

Figure 1A

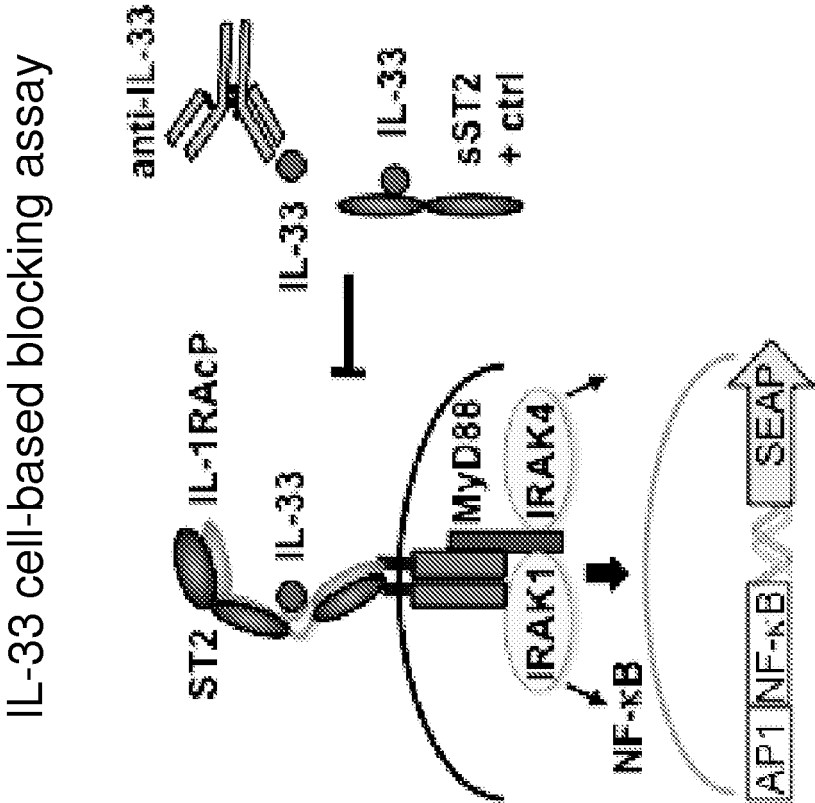
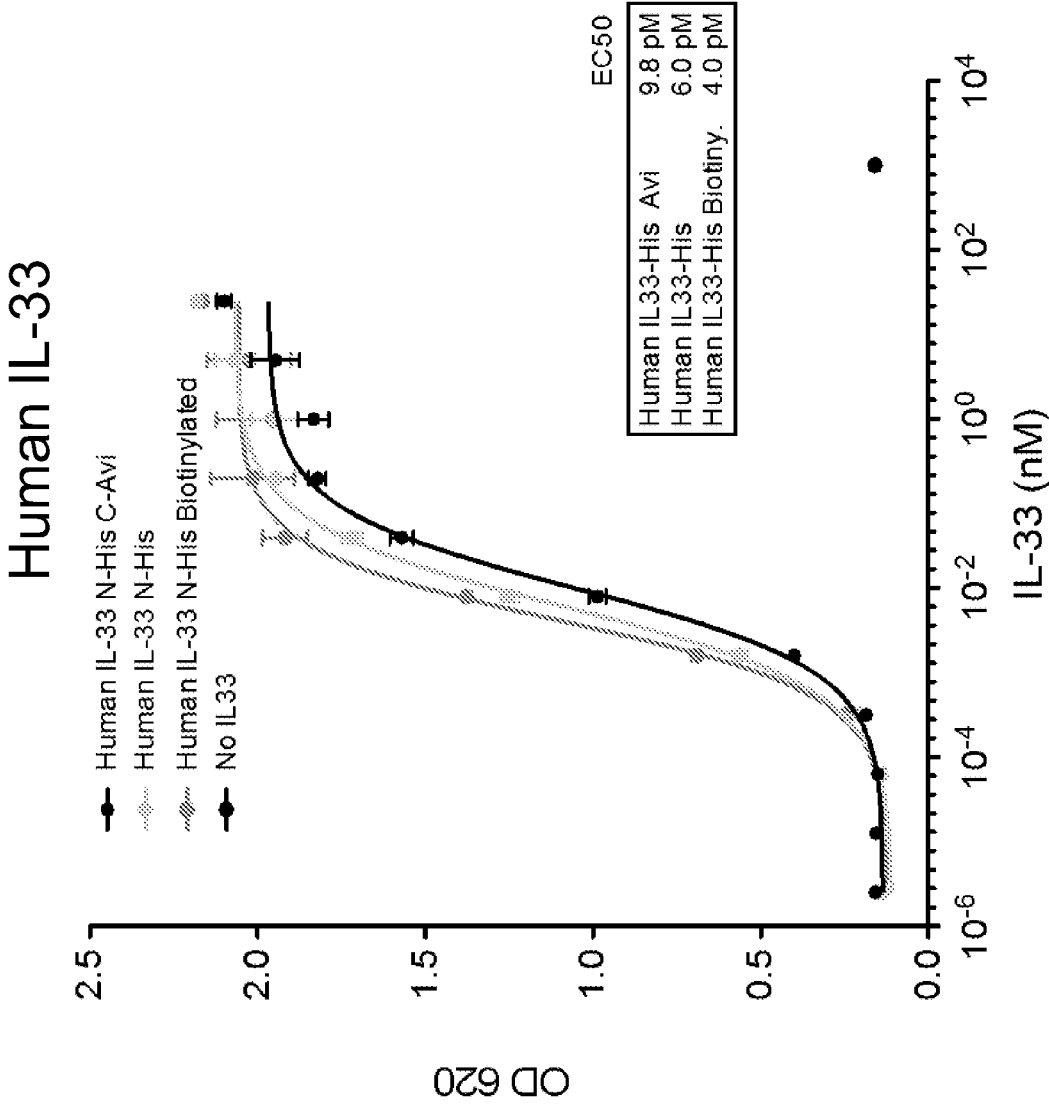


Figure 1B



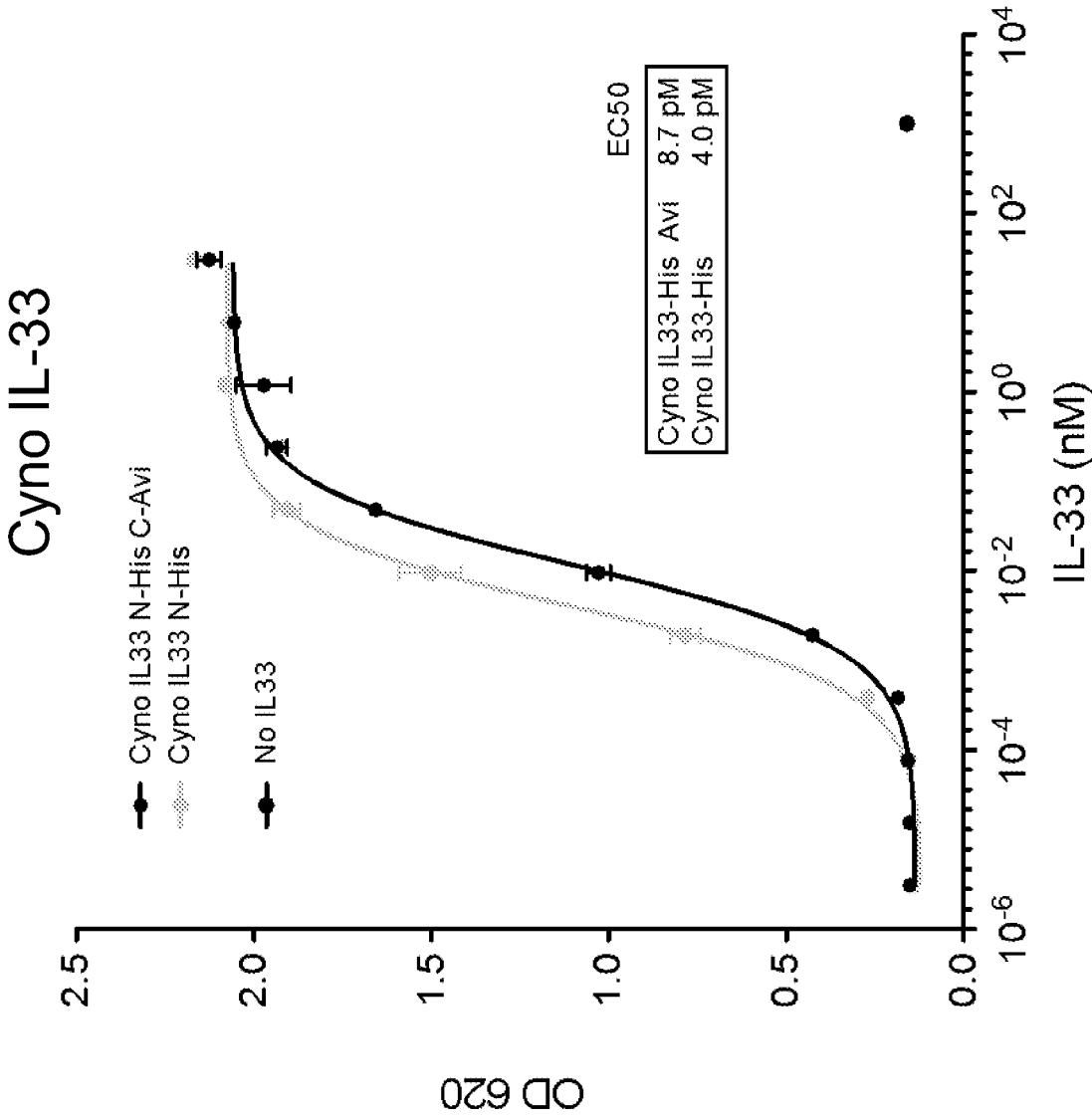


Figure 1C

Figure 2

IL-33 Blocking Activity of Selected Anti-IL-33 Clones
15 pM hu IL-33 (300 pg/ml)

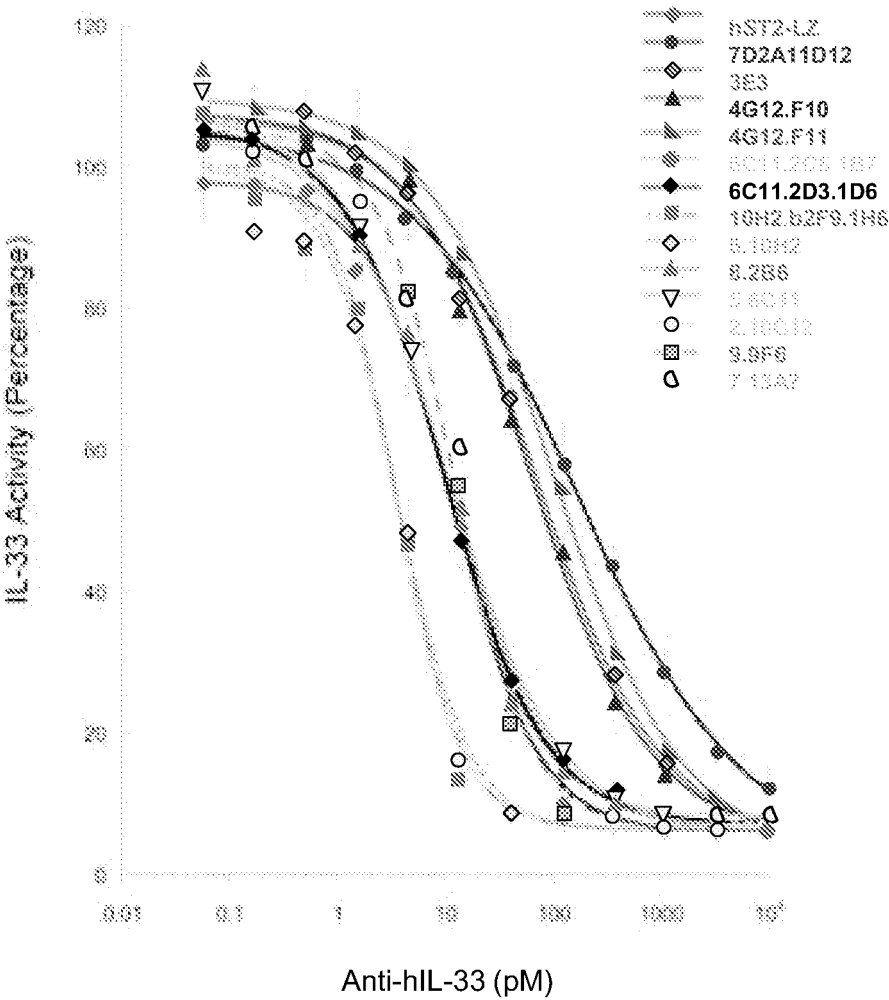
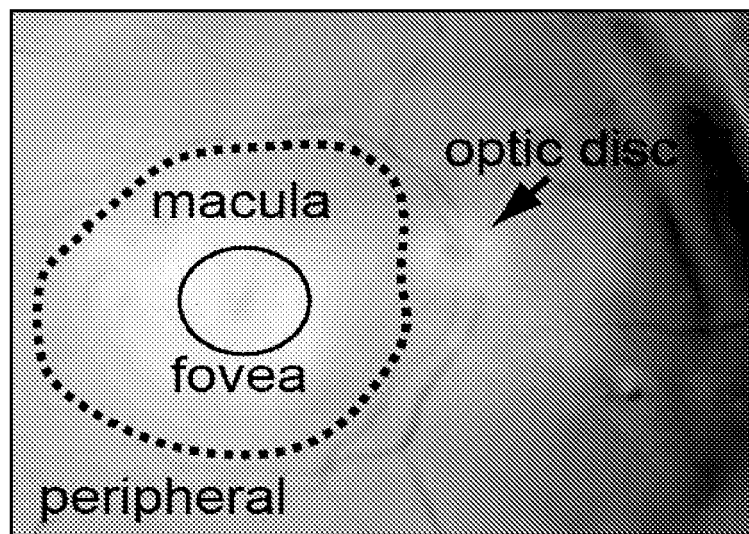


