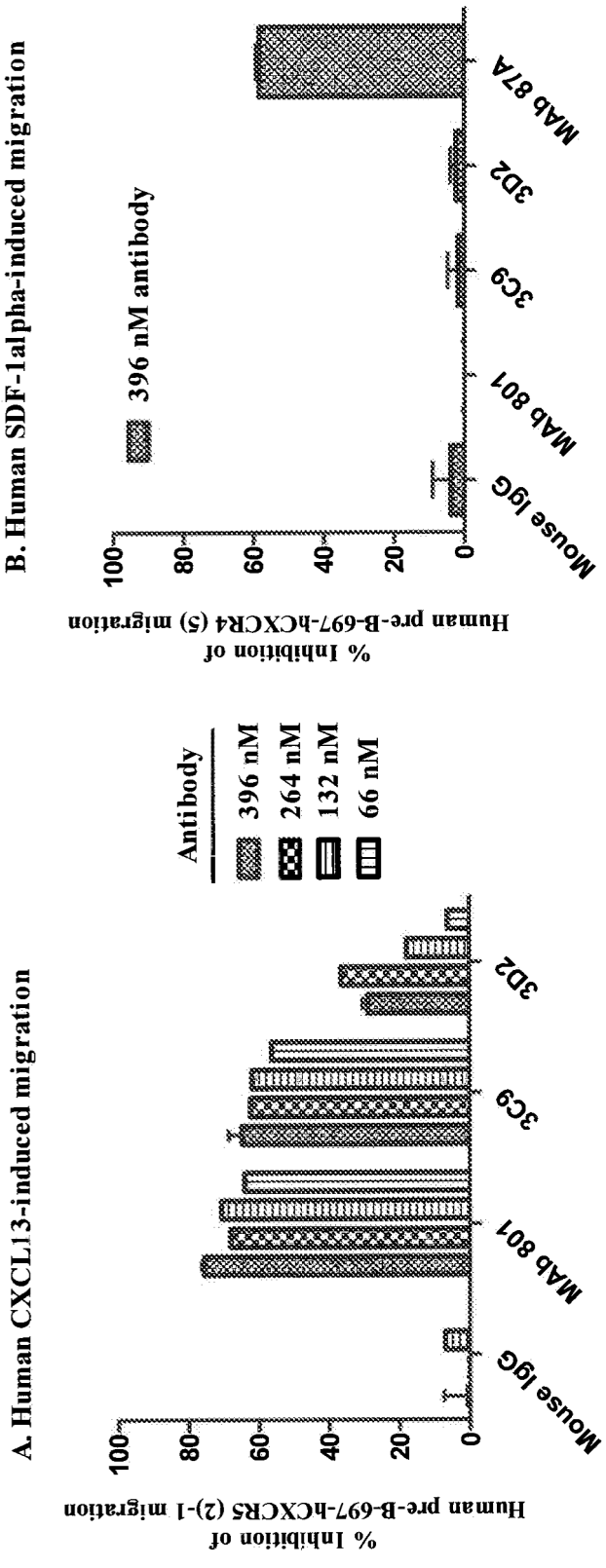

A. Human CXCL13-induced migration
% Inhibition of
Human pre-B-697-hCXCR5 (2)-1 migration
100
80
60
40
20
0
Mouse IgG
MAb 801
3C9
3D2
Antibody
396 nM
264 nM
132 nM
66 nM
B. Human SDF-1alpha-induced migration
% Inhibition of
Human pre-B-697-hCXCR4 (5) migration
396 nM antibody
Mouse IgG
MAb 801
3C9
3D2
MAb 87A

FIG. 4

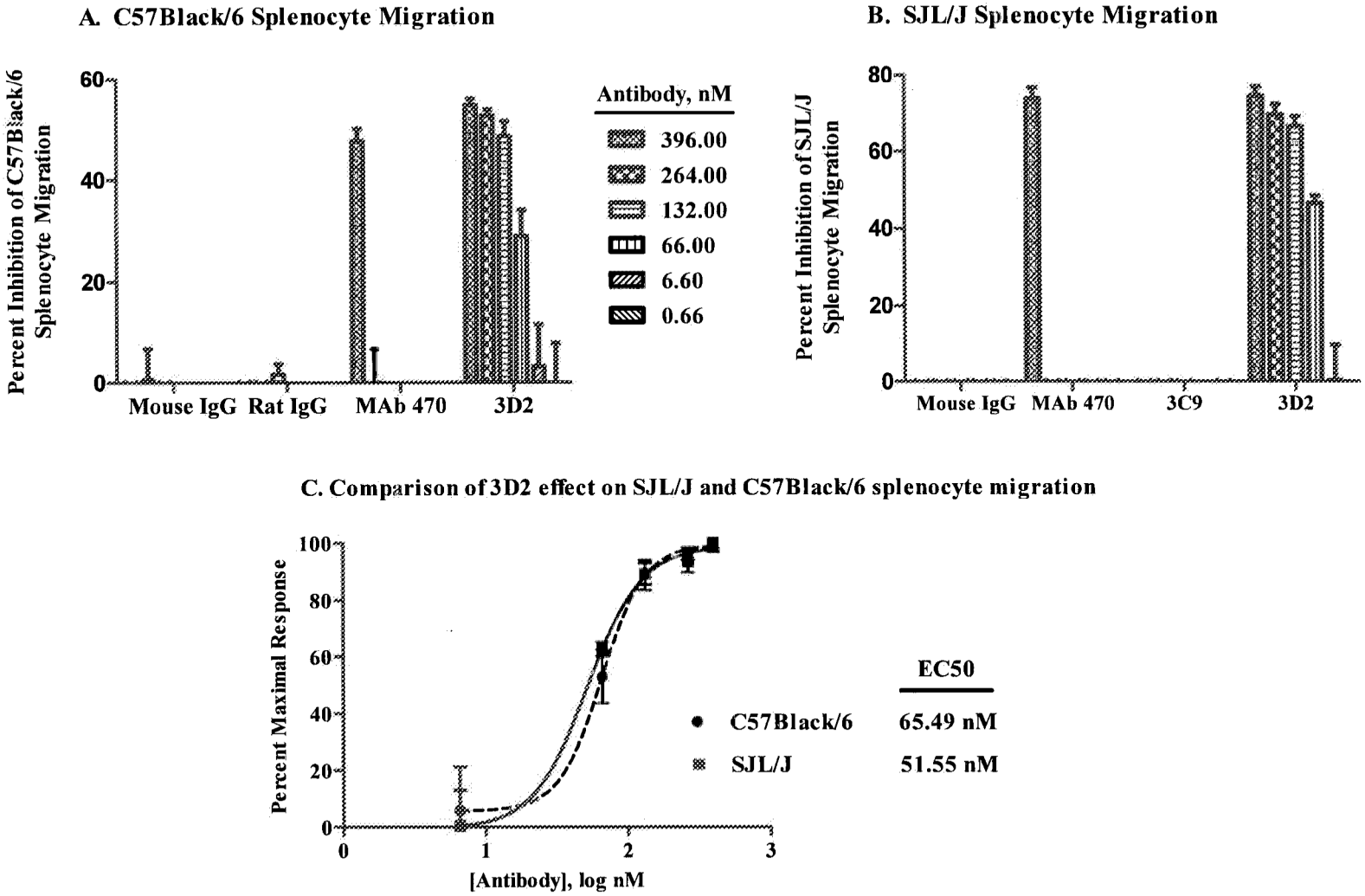

A. C57Black/6 Splenocyte Migration
Percent Inhibition of C57Black/6 Splenocyte Migration
60
40
20
0
Mouse IgG
Rat IgG
MAb 470
3D2
Antibody, nM
396.00
264.00
132.00
66.00
6.60
0.66
B. SJL/J Splenocyte Migration
Percent Inhibition of SJL/J Splenocyte Migration
80
60
40
20
0
Mouse IgG
MAb 470
3C9
3D2
C. Comparison of 3D2 effect on SJL/J and C57Black/6 splenocyte migration
Percent Maximal Response
100
80
60
40
20
0
0
1
2
3
[Antibody], log nM
EC50
C57Black/6 65.49 nM
SJL/J 51.55 nM

FIG. 5

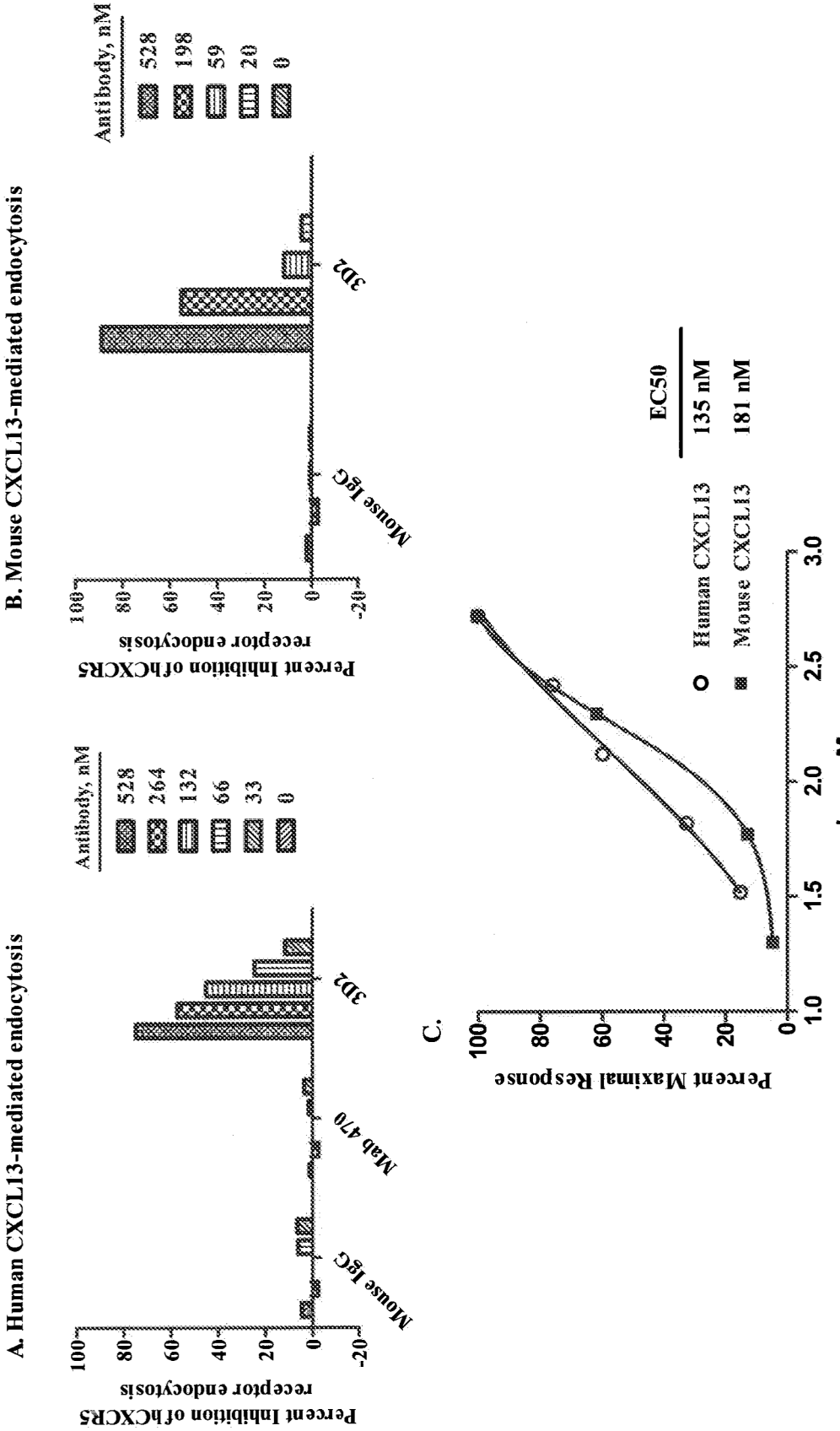

A. Human CXCL13-mediated endocytosis
Percent Inhibition of hCXCR5 receptor endocytosis
100
80
60
40
20
0
-20
Antibody, nM
528
264
132
66
33
0
3D2
Mab 470
Mouse IgG
B. Mouse CXCL13-mediated endocytosis
Percent Inhibition of hCXCR5 receptor endocytosis
100
80
60
40
20
0
-20
Antibody, nM
528
198
59
20
0
3D2
Mouse IgG
C.
Percent Maximal Response
100
80
60
40
20
0
1.0
1.5
2.0
2.5
3.0
Log nM
EC50
Human CXCL13 135 nM
Mouse CXCL13 181 nM