Figure 3

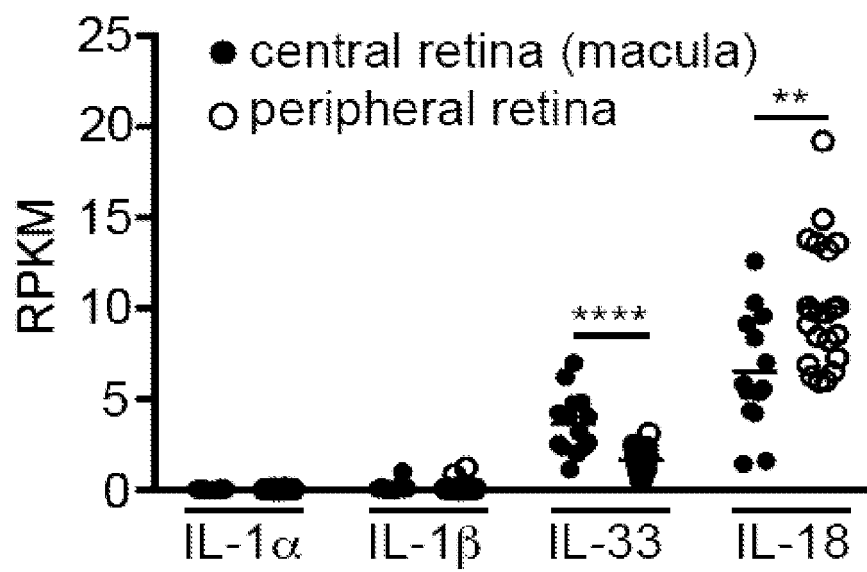
antiIL-33	Hu IL-33 IC ₅₀ (pM)	Hu IL-33 IC ₅₀ (pM)	Hu IL-33 IC ₅₀ (log/mL)	Cyno IL-33 IC ₅₀ (pM)	Cyno IL-33 IC ₅₀ (pM)	Cyno IL-33 IC ₅₀ (log/mL)
h5T2-LZ	12.2	46.7		1.8	3.6	
10C12 Mouse Version	3.9	18.2	0.0027	141.0	1289.0	0.1934
10C12 36 H7 HC 62A	2.7	7.7	0.0012	43.5	435.5	0.0653
10C12 36 H7 HC 100Y	>10000	>10000	>1.5	>10000	>10000	>1.5
10C12 36 H7 HC 34L	2.5	8.0	0.0012	39.5	592.9	0.0489
10C12 36 H7 HC 100F	121.3	1625.0	0.2438	>10000	>10000	>1.5
10C12 36 H7 HC 34V	4.5	20.0	0.0031	89.1	1313.0	0.1970
10C12 36 H7 HC 58I	12.9	182.2	0.0273	134.9	1451.0	0.2377
10C12 36 H7 HC 58I	3.6	33.3	0.0060	50.6	531.8	0.0787
10C12 36 H7 HC 87Y	2.6	17.4	0.0026	119.1	1674.0	0.2531
10C12 36 H7 HC 87Y 58I	2.0	20.5	0.0031	181.9	1217.0	0.1826
10C12 36 H7 HC 58I	3.2	18.8	0.0028	156.6	2289.0	0.3449
10C12 36 H7 87Y	2.7	10.9	0.0016	55.0	583.8	0.0676
10C12 36 H7 87Y 58I	3.4	15.2	0.0023	59.1	1087.0	0.1631
10C12 36 H7 58I	2.1	6.5	0.0010	28.6	374.6	0.0563
10H2 Mouse Version	5.3	33.0	0.0047	17.4	271.0	0.0407
10H2 36 F10 LC34L	3.1	11.0	0.0017	4.2	17.0	0.0035
10H2 36 F10 LC30V	6.5	34.7	0.0062	39.6	1185.0	0.1776
10H2 36 F10 HC54D	6.9	32.5	0.0049	72.2	1531.0	0.2297
10H2 36 F10 HC54S	3.5	13.4	0.0020	24.8	435.7	0.0354
10H2 36 F10 HC59A	2.9	11.5	0.0017	22.9	260.1	0.0300
10H2 36 F10 HC100Y	>10000	>10000	>1.5	>10000	>10000	>1.5
10H2 36 F10 HC13F	4.3	26.8	0.0040	17.6	431.0	0.0647
10H2 36 F10 HC33Y	5.6	77.8	0.0117	62.8	527.1	0.0791
10H2 36 F10 HC54A	9.0	15.1	0.0023	21.5	471.6	0.0707
10H2 36 F10 HC100F	46.7	447.5	0.0671	1168.0	>10000	>1.5
6C11 Mouse Version	21.3	120.4	0.0181	>10000	>10000	>1.5
6C11 36 B2 52CA	18.3	203.5	0.0305	1099.0	>10000	>1.5
6C11 36 B2 52aS	4.9	58.1	0.0067	2153.0	>10000	>1.5
6C11 36 B2 100Y	>10000	>10000	>1.5	>10000	>10000	>1.5
6C11 36 B2 100F	1350.0	>10000	>1.5	6664.0	>10000	>1.5
4G12 parental	60.7	854.2	0.1261	18.3	215.6	0.0323
4G12 100aY	4433.0	>10000	>1.5	1181.0	>10000	>1.5
4G12 100aF	2638.0	>10000	>1.5	2427.0	>10000	>1.5
4G12 62A	94.1	1244.0	0.1866	19.6	93.7	0.0343

Figures 4A-4B

A.

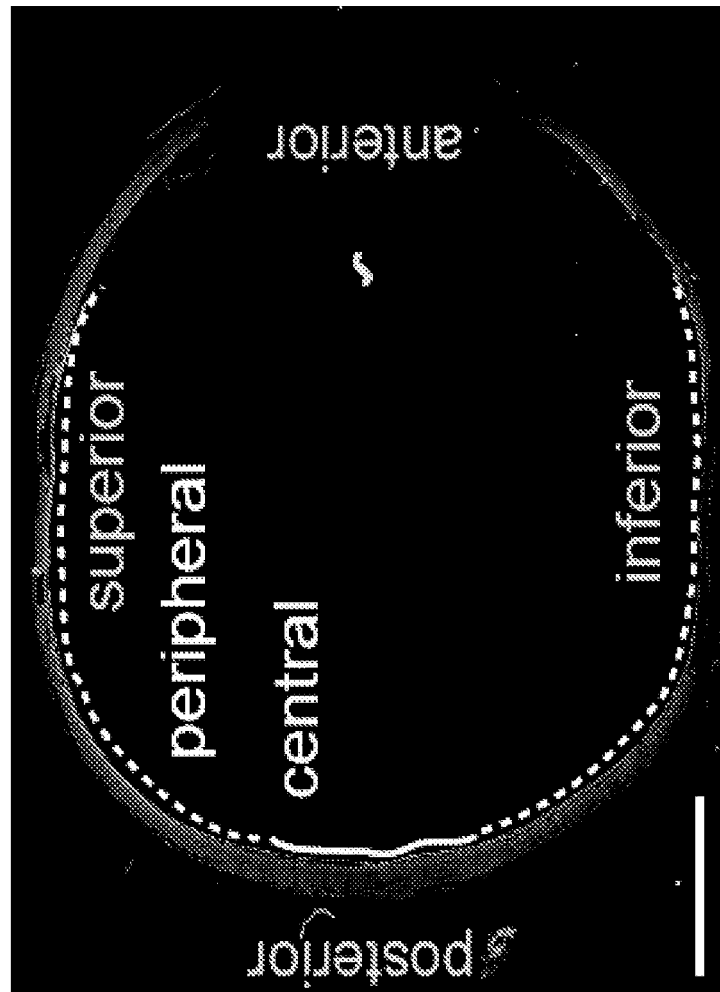


B.

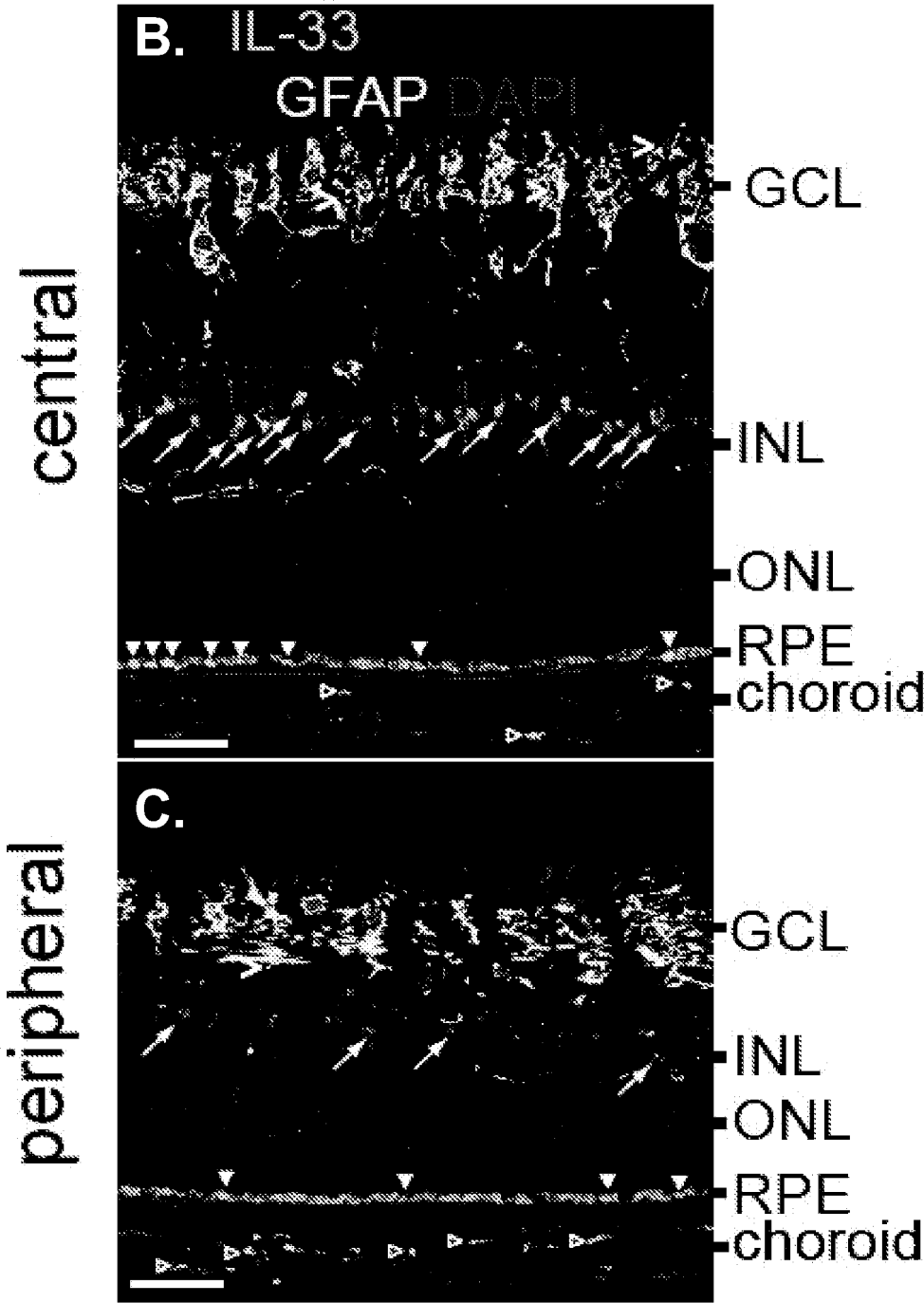


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Figure 5A

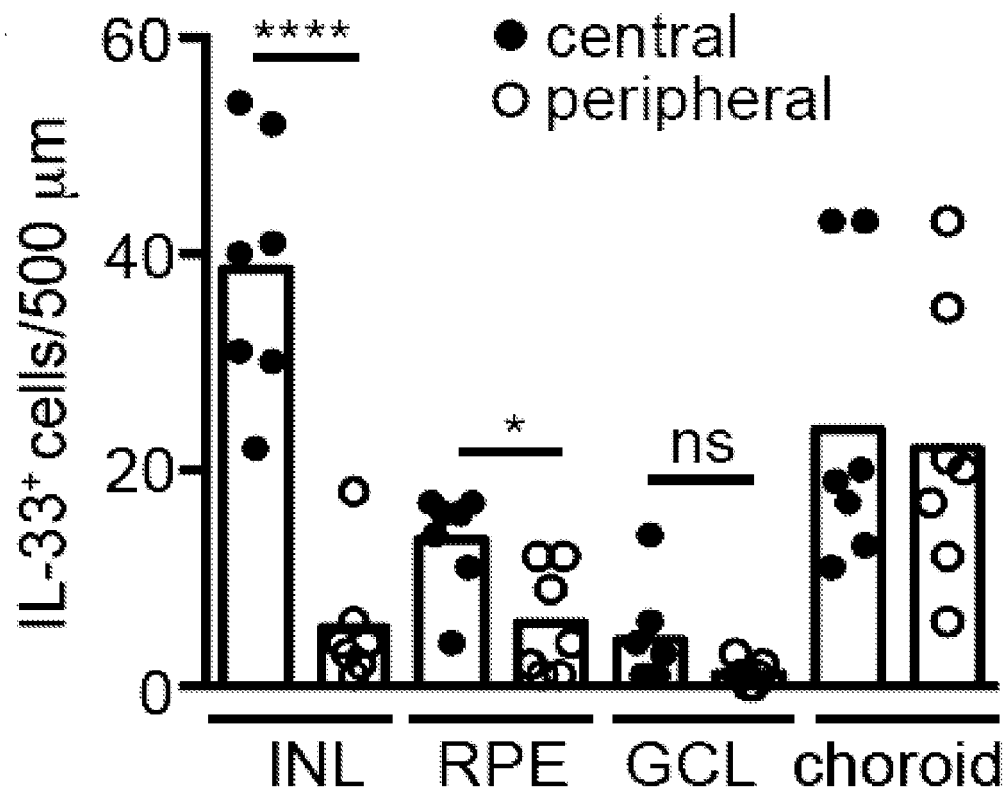


Figures 5B-5C



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Figure 5D



Figures 5E

central

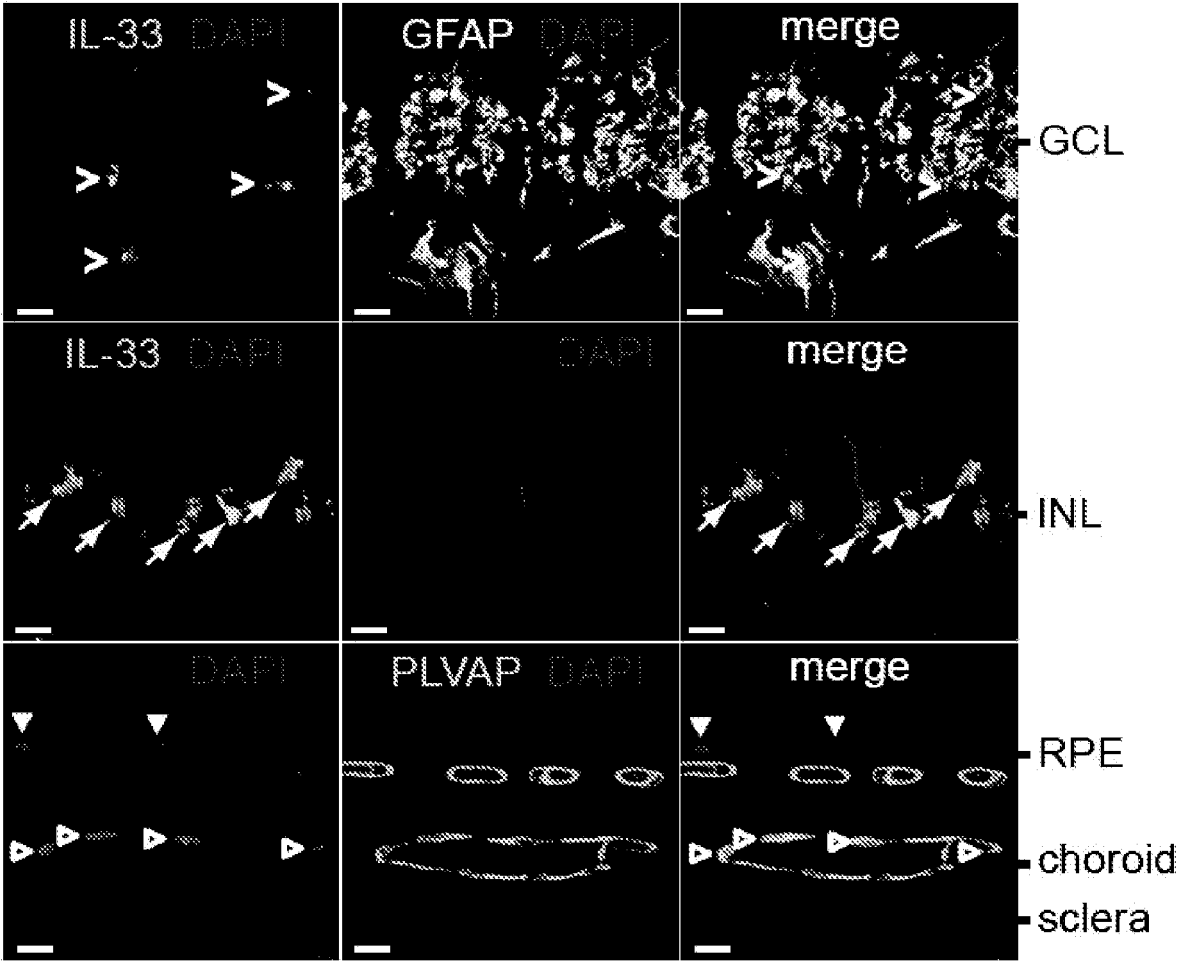


Figure 6A

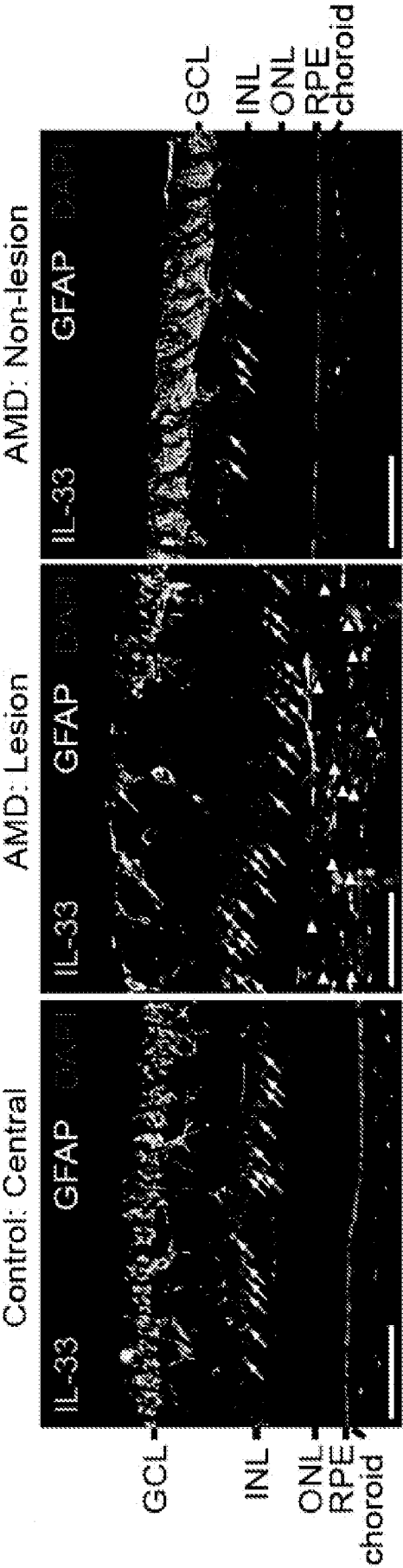
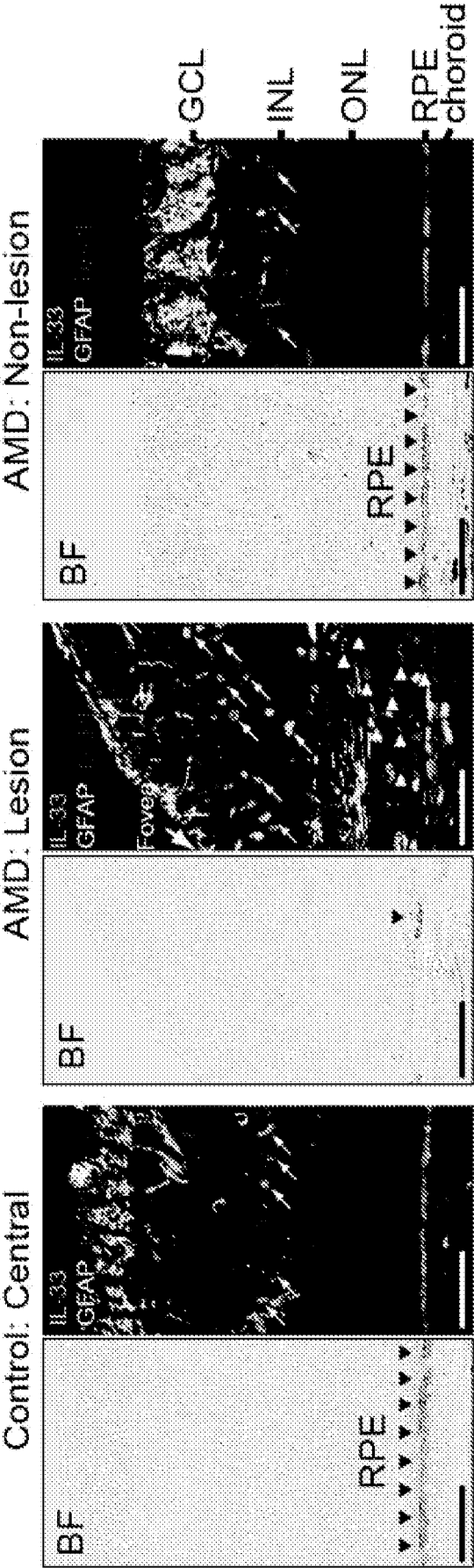
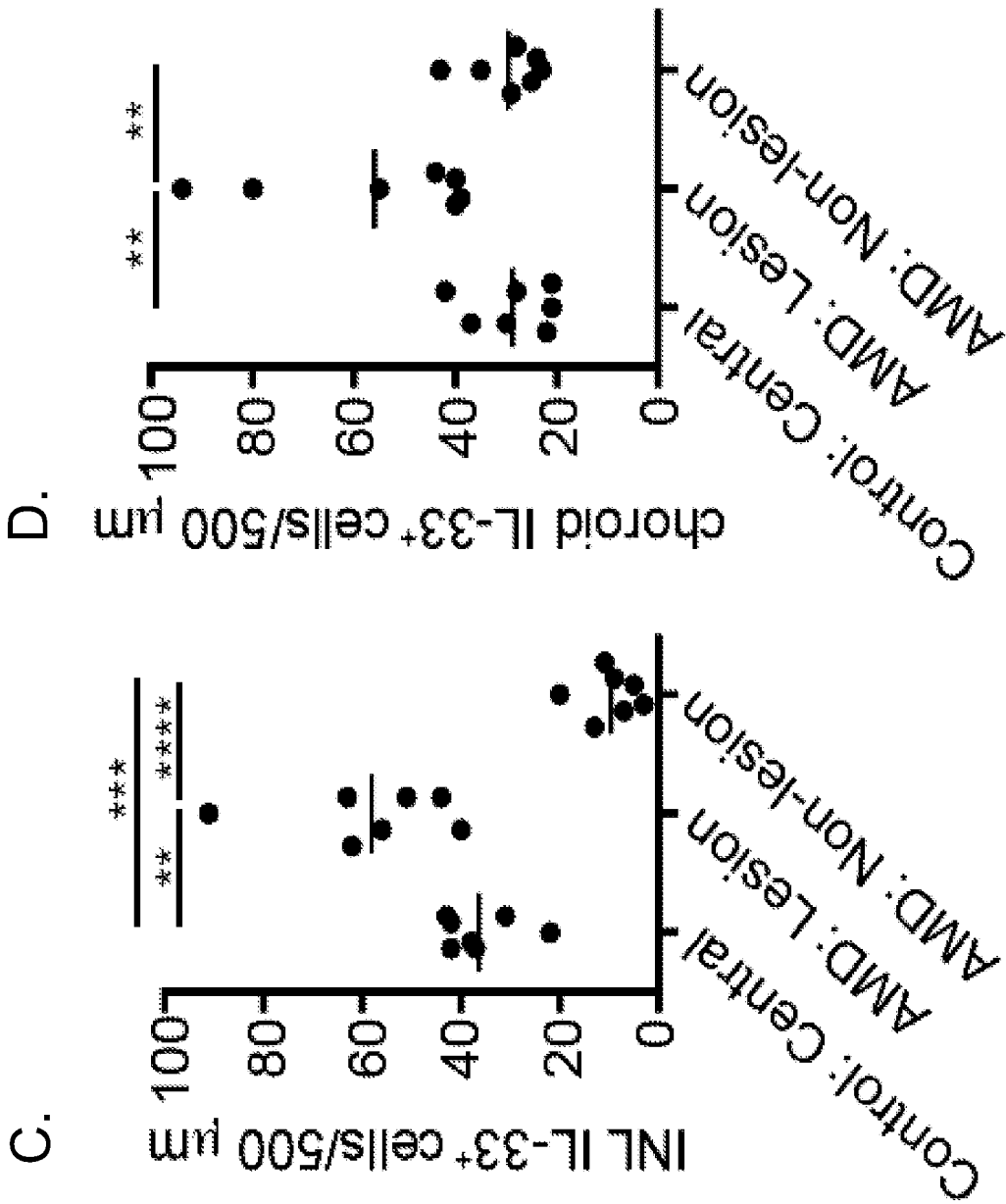