FIG. 6

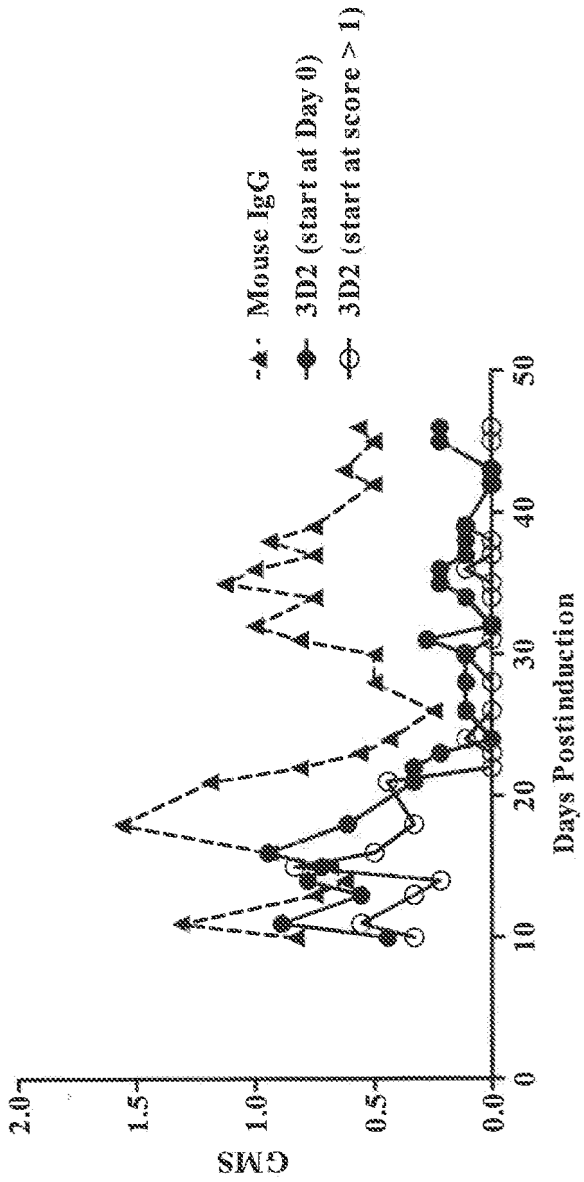

Mouse IgG
3D2 (start at Day 0)
3D2 (start at score > 1)
GMS
2.0
1.5
1.0
0.5
0.0
0
10
20
30
40
50
Days Postinduction

FIG. 7

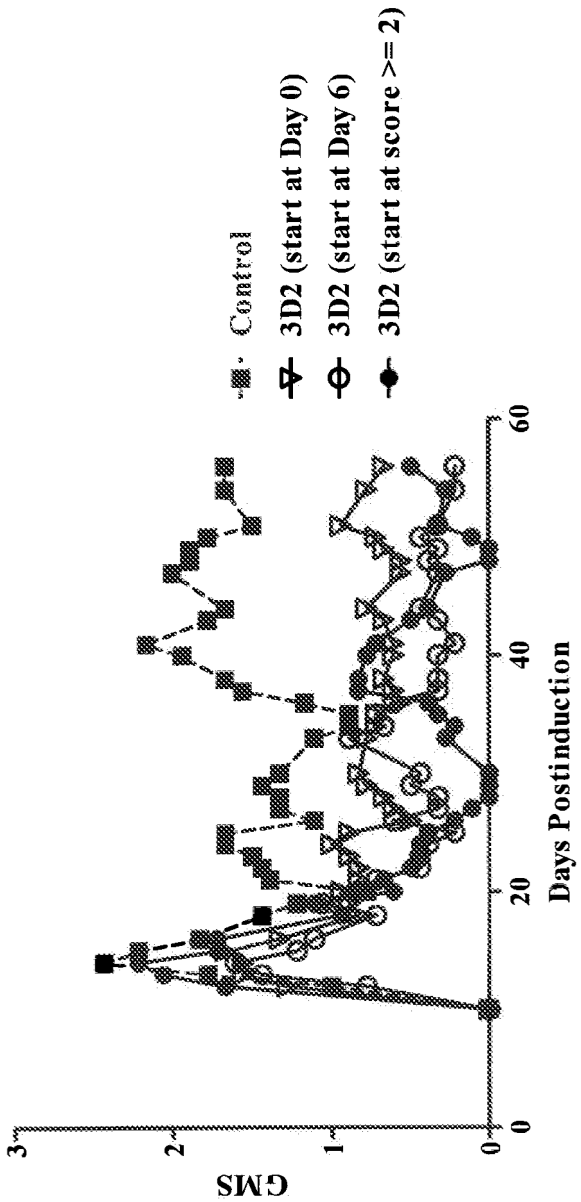

Control
3D2 (start at Day 0)
3D2 (start at Day 6)
3D2 (start at score >= 2)
GMS
0
1
2
3
0
20
40
60
Days Postinduction

FIG. 8

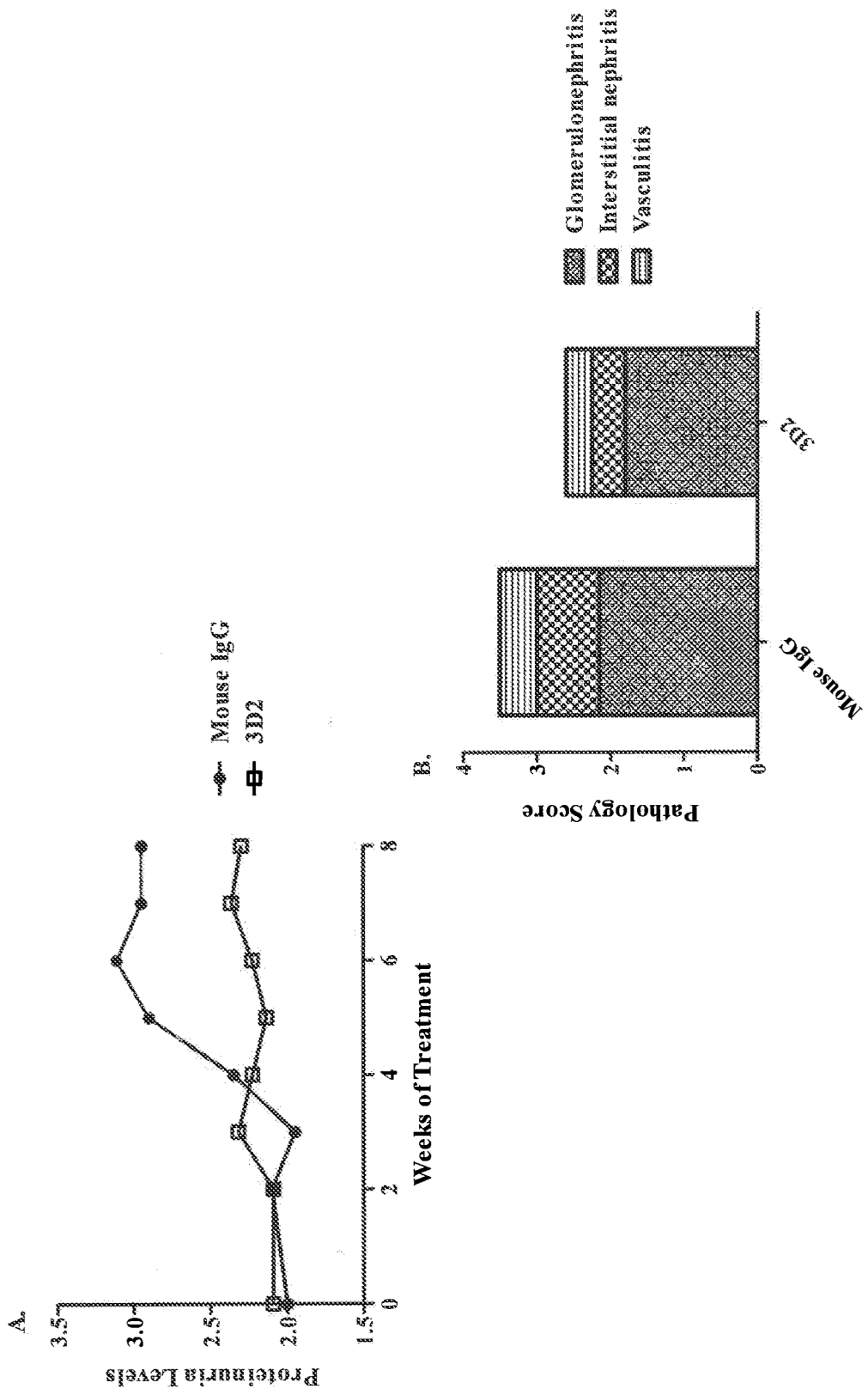

A.
Proteinuria Levels
3.5
3.0
2.5
2.0
1.5
0
2
4
6
8
Weeks of Treatment
Mouse IgG
3D2
B.
Pathology Score
4
3
2
1
0
Mouse IgG
3D2
Glomerulonephritis
Interstitial nephritis
Vasculitis

FIG. 9

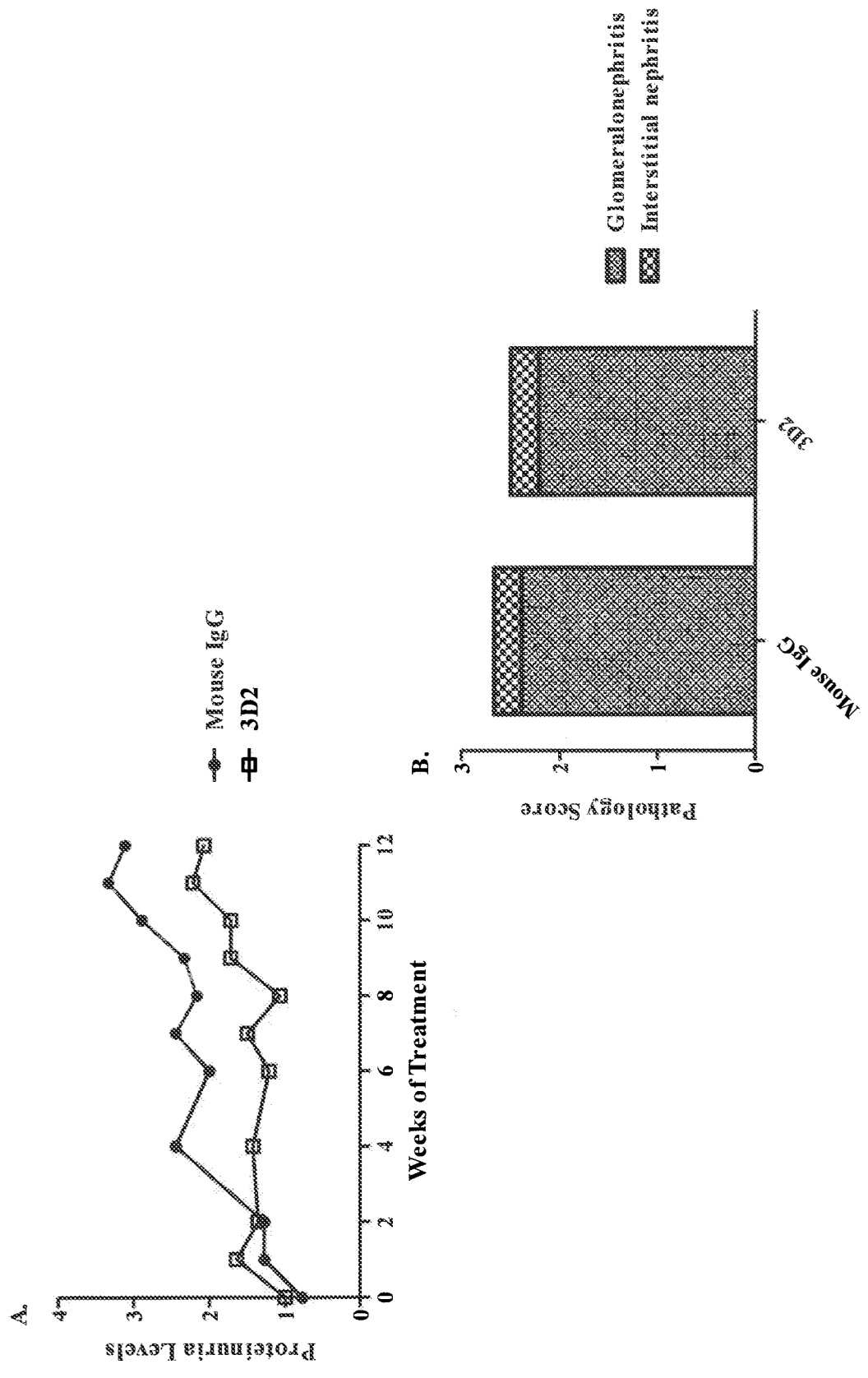

A.
Proteinuria Levels
Weeks of Treatment
Mouse IgG
3D2
B.
Pathology Score
Glomerulonephritis
Interstitial nephritis
Mouse IgG
3D2

FIG. 10

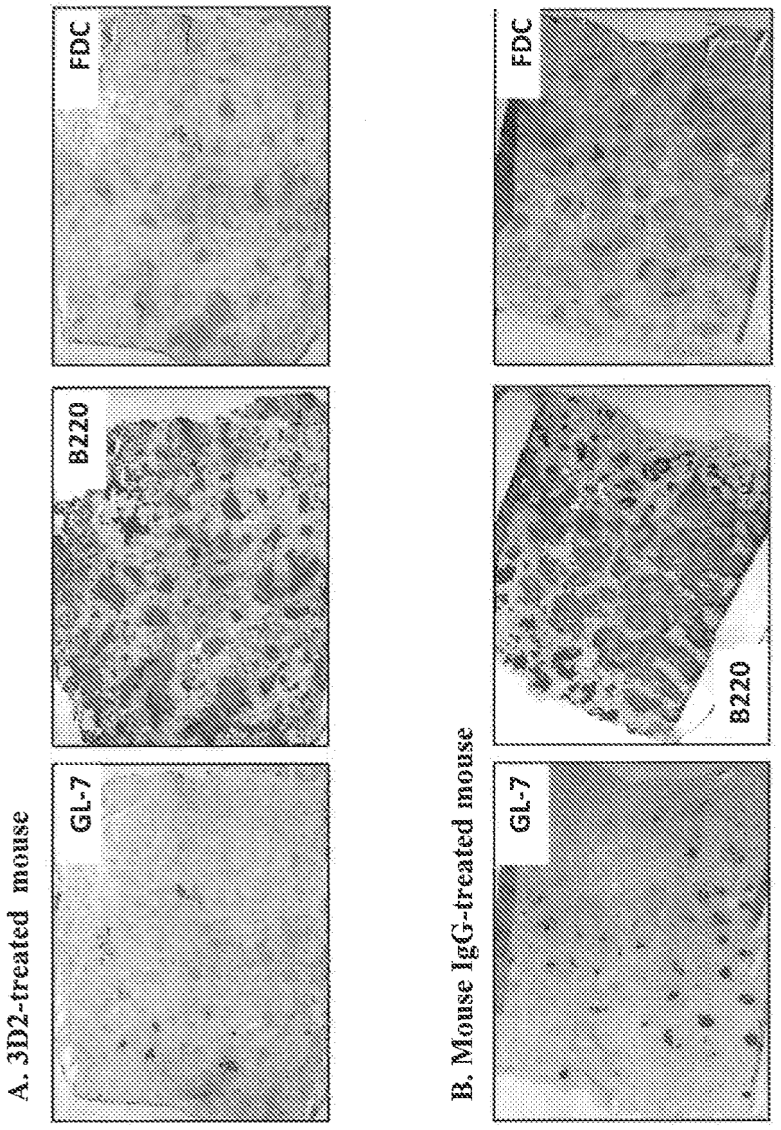

A. 3D2-treated mouse
GL-7
B220
FDC
B. Mouse IgG-treated mouse
GL-7
B220
FDC

FIG. 11

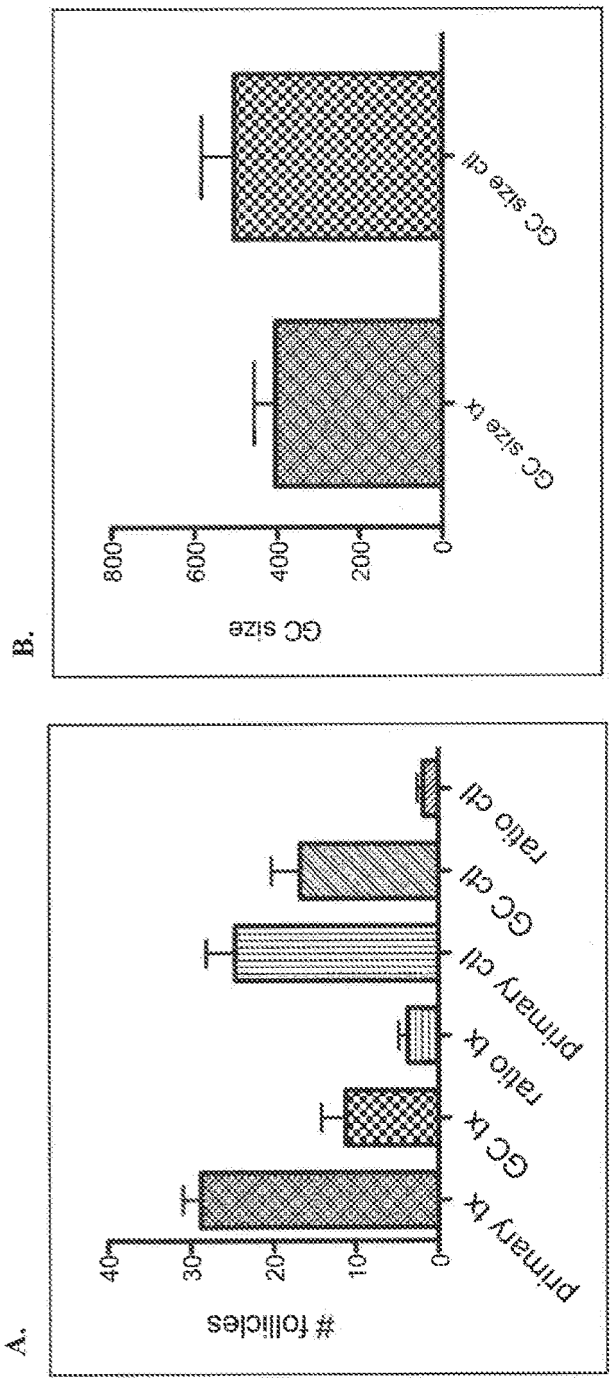

A.
follicles
0
10
20
30
40
primary 1x
GC 1x
ratio 1x
primary cil
GC cil
ratio cil
B.
GC size
0
200
400
600
800
GC size 1x
GC size cil

FIG. 12

H1609 DNA sequence:
GAGGTGCAGCTTCAGGAGTCTGGCCCTGGGATATTGCAGCCCTCCCAGACCCTCAATC
TGACTTGTTCTTTCTCTGGATTTTCACTGAGCACTTTTGGTATGGGTGTAGGCTGGATT
CGTCAGCCTTCAGGGAAGGGTCTGGAGTGGCTGGCACACATTTGGTGGGATGATGAT
AGGAGGTATAACCCAGCCCTGAAGAGTCGGCTCACAATCTCCAAGGAAACCTCCAAA
AACCAGGTGTTCCTCAAGATCGCCAATGTGGACACTGCAGATACTGCCACATACTACT
GTACTCGAATAGCGGGGTATTATGGTAGTAGAGACTGGTTTGCTTACTGGGGCCAAG
GGACCACGGTCACCGTCTCCTCA (SEQ ID NO: 2)

H1609 Amino Acid sequence:
EVQLQESGPGILQPSQTLNLTCSFSGFSLSTFGMGVGWIRQPSGKGLEWLAHIWWDDDRR
YNPALKSRLTISKETSKNQVFLKIANVDTADTATYYCTRIAGYYGSRDWFAYWGQGTTV
TVSS (SEQ ID NO: 3)

L0293: DNA sequence
GACATTGTGCTGACCCAGTCTCCAGCTTCTTTGGCTGTGTCTCTAGGGCAGAGGGCCA
CCATCTCCTGCAGAGCCAGCGAAAGTGTTGATAATTCTGGCATTAGTTTTATGCACTG
GTACCAGCAGAAACCAGGACAGCCACCCAAACTCCTCATCTTTCGTGCATCCGACCTA
GAATCTGGGATCCCTGCCAGGTTCAGTGGCAGTGGGTCTAGGACAGACTTCACCCTCA
CCGTTAATCCTGTGGAGACTGATGATGTTGCAACCTATTTCTGTCAGCAAAGTAATAA
GGATCCGTGGACGTTCGGTGGAGGCACCAAGCTCGAGATCAAA (SEQ ID NO: 7)

L0293 Amino Acid sequence:
DIVLTQSPASLAVSLGQRATISCRASESVDNSGISFMHWYQQKPGQPPKLLIFRASDLESGI
PARFSGSGSRTDFTLTVNPVETDDVATYFCQQSNKDPWT FGGGTKLEIK (SEQ ID NO: 8)