Figure 6B





Figures 6C-6D

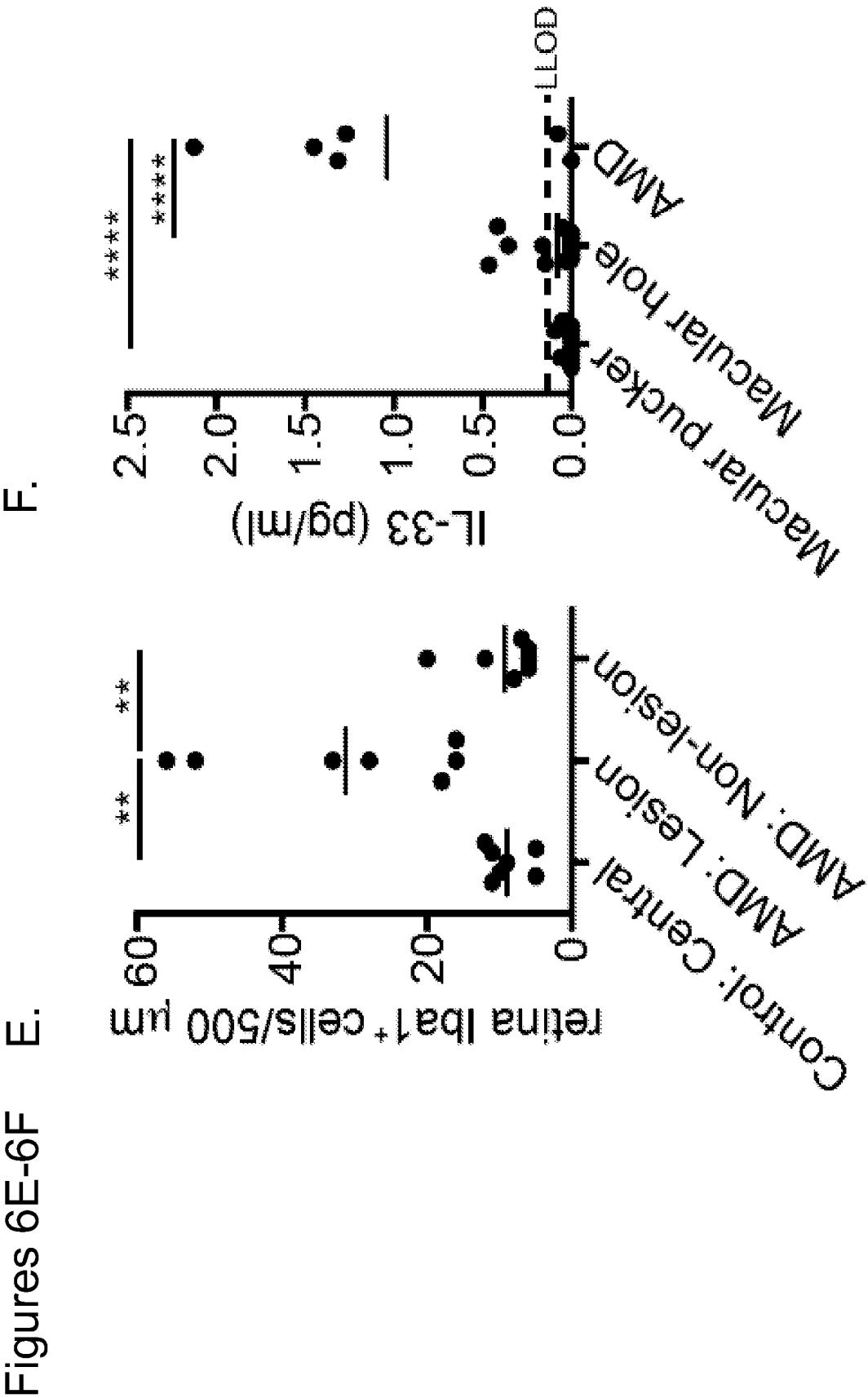


Figure 7A

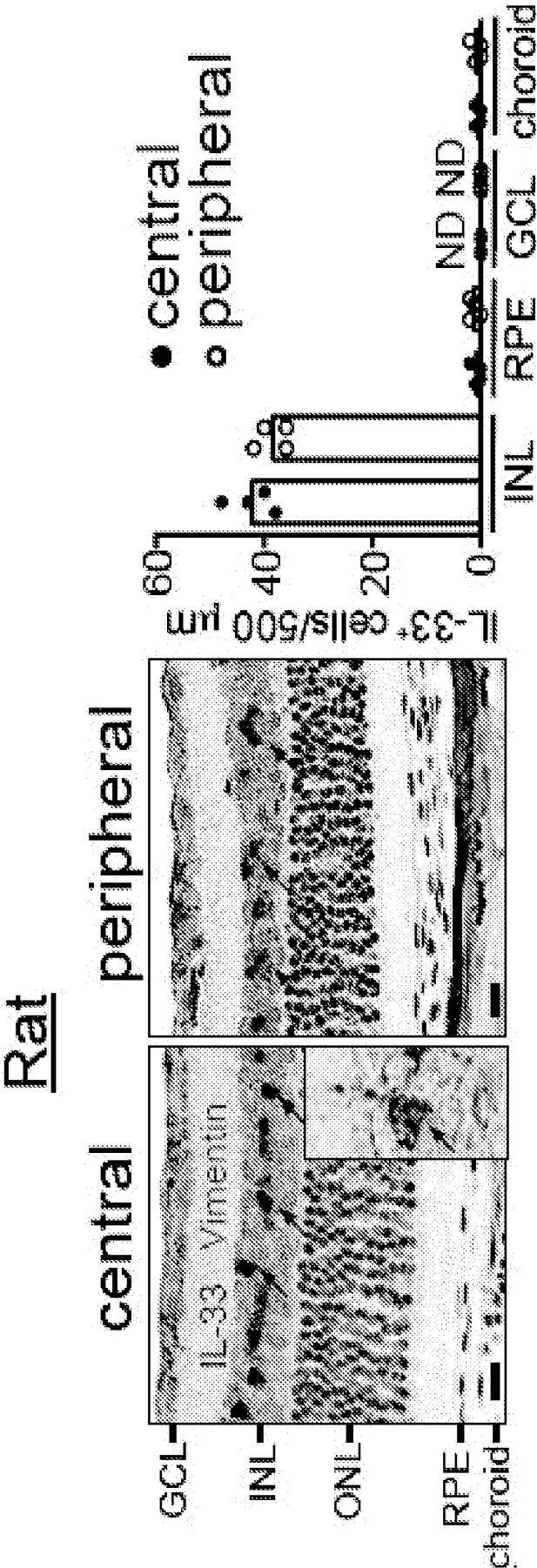


Figure 7B

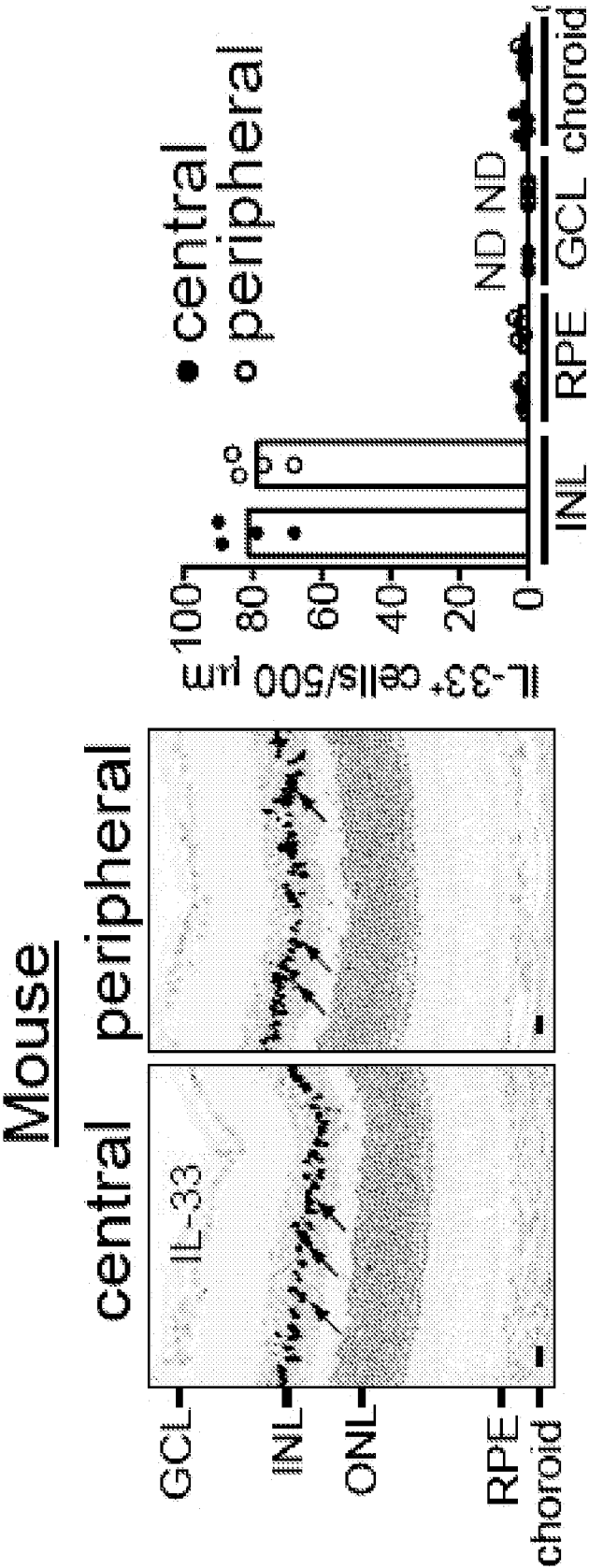


Figure 7C

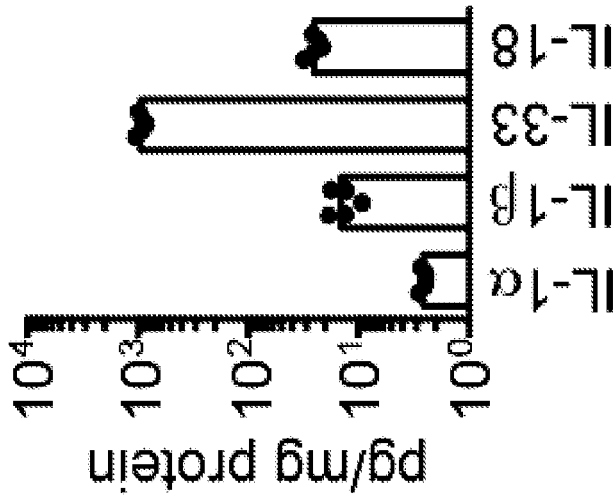
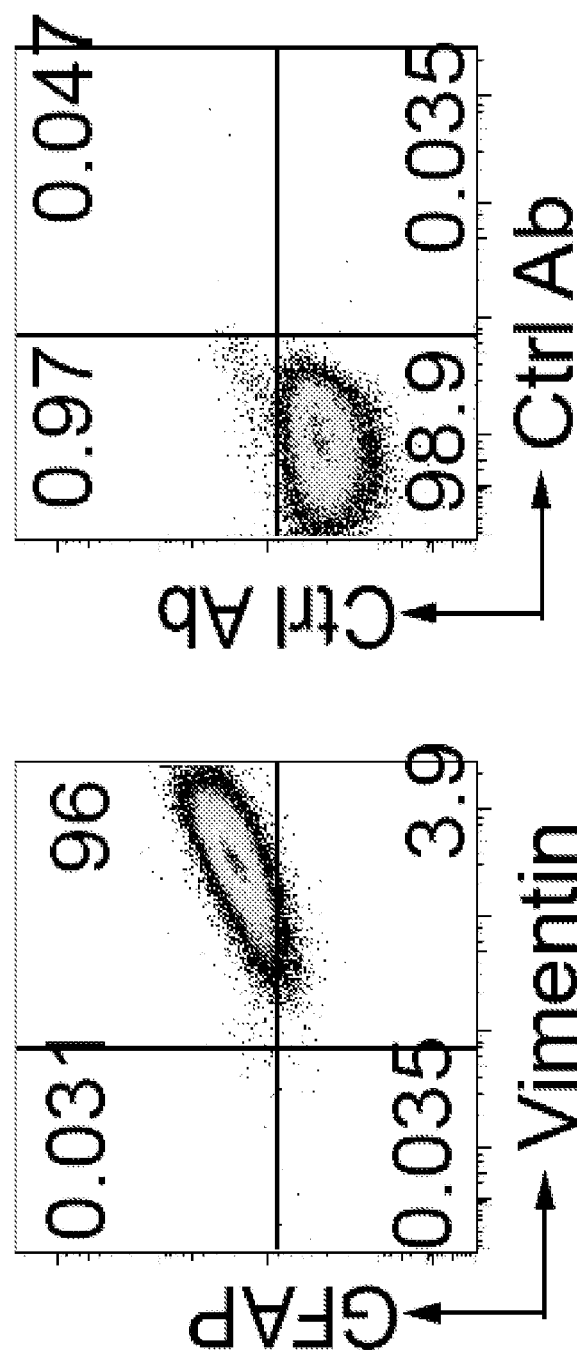


Figure 7D



Figures 7E-7F

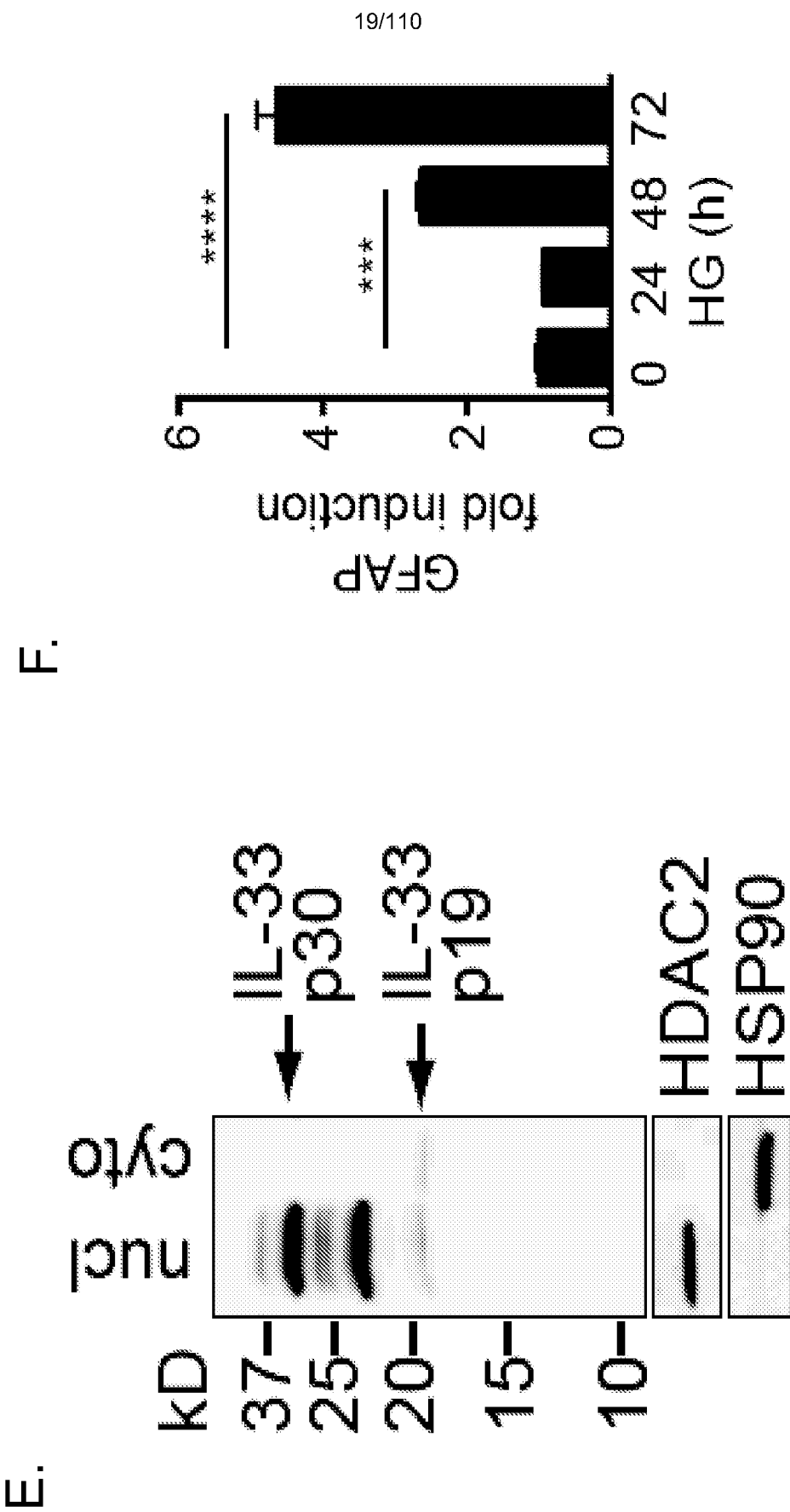
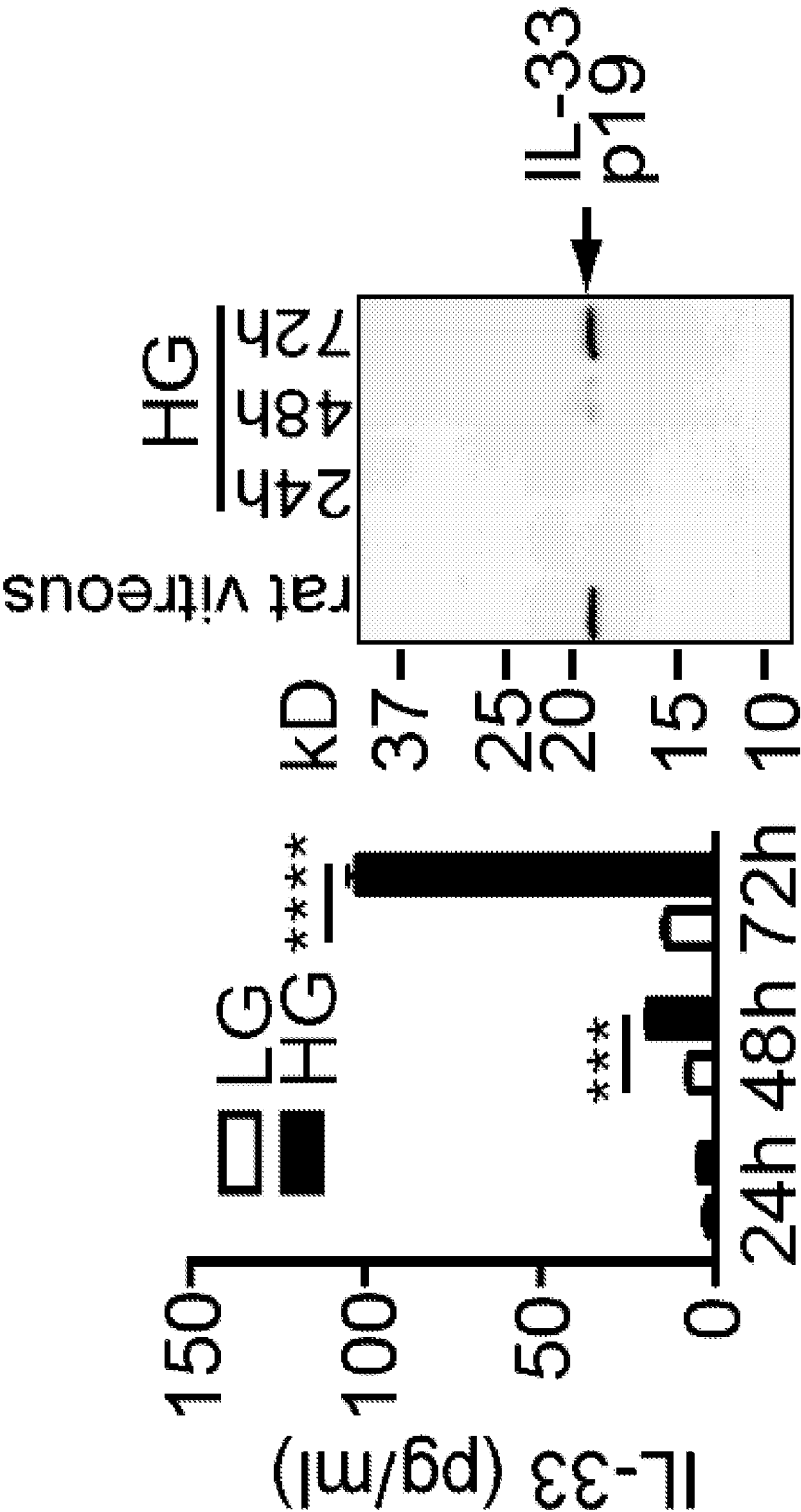