FIG. 13

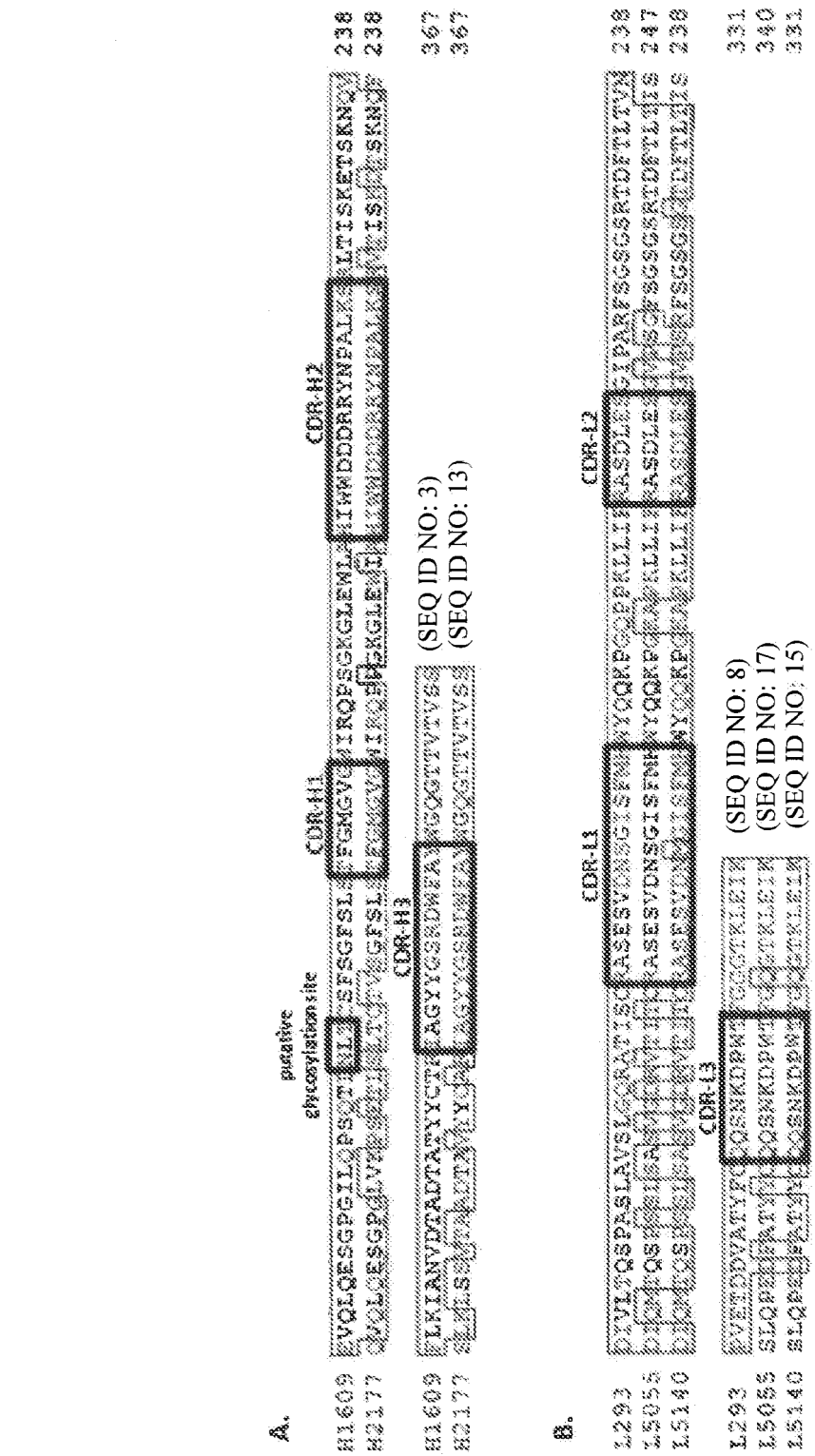

A.
putative glycosylation site
CDR-H1
CDR-H2
CDR-H3
H1609
H2177
(SEQ ID NO: 3)
(SEQ ID NO: 13)
B.
CDR-L1
CDR-L2
CDR-L3
L293
L5055
L5140
(SEQ ID NO: 8)
(SEQ ID NO: 17)
(SEQ ID NO: 15)

FIG. 14

H2177 DNA sequence:
CAGGTGCAGCTGCAGGAGAGCGGCCCAGGCCTGGTGAAGCCTAGCGAGACCCTGAGC
CTCACCTGCACCGTCAGCGGCTTTAGCCTGAGCACCTTTGGCATGGGCGTGGGCTGGA
TTAGACAGCCTCCAGGCAAGGGCCTGGAGTGGATTGCACACATTTGGTGGGATGATG
ATAGGAGATATAACCCAGCCCTGAAGAGCAGAGTGACCATCAGCAAGGACACCAGC
AAGAACCAGTTCAGCCTGAAGCTGAGCAGCGTGACCGCTGCCGACACCGCCGTGTAT
TACTGTGCCAGAATCGCCGGCTATTATGGCAGCAGAGACTGGTTTGCCTACTGGGGCC
AAGGCACCACGGTCAC CGTCTCCTCA (SEQ ID NO: 12)

H2177 Amino Acid sequence:
QVQLQESGPGLVKPSETLSLTCTVSGFSLSTFGMGVGWIRQPPGKGLEWIAHIWWDDDRR
YNPALKSRVTISKDTSKNQFSLKLSSVTAADTAVYYCARIAGYYGSRDWFAYWGQGTTV
TVSS (SEQ ID NO: 13)

L5055: DNA sequence
GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTGGGAGACAGAGTCA
CCATCACTTGCAGAGCCAGCGAAAGTGTTGATAATTCTGGCATTAGTTTTATGCACTG
GTATCAGCAGAAACCAGGGAAAGCCCCTAAGCTCCTGATCTTTAGAGCATCCGACCT
GGAATCTGGGGTCCCATCAGGGTTCAGTGGCAGTGGATCTAGGACAGATTTCACTCTC
ACCATCAGCAGTCTGCAACCTGAAGATTTTGCAACTTACTACTGTCAGCAAAGTAATA
AGGATCCCTGGACCTTCGGCCAAGGGACCAAGCTCGAGATCAAA (SEQ ID NO: 18)

L5055 Amino Acid sequence:
DIQMTQSPSSLSASVGDRVTITCRASESVDNSGISFMHWYQQKPGKAPKLLIFRASDLESG
VPSGFSGSGSGRTDFTLTISSLQPEDFATYYCQQSNKDPWTFGQGTKLEIK (SEQ ID NO: 17)

L5140: DNA sequence
GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTGGGAGACAGAGTCA
CCATCACTTGCAGAGCCAGCGAAAGTGTTGATAATATGGGCATTAGTTTTATGCACTG
GTATCAGCAGAAACCAGGGAAAGCCCCTAAGCTCCTGATCTTTAGAGCATCCGACCT
GGAATCTGGGGTCCCATCAAGGTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTC
ACCATCAGCAGTCTGCAACCTGAAGATTTTGCAACTTACTACTGTCAGCAAAGTAATA
AGGATCCCTGGACCTTCGGCCAAGGGACCAAGCTCGAGATCAAA (SEQ ID NO: 14)

L5140 Amino Acid sequence:
DIQMTQSPSSLSASVGDRVTITCRASESVDNMGISFMHWYQQKPGKAPKLLIFRASDLESG
VPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSNKDPWTFGQGTKLEIK (SEQ ID NO: 15)

FIG. 15

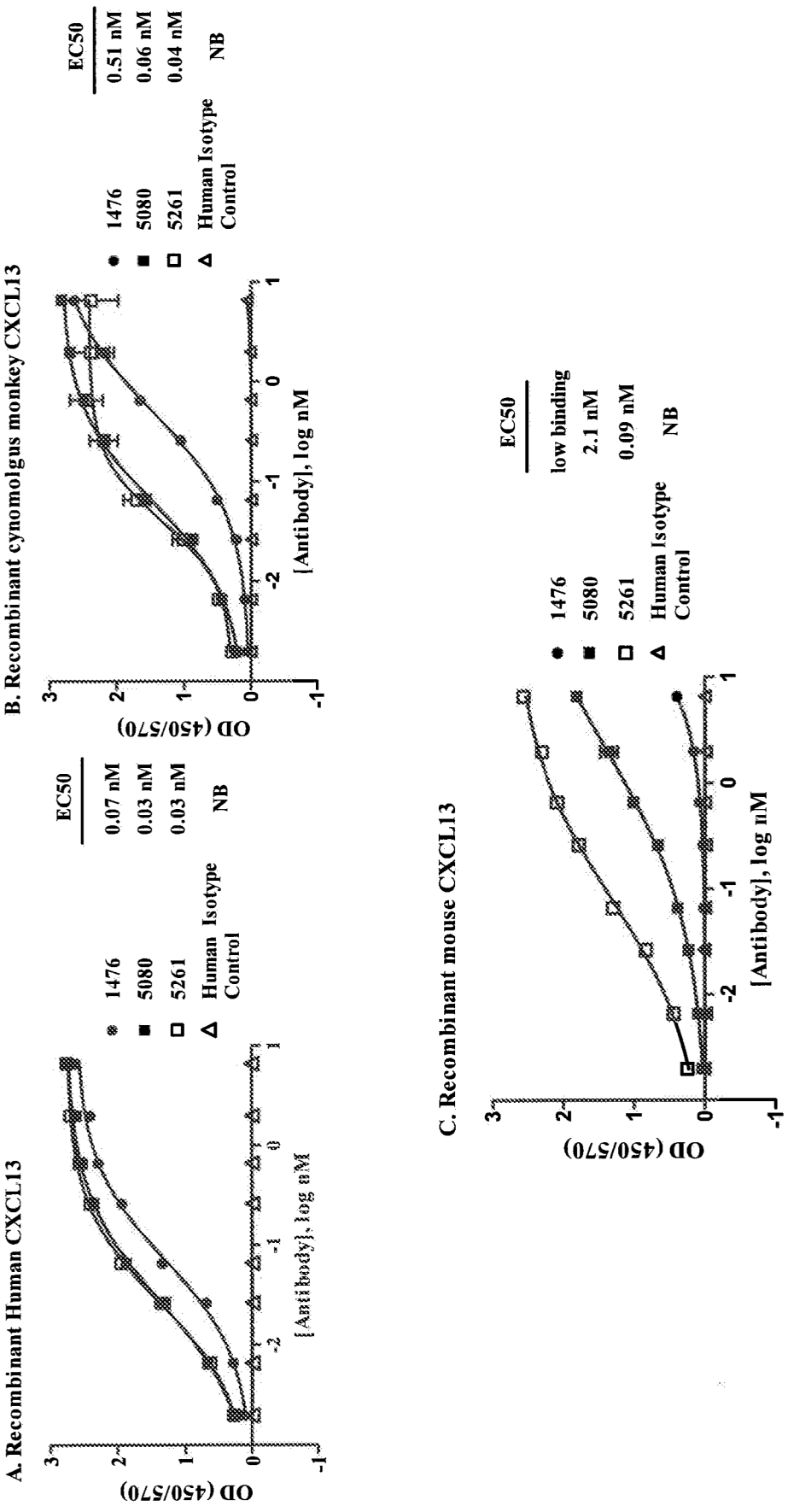

A. Recombinant Human CXCL13
OD (450/570)
[Antibody], log nM
1476
5080
5261
Human Isotype Control
EC50
0.07 nM
0.03 nM
0.03 nM
NB
B. Recombinant cynomolgus monkey CXCL13
OD (450/570)
[Antibody], log nM
1476
5080
5261
Human Isotype Control
EC50
0.51 nM
0.06 nM
0.04 nM
NB
C. Recombinant mouse CXCL13
OD (450/570)
[Antibody], log nM
1476
5080
5261
Human Isotype Control
EC50
low binding
2.1 nM
0.09 nM
NB