Figure 7G



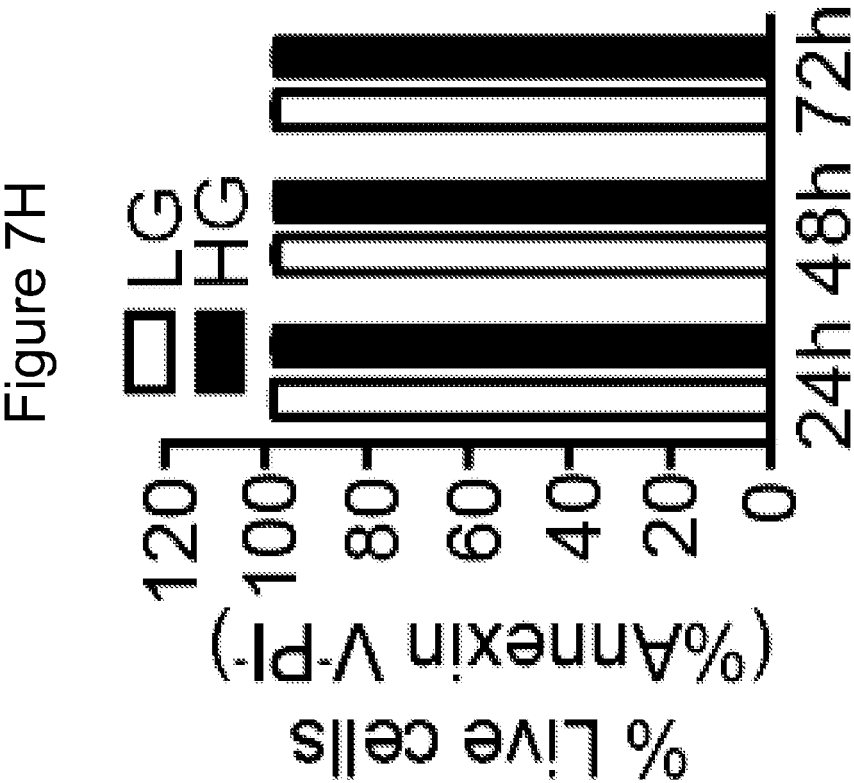


Figure 7I

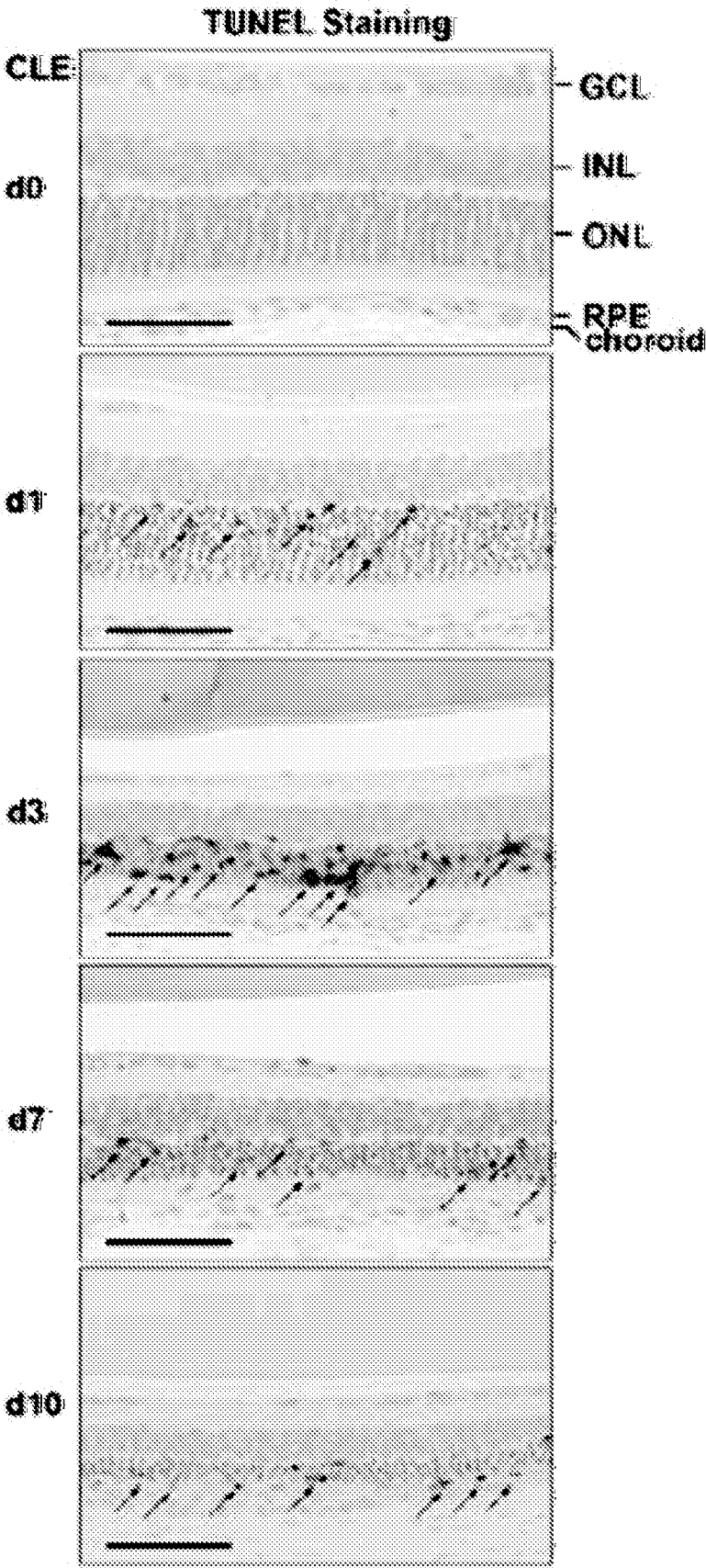


Figure 7J

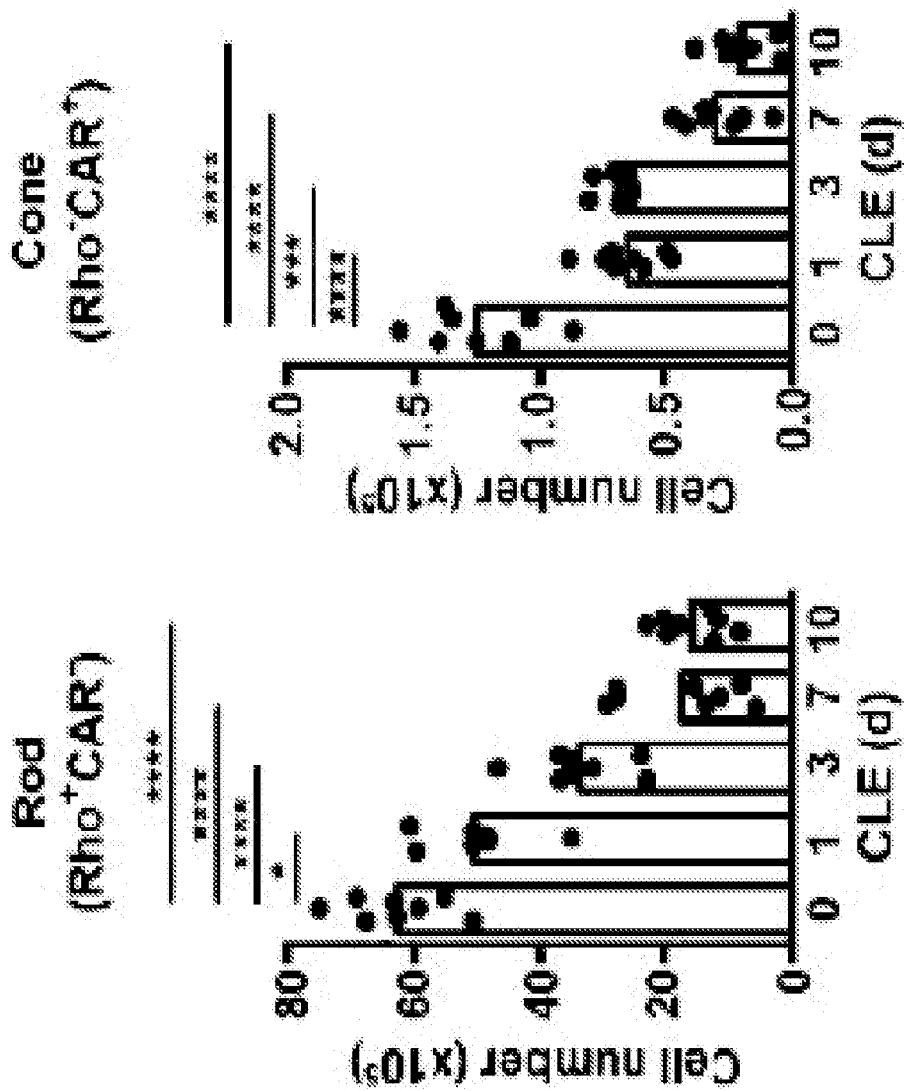


Figure 7K

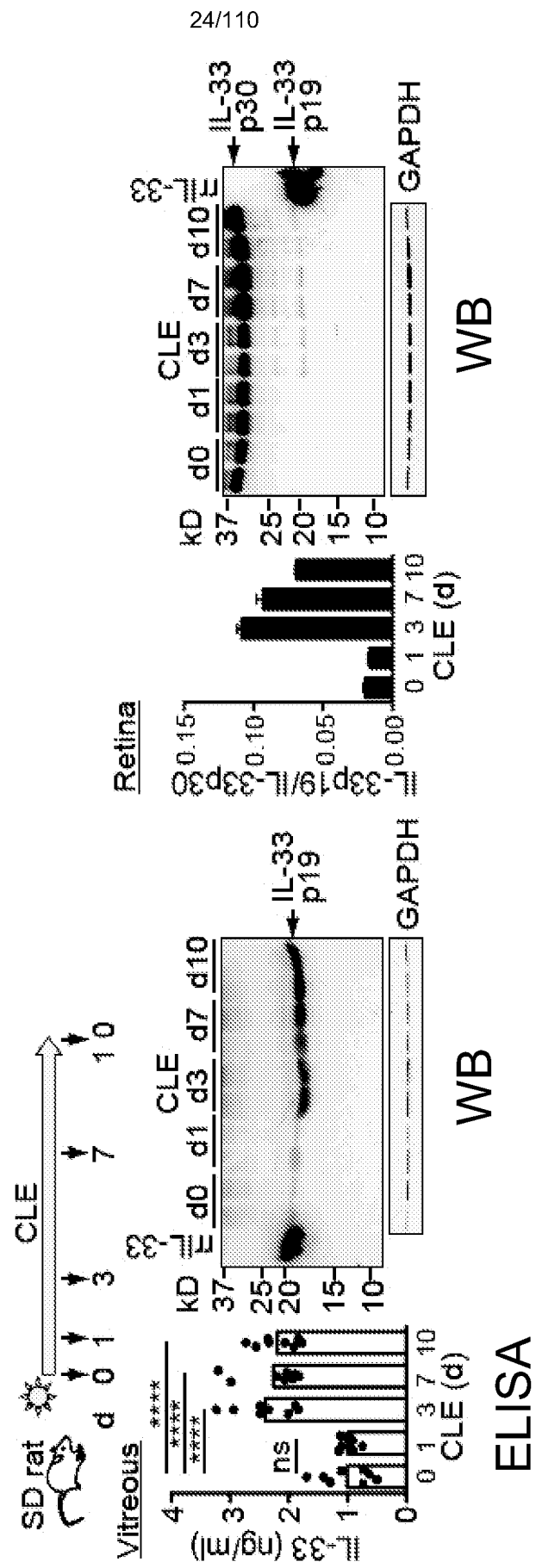


Figure 7L

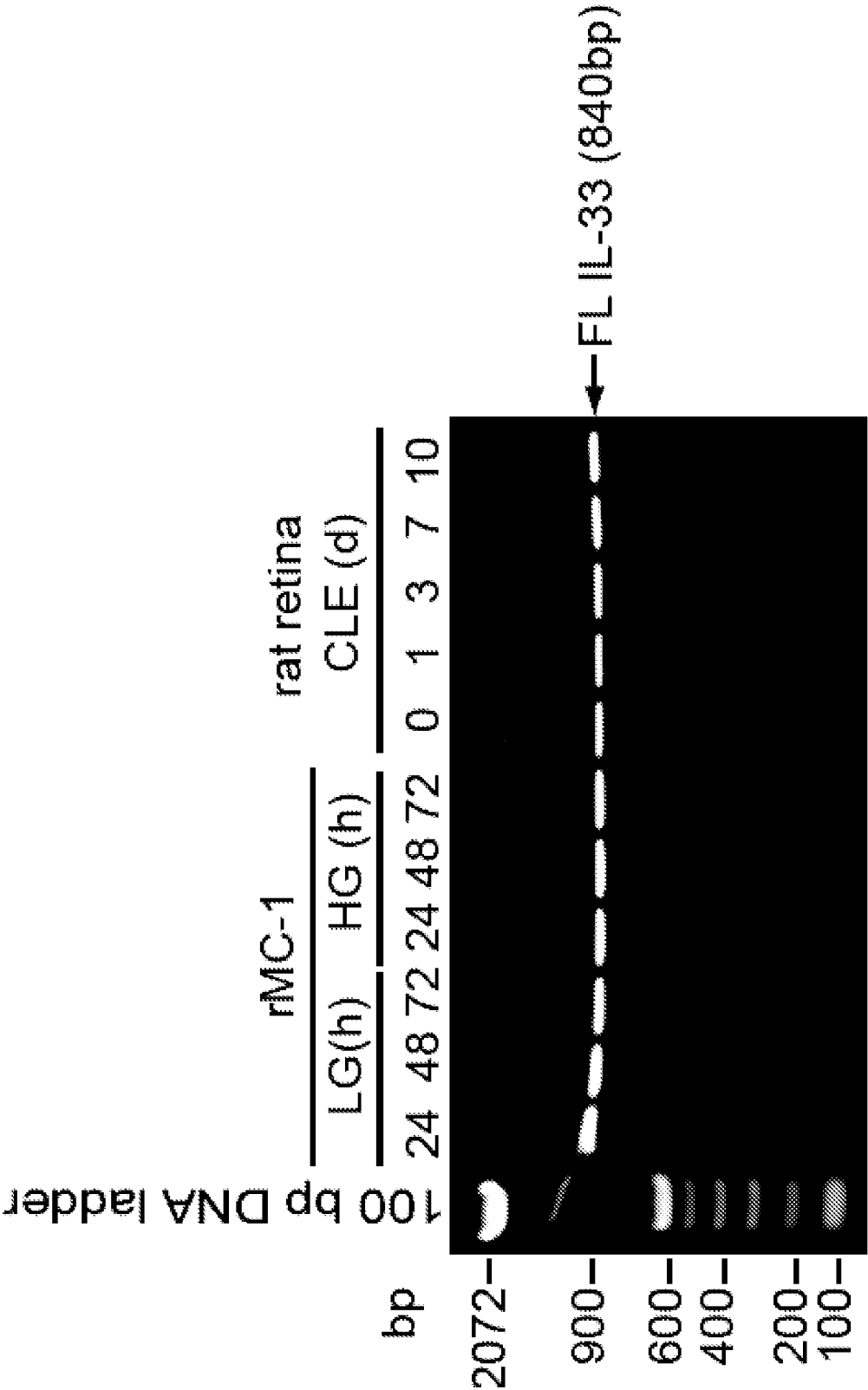


Figure 7M

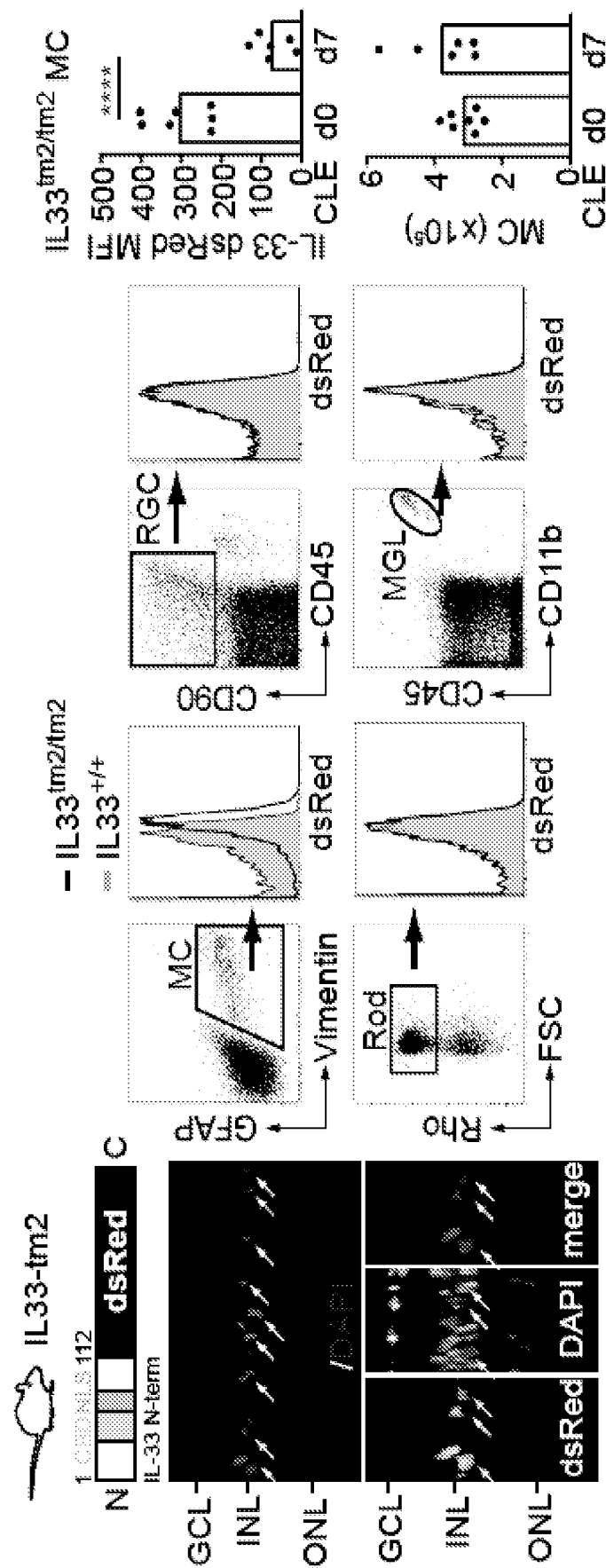


Figure 8A

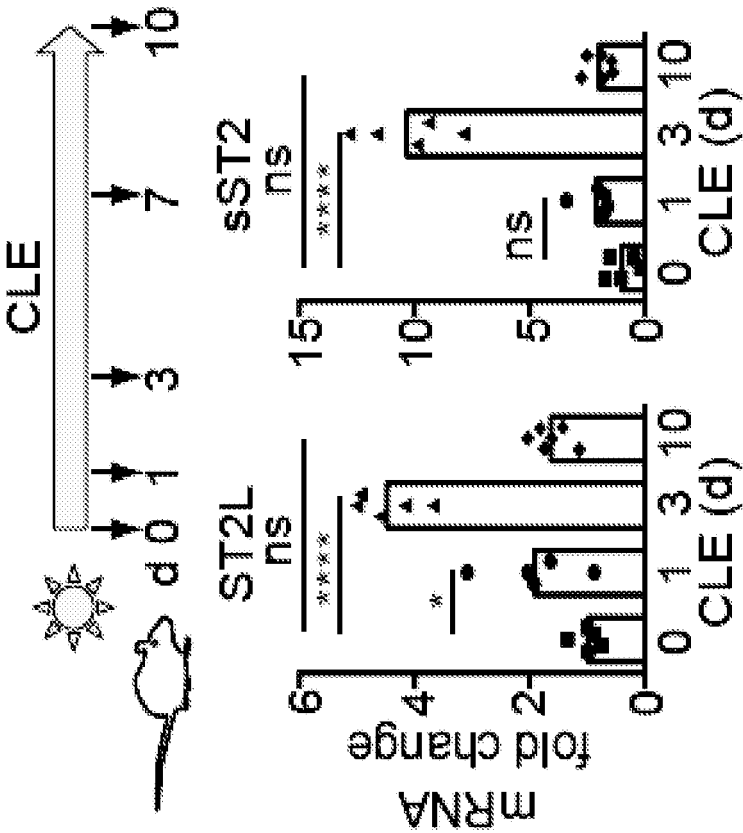


Figure 8B

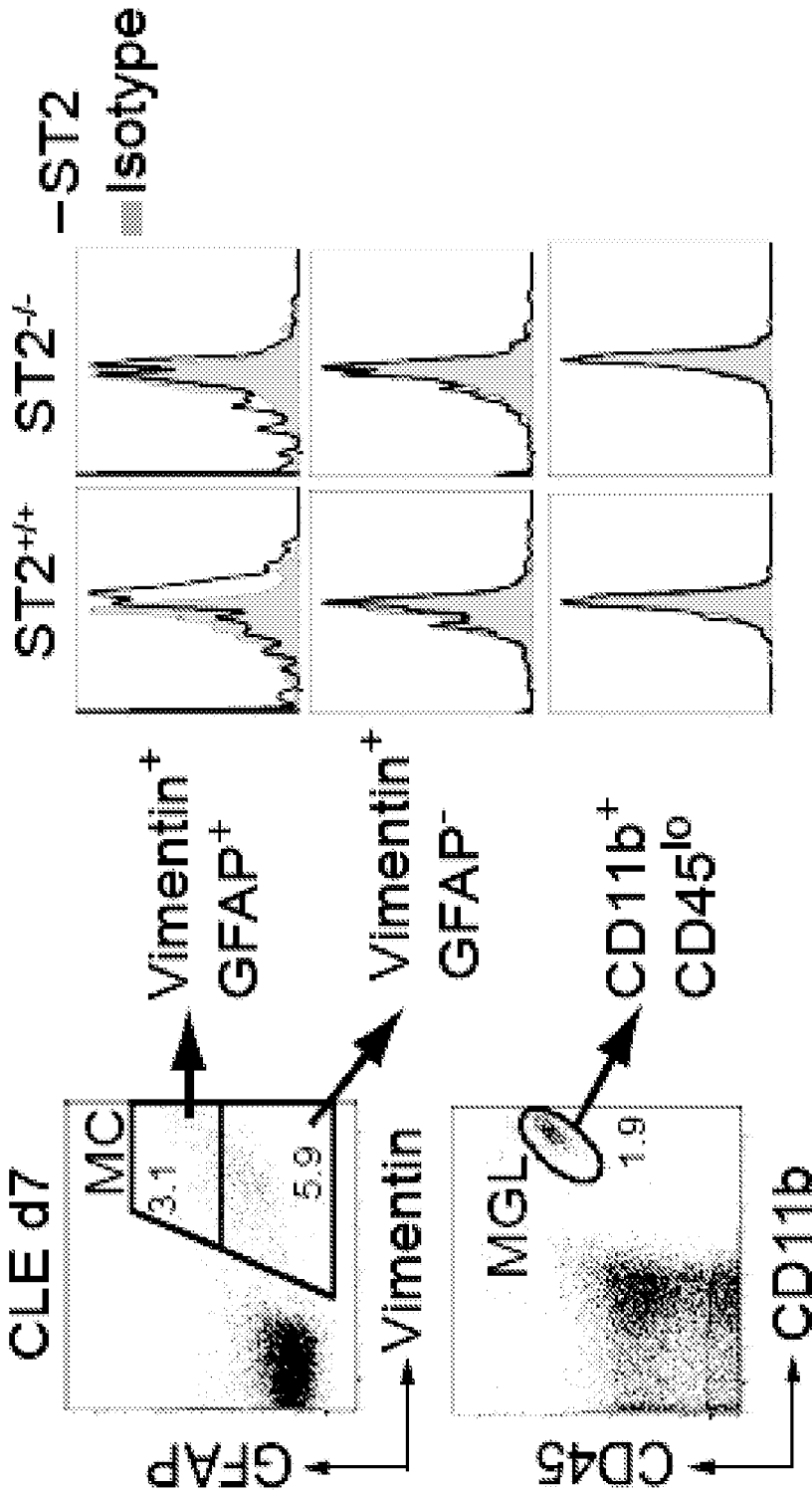




Figure 8C

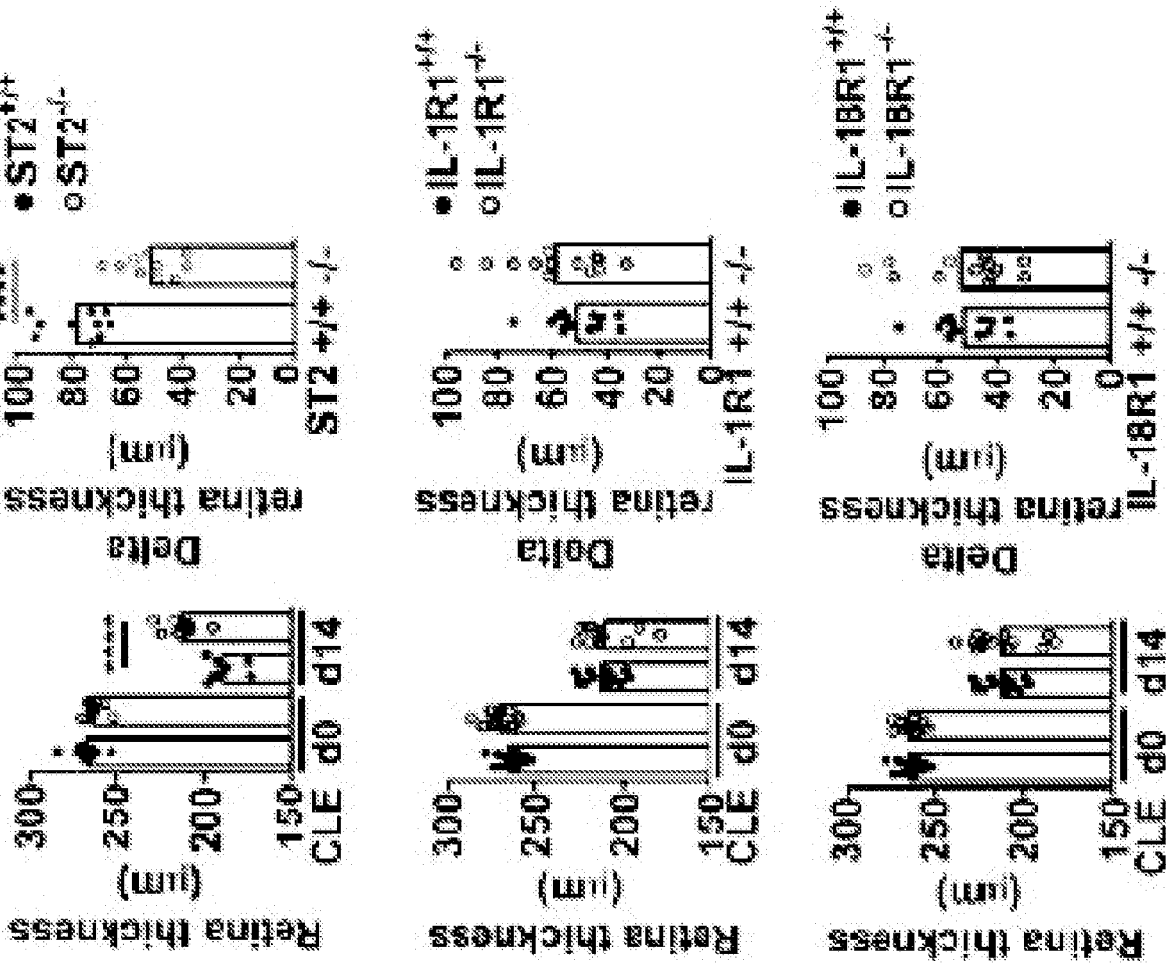


Figure 8D

Figure 8E

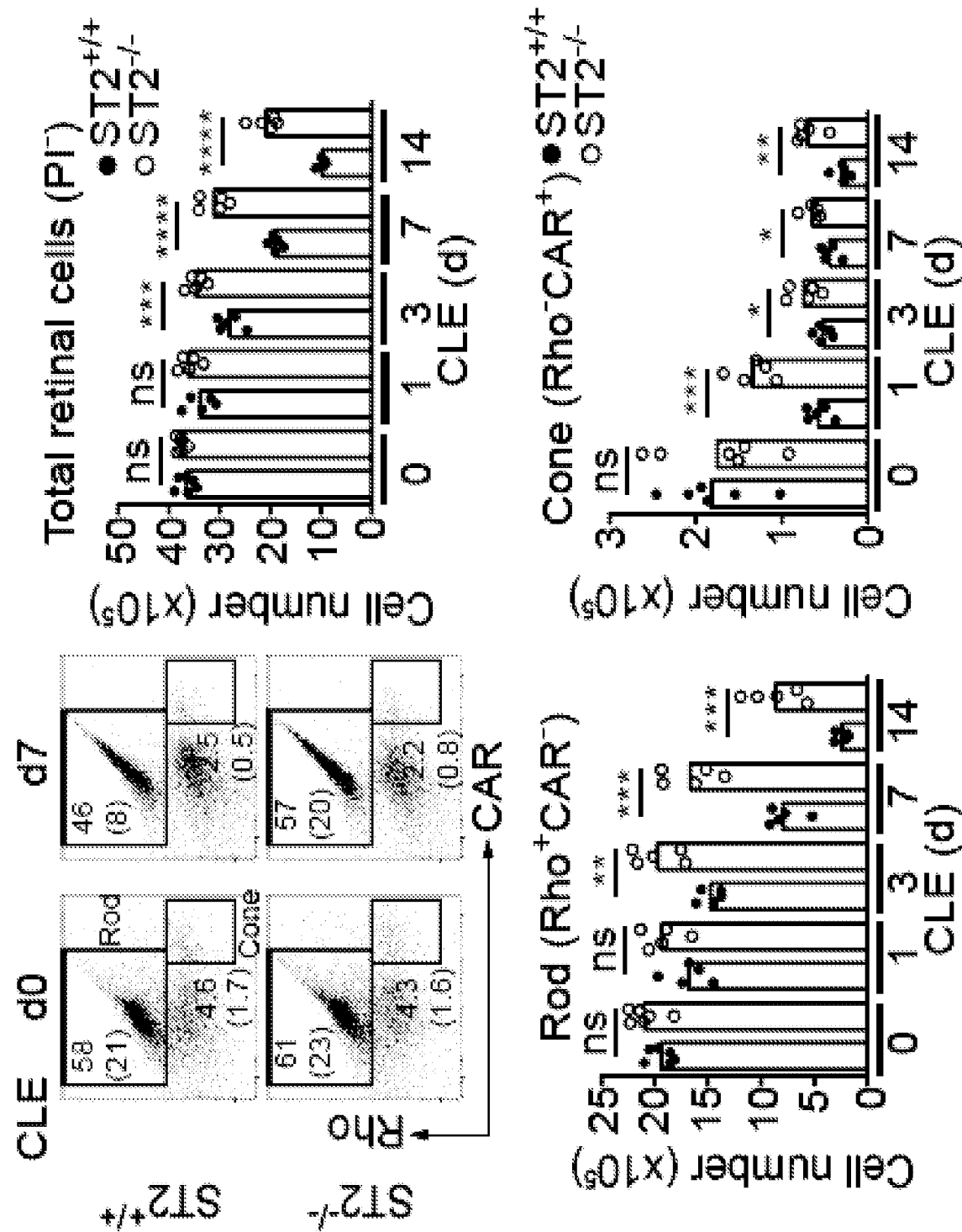


Figure 8F

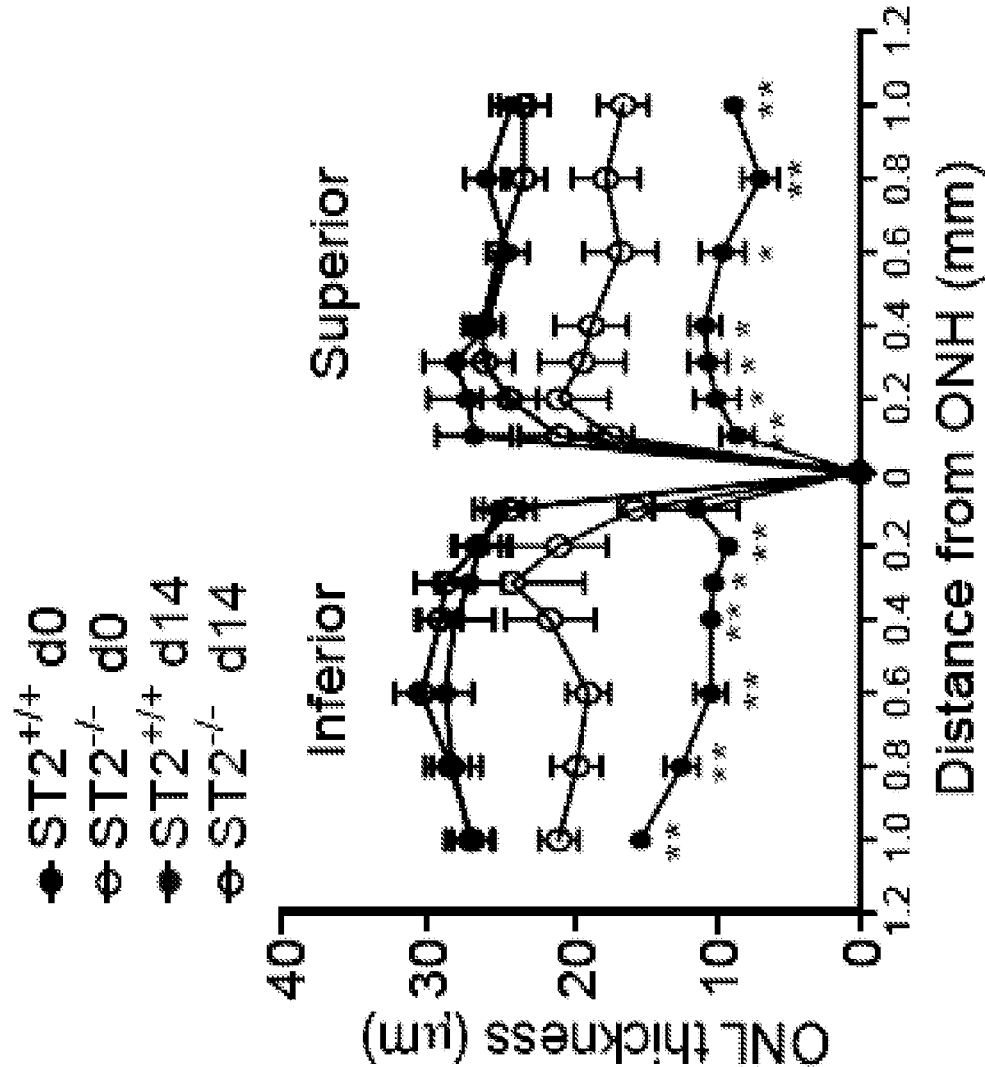


Figure 8G

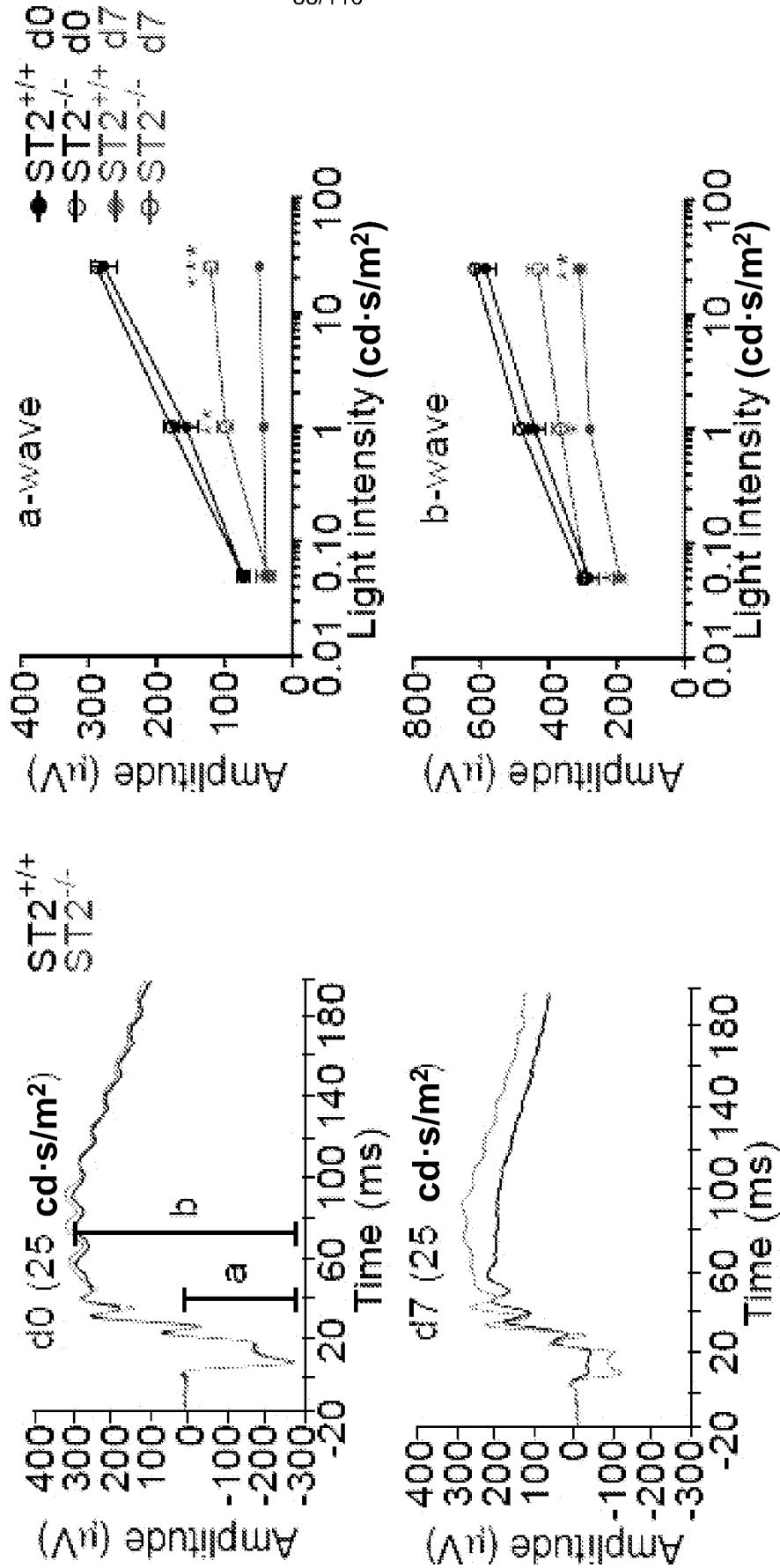


Figure 9B

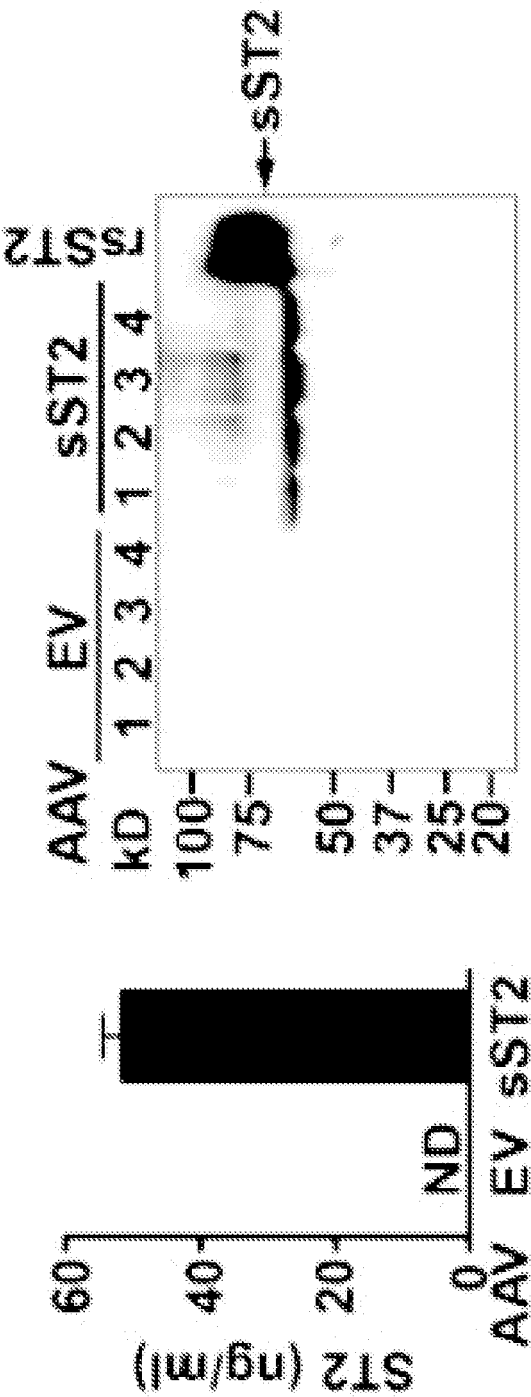


Figure 9C

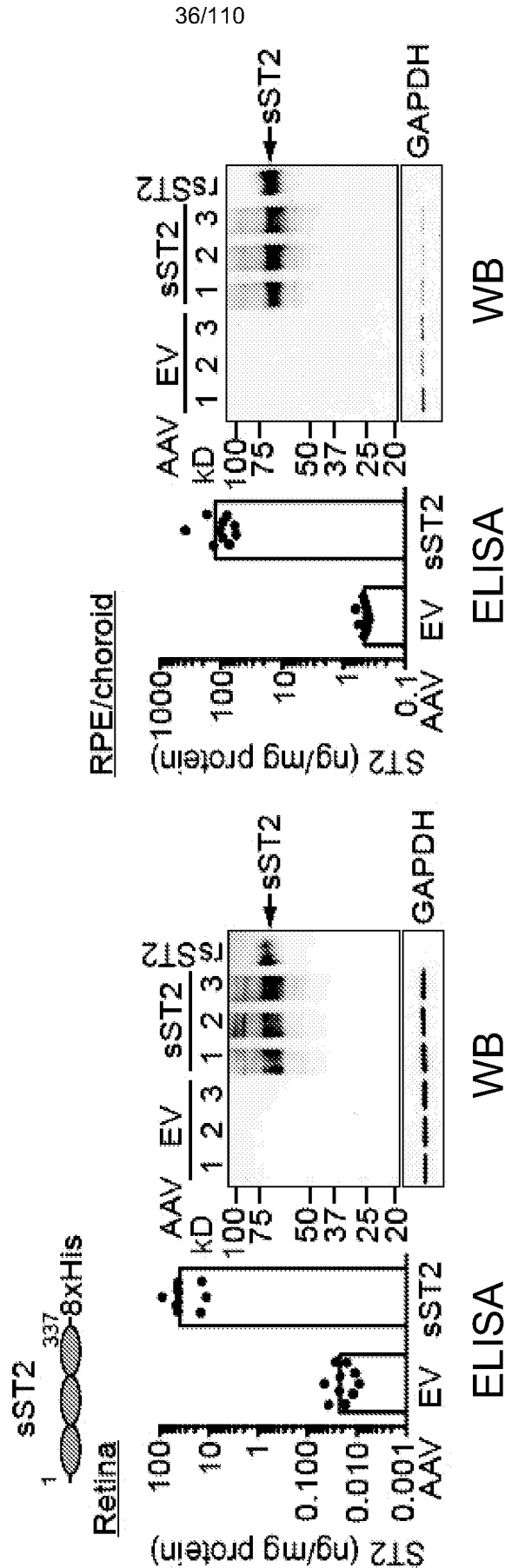
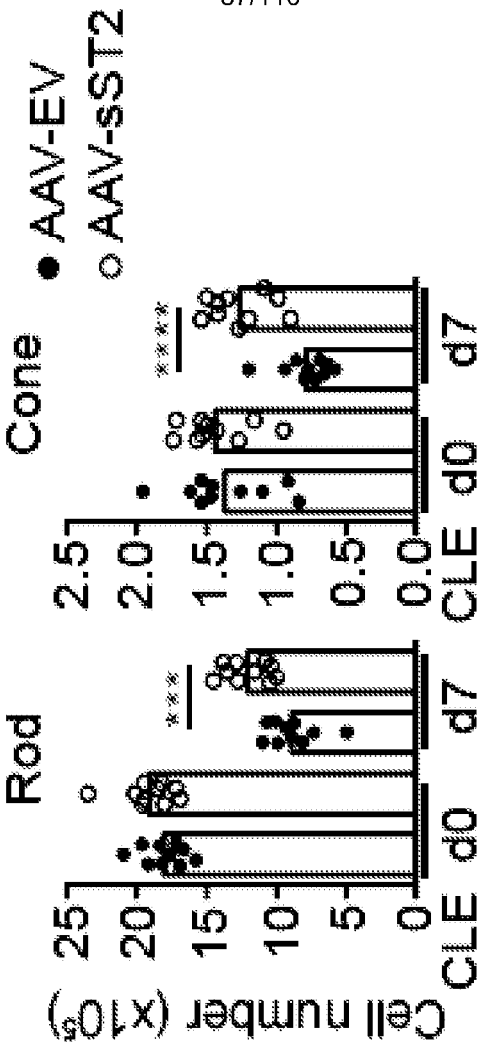


Figure 10