FIG. 16

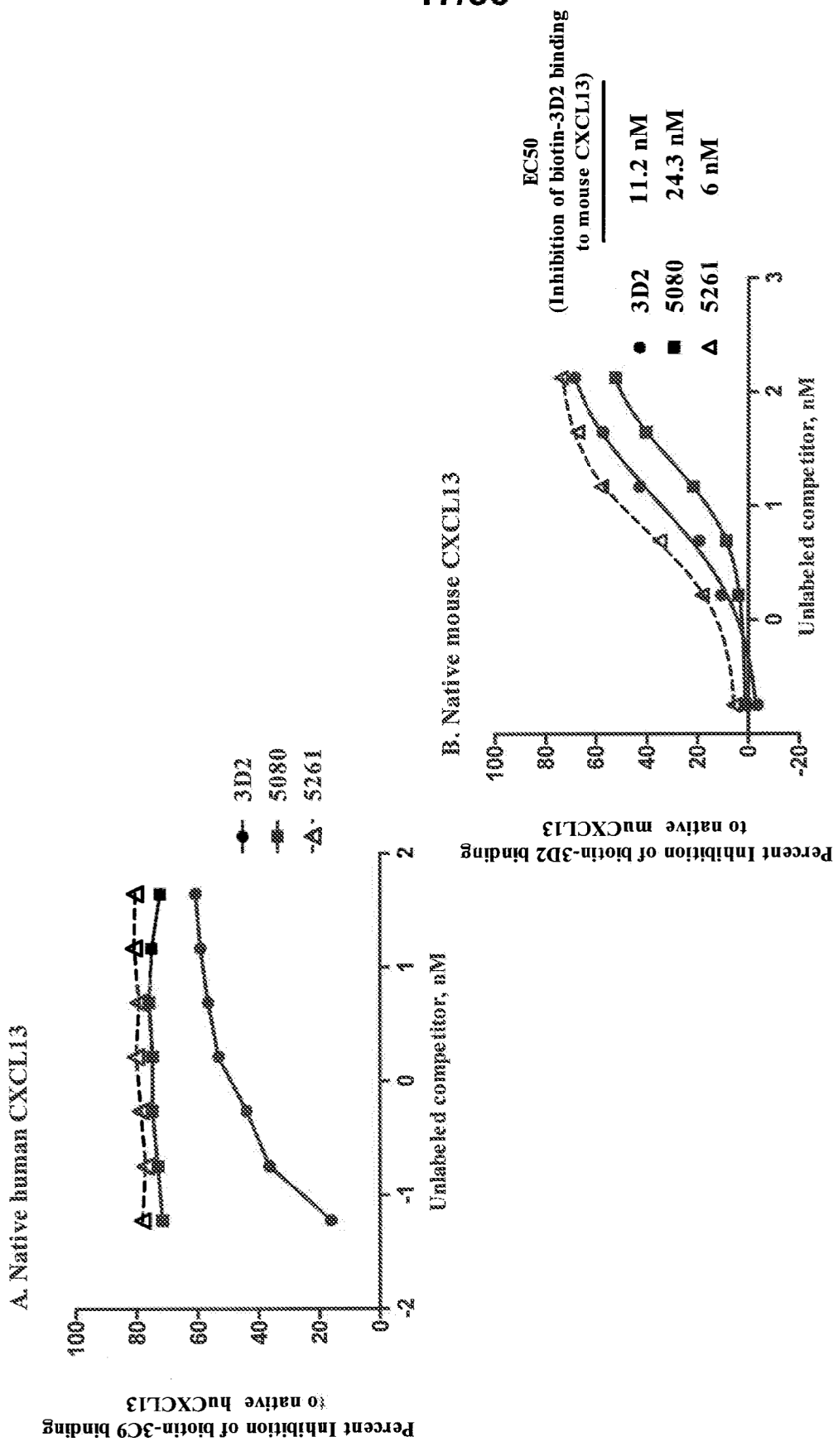

A. Native human CXCL13
Percent Inhibition of biotin-3C9 binding to native huCXCL13
Unlabeled competitor, nM
3D2
5080
5261
B. Native mouse CXCL13
Percent Inhibition of biotin-3D2 binding to native muCXCL13
Unlabeled competitor, nM
EC50
(Inhibition of biotin-3D2 binding to mouse CXCL13)
3D2 11.2 nM
5080 24.3 nM
5261 6 nM

FIG. 17

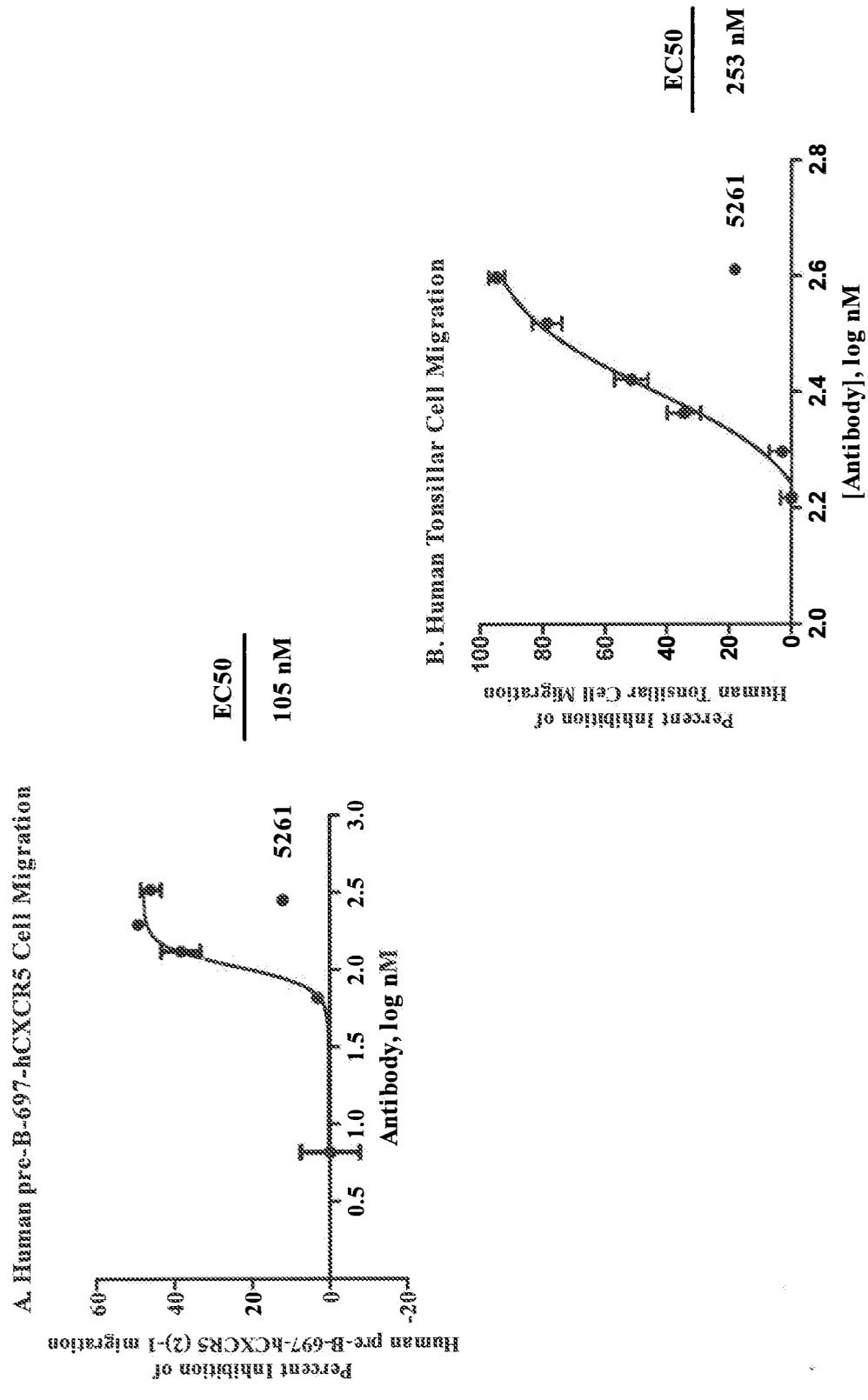

A. Human pre-B-697-hCXCR5 Cell Migration
Percent Inhibition of human pre-B-697-hCXCR5 (2)-1 migration
60
40
20
0
-20
0.5
1.0
1.5
2.0
2.5
3.0
Antibody, log nM
5261
EC50
105 nM
B. Human Tonsillar Cell Migration
Percent Inhibition of Human Tonsillar Cell Migration
100
80
60
40
20
0
2.0
2.2
2.4
2.6
2.8
[Antibody], log nM
5261
EC50
253 nM

FIG. 18

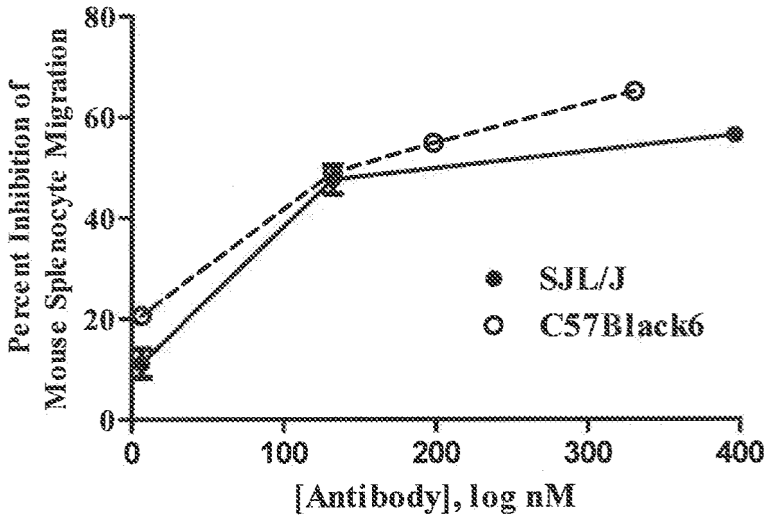

Percent Inhibition of Mouse Splenocyte Migration
80
60
40
20
0
0
100
200
300
400
[Antibody], log nM
SJL/J
C57Black6

FIG. 19

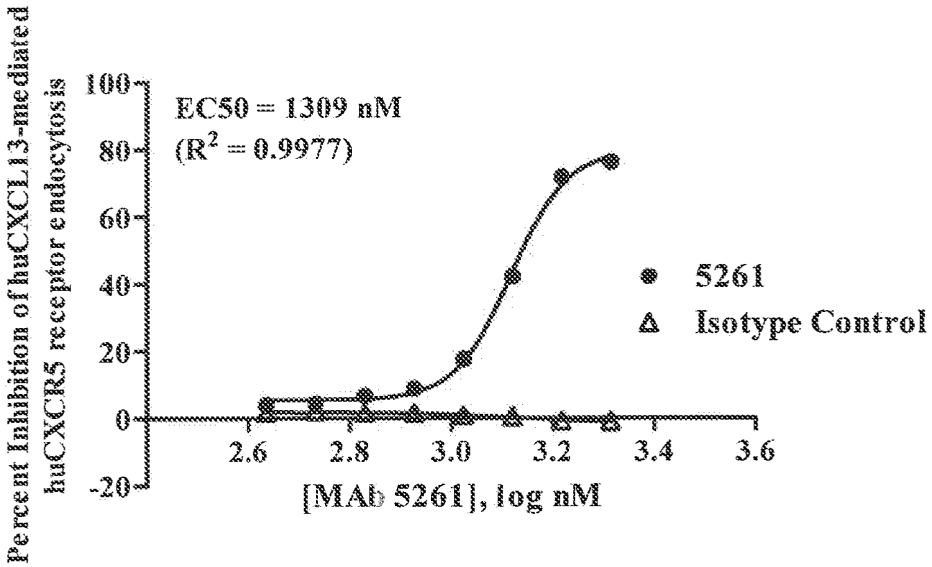

Percent Inhibition of huCXCL13-mediated huCXCR5 receptor endocytosis
100
80
60
40
20
0
-20
EC50 = 1309 nM
(R^2 = 0.9977)
2.6
2.8
3.0
3.2
3.4
3.6
[MAb 5261], log nM
5261
Isotype Control

FIG. 20

H5188 DNA sequence:
CAGGTGCAGCTGCAGGAGAGCGGCCCAGGCCTGGTGAAGCCTAGCGAGACCCTGAGC
CTCACCTGCACCGTCAGCGGCTTTAGCCTGAGCACCTTTGGCATGGGCGTGGGCTGGA
TTAGACAGCCTCCAGGCAAGGGCCTGGAGTGGATTGCACACATTTGGTGGGATGATG
ATAGGAGATATAACCCAGCCCTGAAGAGCAGAGTGACCATCAGCAAGGACACCAGC
AAGAACCAGTTCAGCCTGAAGCTGAGCAGCGTGACCGCTGCCGACACCGCCGTGTAT
TACTGTGCCAGAATCGCCGGCTATTATGGCAGCAGAGACTGGTTTGCCTACTGGGGCC
AAGGCACCACGGTCAC CGTCTCCTCA (SEQ ID NO: 12)