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Figure 11A

Gene Symbol	Log ₂ Fold Change	P value
Parp10	-0.4070	0.031338
Mx2	-0.5531	0.023956
Tap1	-0.3652	0.008909
Igtp	-0.4489	0.011741
Irgm2	-0.4251	0.028030
Timp1	-0.4043	0.004441
Rtp4	-0.6969	0.016280
Irf7	-0.3266	0.031338
Cp	-0.4225	0.007205
Stat3	-0.3860	0.006960
Mt2	-0.4169	0.047613
Osmr	-0.3798	0.006583
Irf1	-0.3453	0.004749
Cebpd	-0.3662	0.004441
Bcl3	-0.4159	0.002762
Egr2	-0.4352	0.004441
Hsd17b2	-0.4163	0.004441
Ccl4	-0.4988	0.007205
Il1b	-0.4339	0.010421
Ifi202b	-0.6794	0.044264
Gbp7	-0.5574	0.004441
Ccl2	-0.3398	0.013638

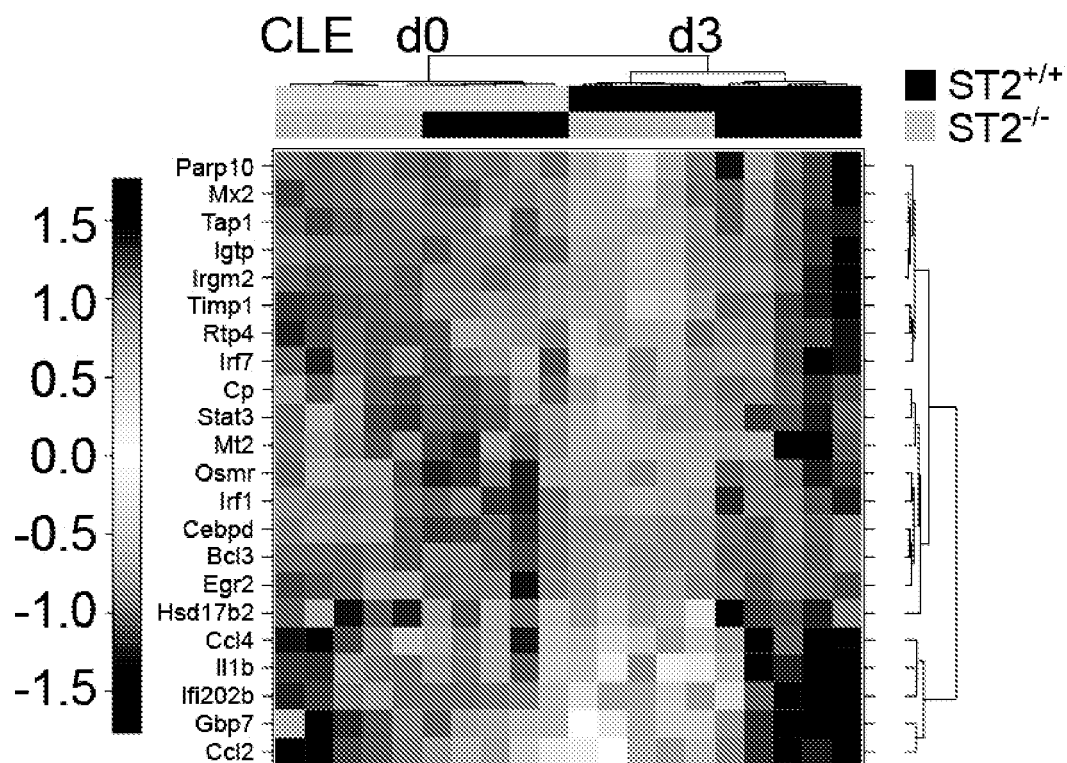


Figure 11B

Pathway analysis of genes down-regulated in ST2^{-/-} retina after CLE

GO ID	Biological Function	p-value	Genes Down-regulated
GO:0006886	Intracellular protein transport	0.001504	<i>Bcl3, Egr2, Irf1b, Stat3, Tap1, Rtp4, Parp10</i>