H5188 Amino Acid sequence:
QVQLQESGPGLVKPSETLSLTCTVSGFSLSTFGMGVGWIRQPPGKGLEWIAHIWWDDDRR
YNPALKSRVTISKDTSKNQFSLKLSSVTAADTAVYYCARIAGYYGSRDWFAYWGQGTTV
TVSS (SEQ ID NO: 13)

L5153: DNA sequence
GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTGGGAGACAGAGTCA
CCATCACTTGCAGAGCCAGCGAAAGTGTTGATAATATGGGCATTAGTTTTATGCACTG
GTATCAGCAGAAACCAGGGAAAGCCCCTAAGCTCCTGATCTTTAGAGCATCCGACCT
GGAATCTGGGGTCCCATCAAGGTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTC
ACCATCAGCAGTCTGCAACCTGAAGATTTTGCAACTTACTACTGTCAGCAAAGTAATA
AGGATCCCTGGACCTTCGGCCAAGGGACCAAGCTCGAGATCAAA (SEQ ID NO: 14)

L5153 Amino Acid sequence:
DIQMTQSPSSLSASVGDRVTITCRASESVDNMGISFMHWYQQKPGKAPKLLIFRASDLESG
VPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSNKDPWTFGQGTKLEIK (SEQ ID NO: 15)

FIG. 21

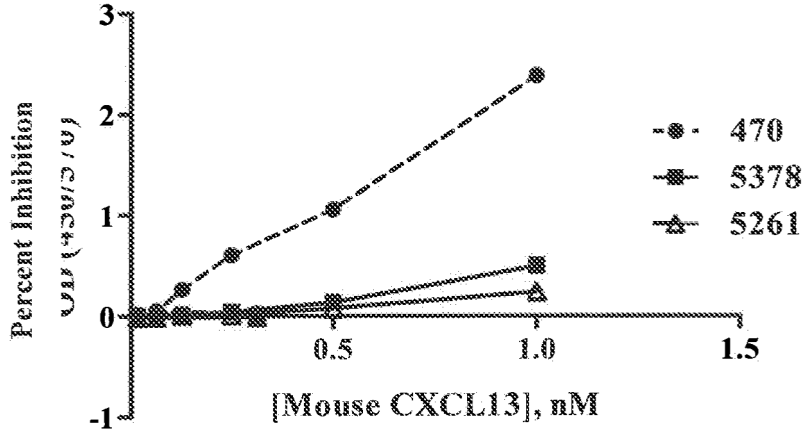


FIG. 22

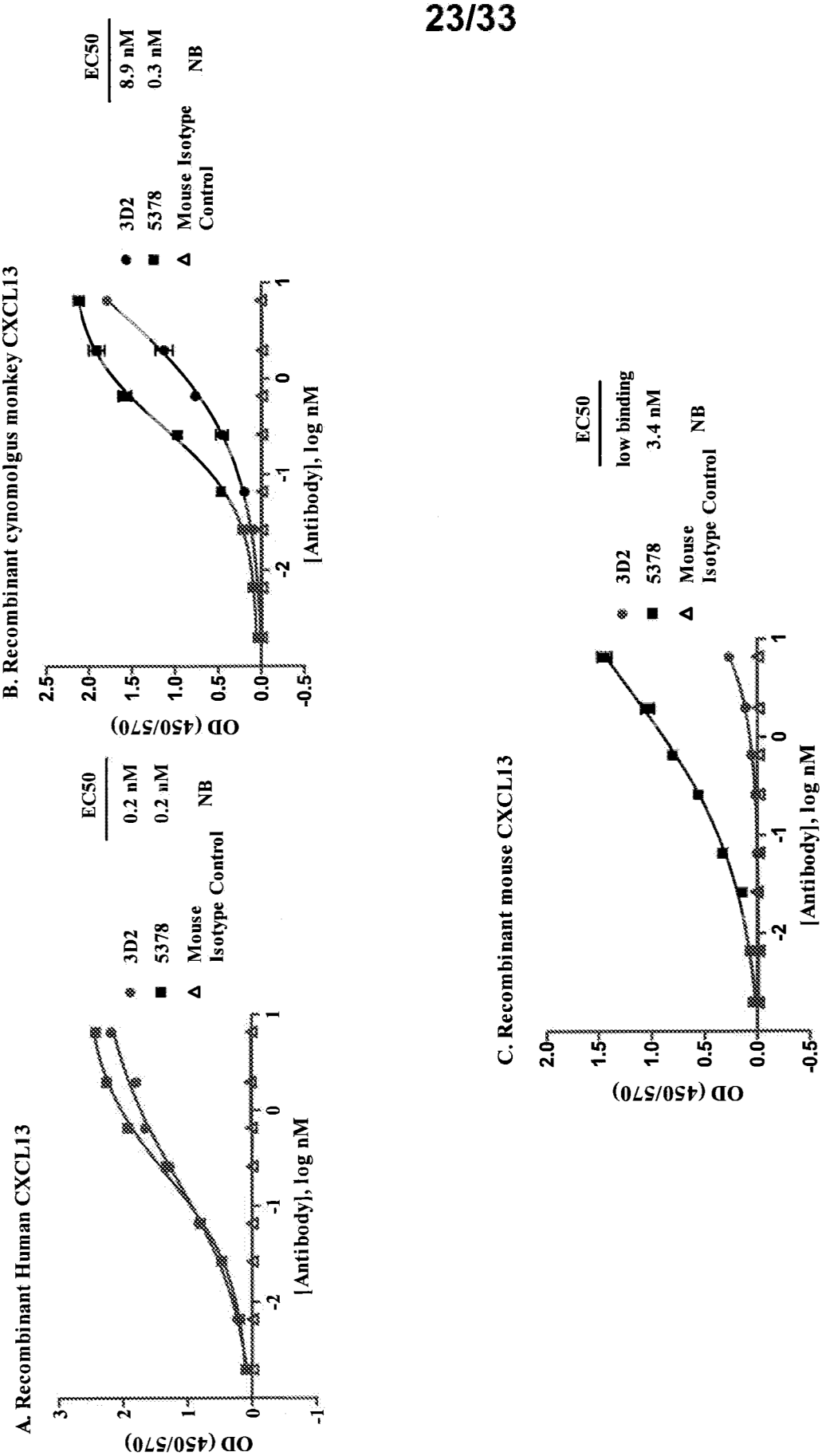

A. Recombinant Human CXCL13
OD (450/570)
[Antibody], log nM
3D2
5378
Mouse Isotype Control
EC50
0.2 nM
0.2 nM
NB
B. Recombinant cynomolgus monkey CXCL13
OD (450/570)
[Antibody], log nM
3D2
5378
Mouse Isotype Control
EC50
8.9 nM
0.3 nM
NB
C. Recombinant mouse CXCL13
OD (450/570)
[Antibody], log nM
3D2
5378
Mouse Isotype Control
EC50
low binding
3.4 nM
NB

FIG. 23

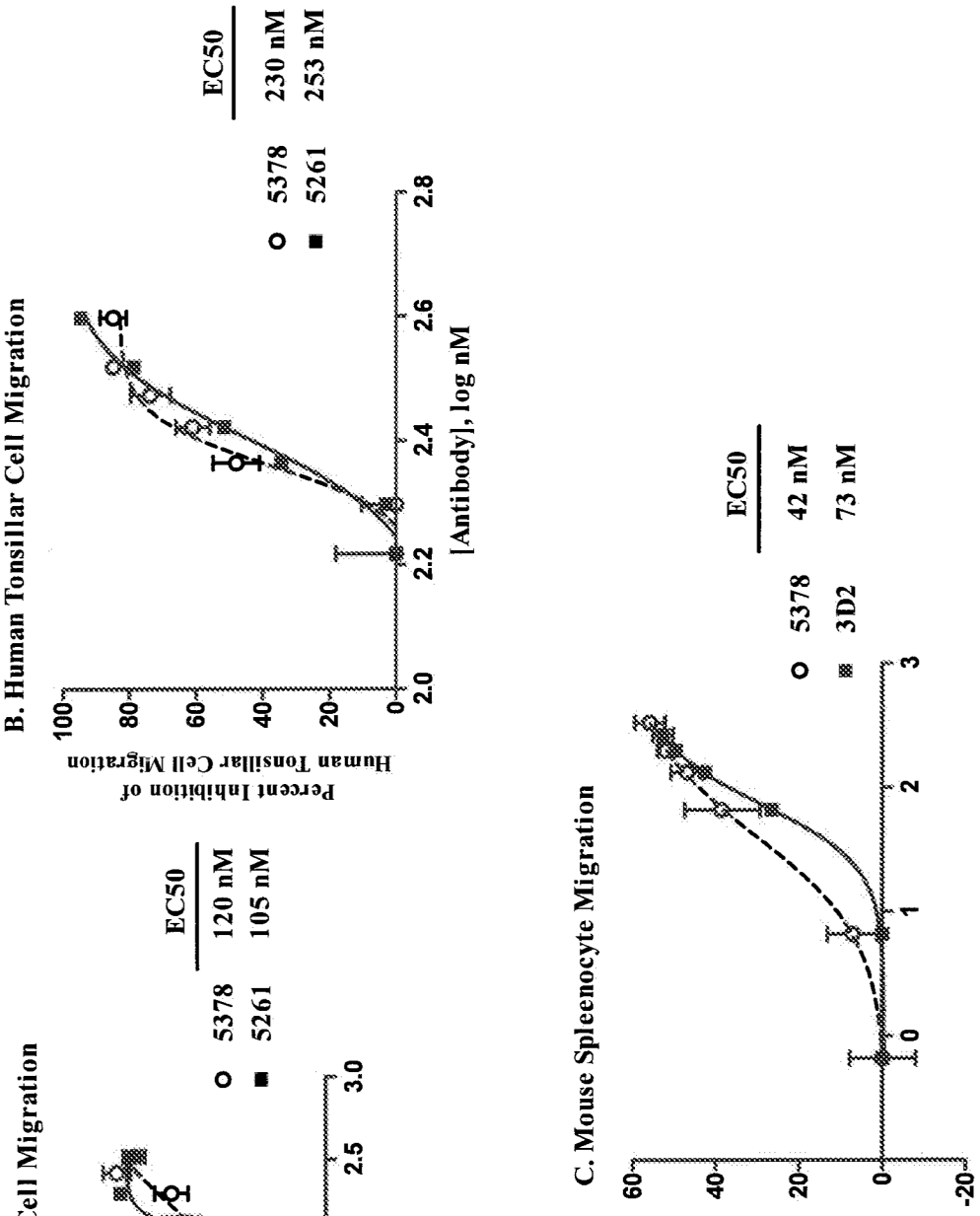
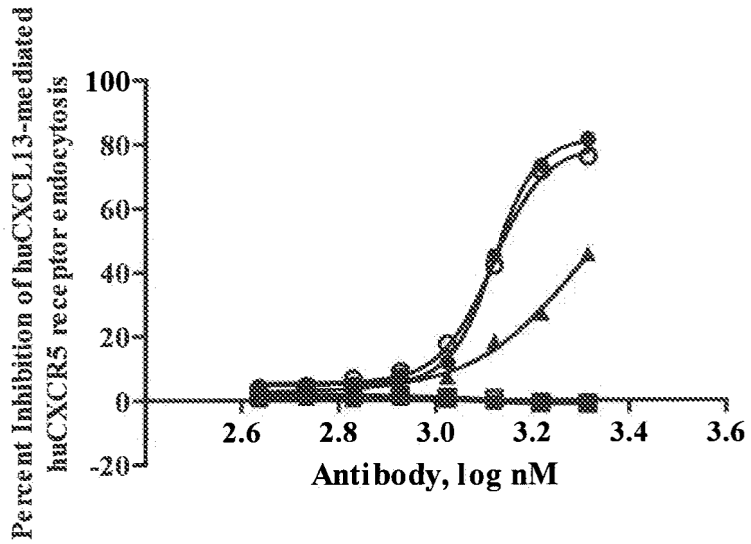

A. Human pre-B-697-hCXCR5 Cell Migration
Percent Inhibition of Human pre-B-697-hCXCR5 (2)-1 migration
Antibody, log nM
EC50
5378 120 nM
5261 105 nM
B. Human Tonsillar Cell Migration
Percent Inhibition of Human Tonsillar Cell Migration
[Antibody], log nM
EC50
5378 230 nM
5261 253 nM
C. Mouse Splenocyte Migration
EC50
5378 42 nM
3D2 73 nM

FIG. 24



	EC50
5378	1313 nM
5261	1309 nM
3D2	2068 nM
Mouse Isotype Control	NE
Human Isotype Control	NE

FIG. 25

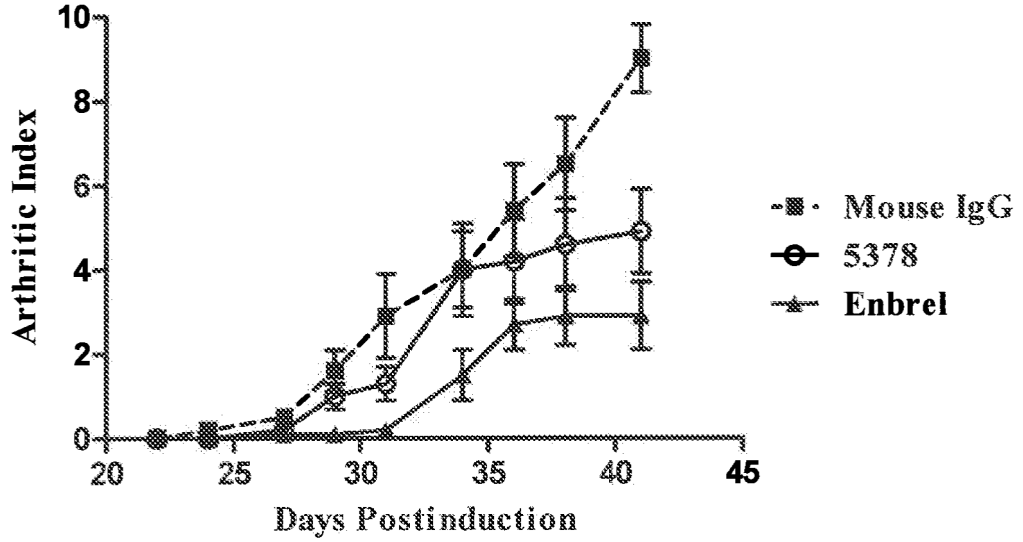

Arthritic Index
10
8
6
4
2
0
20
25
30
35
40
45
Days Postinduction
Mouse IgG
5378
Enbrel

FIG. 26

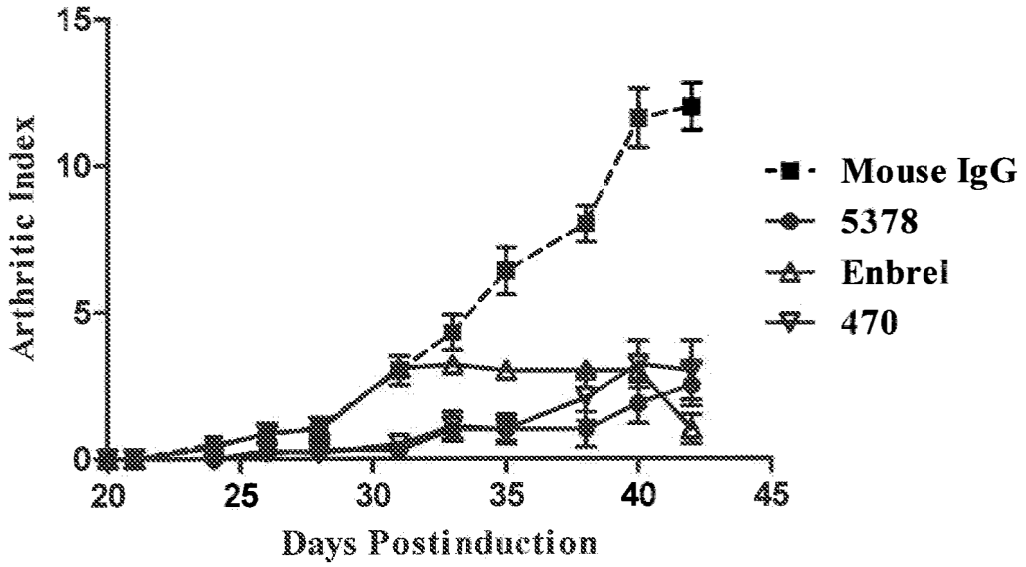

Arthritic Index
15
10
5
0
20
25
30
35
40
45
Days Postinduction
Mouse IgG
5378
Enbrel
470

FIG. 27

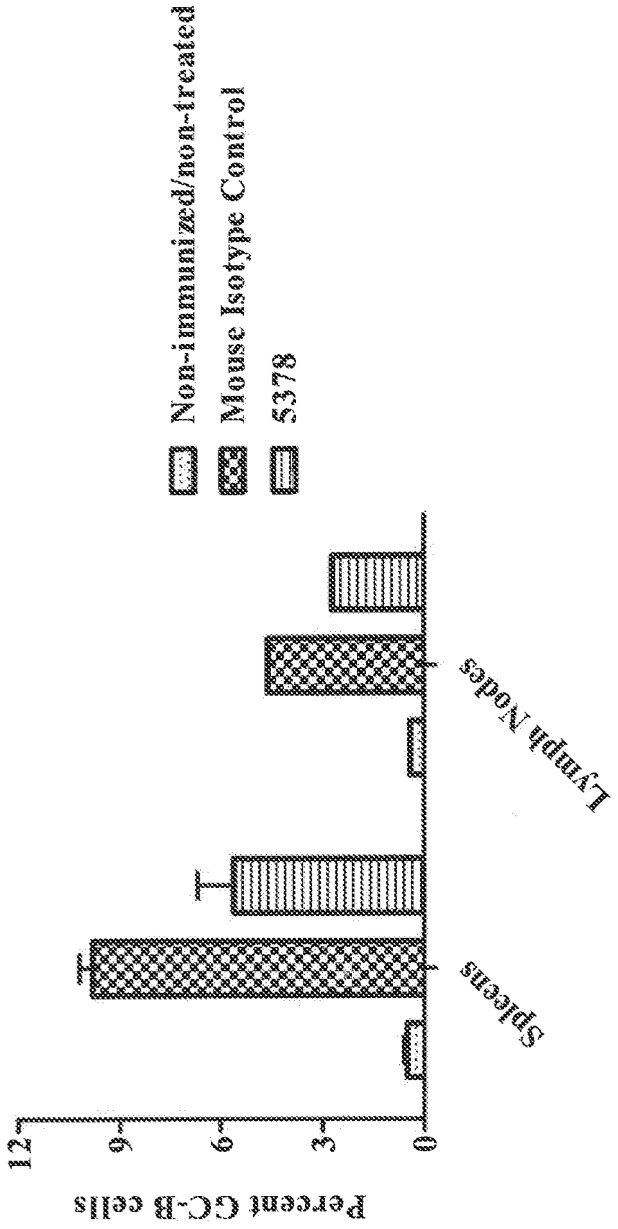

Non-immunized/non-treated
Mouse Isotype Control
5378
Percent GC-B cells
12
9
6
3
0
Spleens
Lymph Nodes

FIG. 28

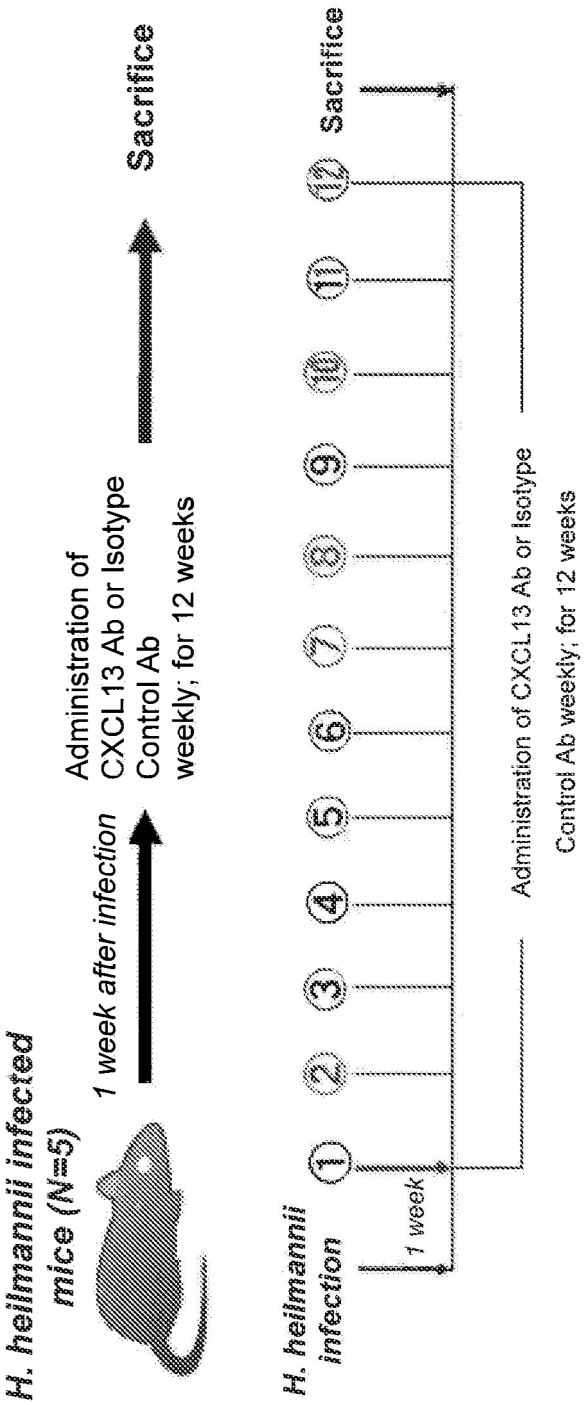

H. heilmannii infected mice (N=5)
1 week after infection
Administration of CXCL13 Ab or Isotype Control Ab weekly; for 12 weeks
Sacrifice
H. heilmannii infection
1 week
1
2
3
4
5
6
7
8
9
10
11
12
Sacrifice
Administration of CXCL13 Ab or Isotype Control Ab weekly; for 12 weeks

FIG. 29

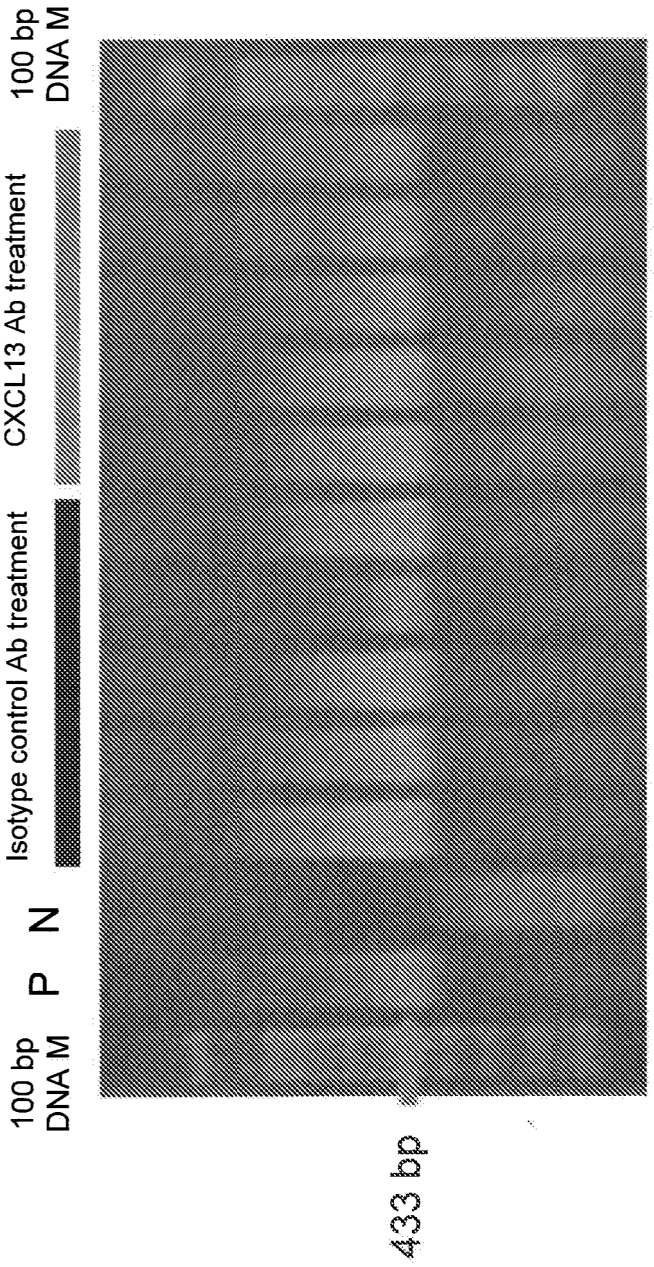

100 bp DNA M
P
N
Isotype control Ab treatment
CXCL13 Ab treatment
100 bp DNA M
433 bp

FIG. 30

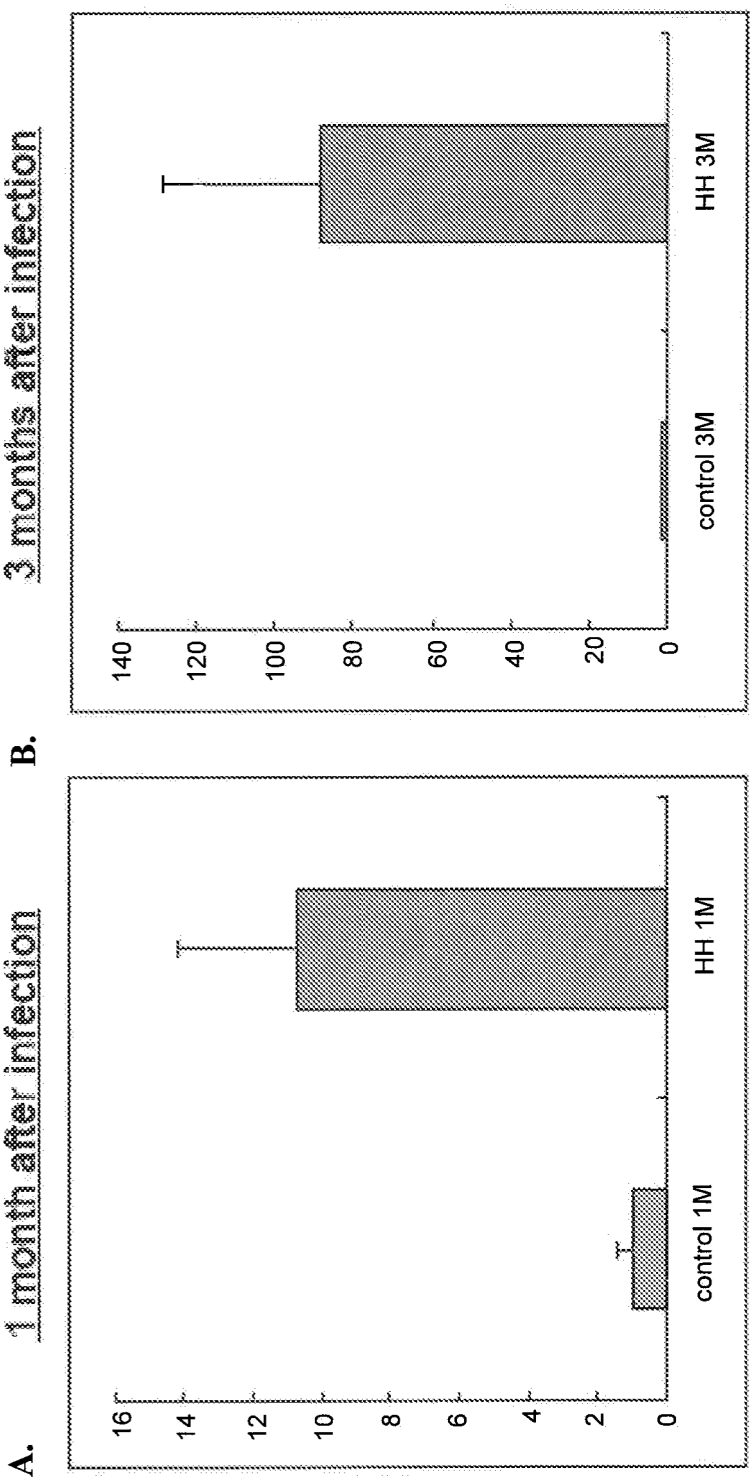

A.
1 month after infection
16
14
12
10
8
6
4
2
0
HH 1M
control 1M
B.
3 months after infection
140
120
100
80
60
40
20
0
HH 3M
control 3M

FIG. 31

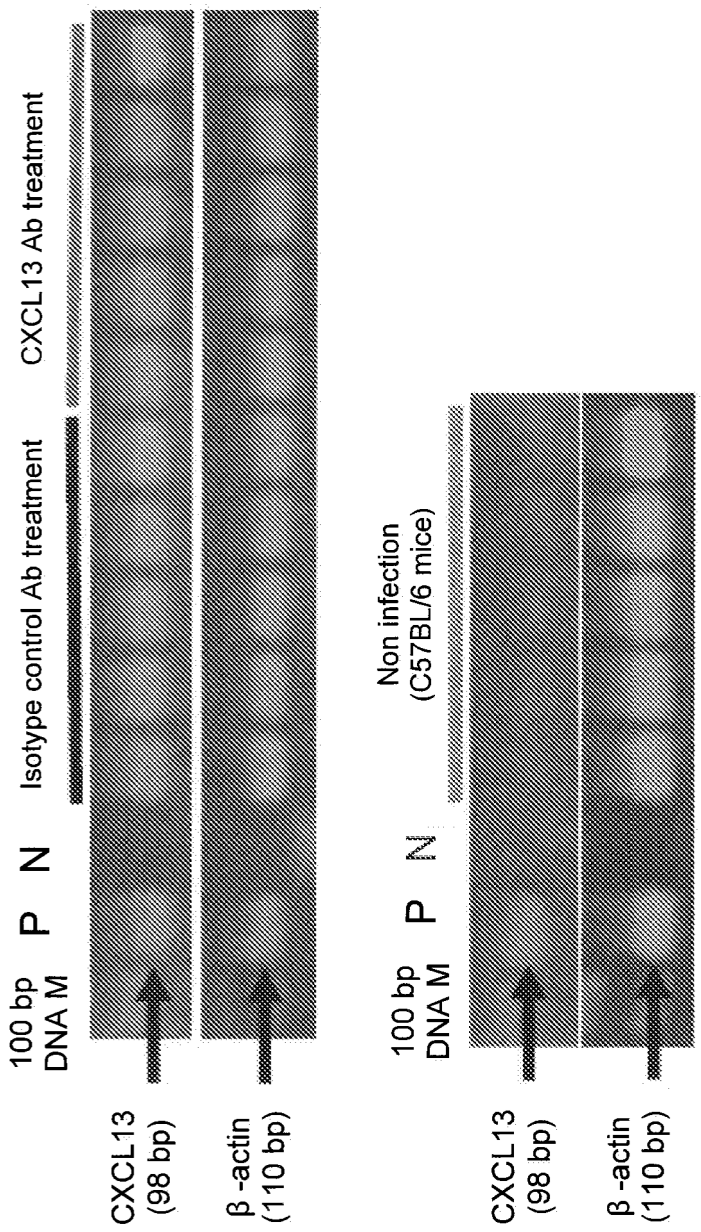

100 bp DNA M
P
N
Isotype control Ab treatment
CXCL13 Ab treatment
CXCL13 (98 bp)
β -actin (110 bp)
Non infection (C57BL/6 mice)
100 bp DNA M
P
N
CXCL13 (98 bp)
β -actin (110 bp)

FIG. 32

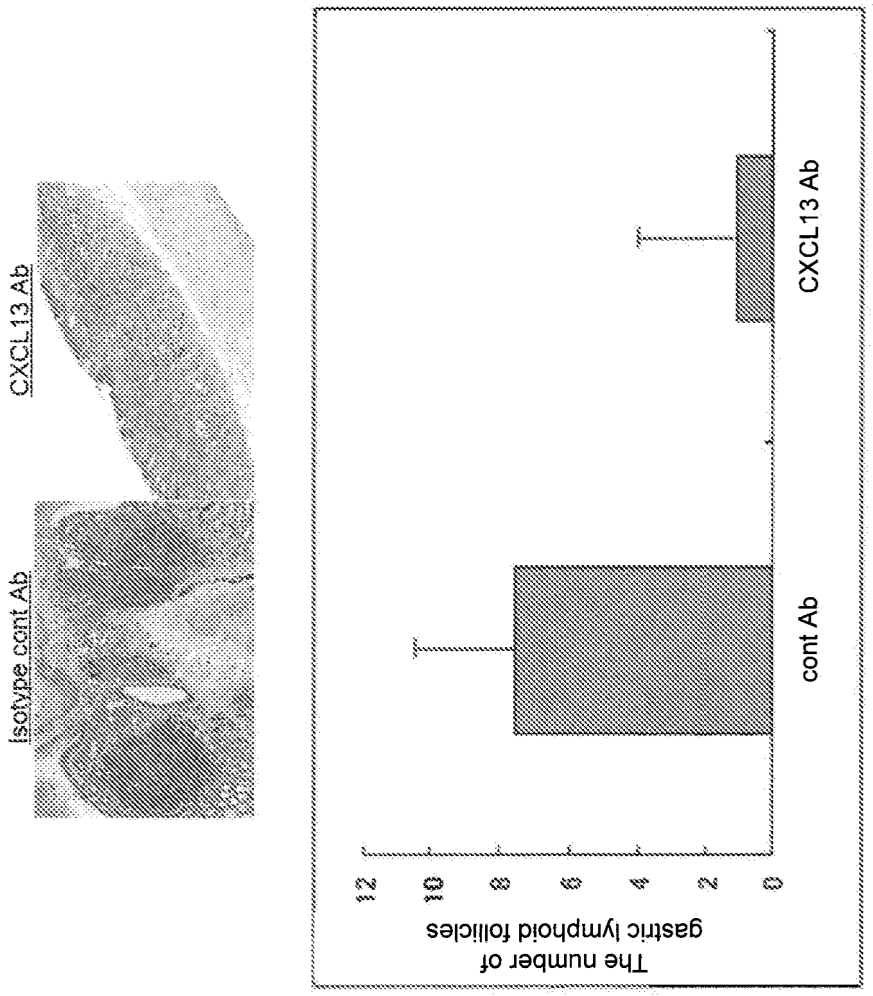

Isotype cont Ab
CXCL13 Ab
The number of gastric lymphoid follicles
0
2
4
6
8
10
12
cont Ab
CXCL13 Ab

FIG. 33