GO:0071345	Cellular response to cytokine stimulus	0.001569	<i>Igfbp, Irf1b, Irf1, Osmr, Ccl2, Stat3, Irf202b, Irf7, Gbp7</i>
GO:0034124	MyD88-dependent TLR signaling pathway	0.002303	<i>Irf1, Irf7</i>
GO:0060416	Response to growth hormone	0.002303	<i>Irf1, Stat3</i>
GO:0045944	Transcription from RNA Pol II promoter	0.004203	<i>Bcl3, Cebpd, Egr2, Irf1b, Irf1, Stat3, Irf7</i>
GO:0006913	Nucleocytoplasmic transport	0.005390	<i>Bcl3, Egr2, Irf1b, Stat3, Parp10</i>
GO:0032870	Cellular response to hormone stimulus	0.005669	<i>Egr2, Irf1b, Irf1, Stat3</i>
GO:0042089	Cytokine biosynthetic process	0.005669	<i>Bcl3, Irf1b, Irf1, Irf7</i>
GO:0079727	Cellular macromolecule localization	0.006119	<i>Bcl3, Egr2, Irf1b, Stat3, Tap1, Rtp4, Parp10</i>
GO:0042221	Response to chemical	0.006125	<i>Cp, Egr2, Hsd17b2, Igfbp, Irf1b, Irf1, Mf2, Mx2, Osmr, Ccl2, Ccl4, Stat3, Irf202b, Irf7, Irgm2, Rtp4, Gbp7</i>
GO:0031330	Negative regulation of cellular catabolism	0.006697	<i>Stat3, Timp1</i>
GO:0045084	Th2 cell differentiation	0.006697	<i>Bcl3, Irf1</i>
GO:0046686	Response to copper ion	0.006697	<i>Cp, Mf2</i>
GO:1901652	Response to peptide	0.007156	<i>Egr2, Irf1b, Irf1, Stat3</i>
GO:0042832	Defense response to protozoan	0.007270	<i>Bcl3, Irgm2, Gbp7</i>
GO:0019557	Regulation of Macromolecule biosynthesis	0.007896	<i>Bcl3, Cebpd, Egr2, Irf1b, Irf1, Ccl2, Stat3, Irf7</i>
GO:0034341	Response to interferon-gamma	0.008882	<i>Irf1, Ccl2, Irgm2, Gbp7</i>

Figure 11C

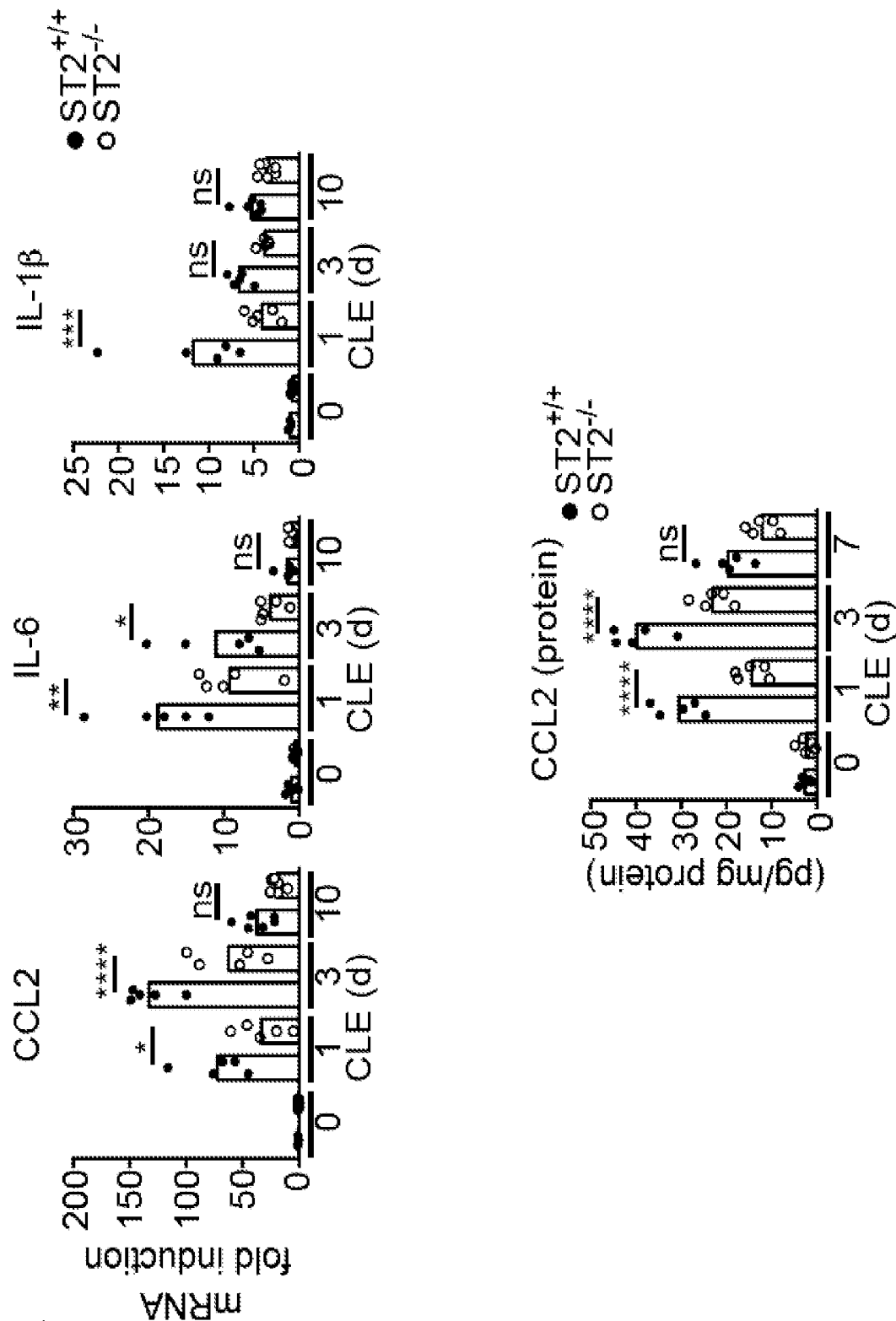


Figure 11D

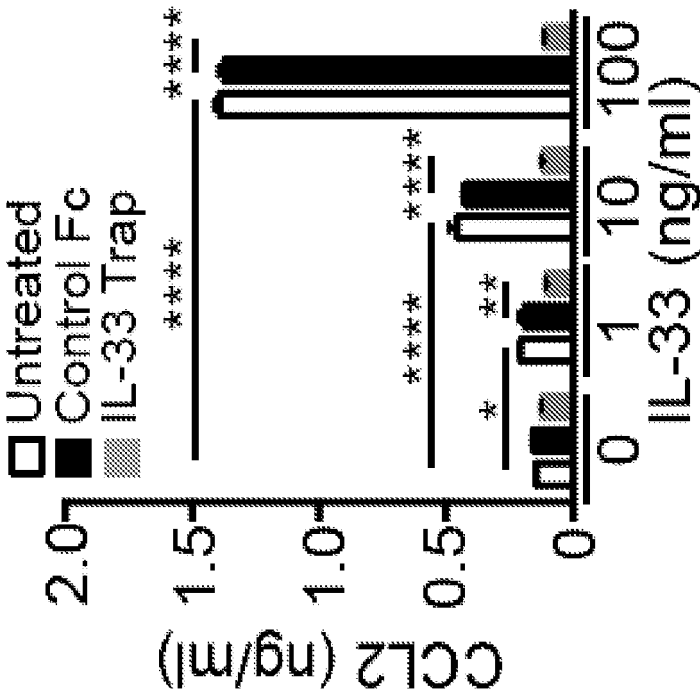
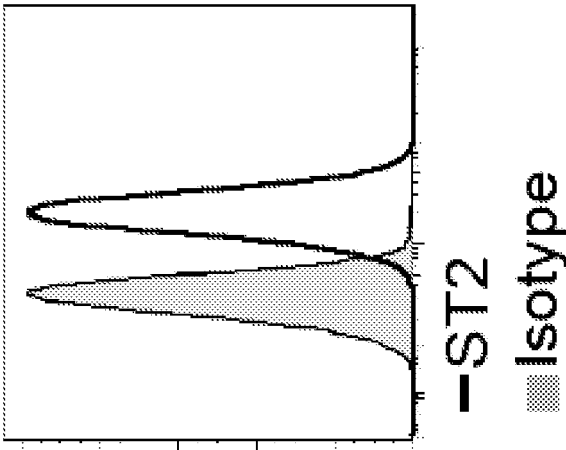


Figure 11E

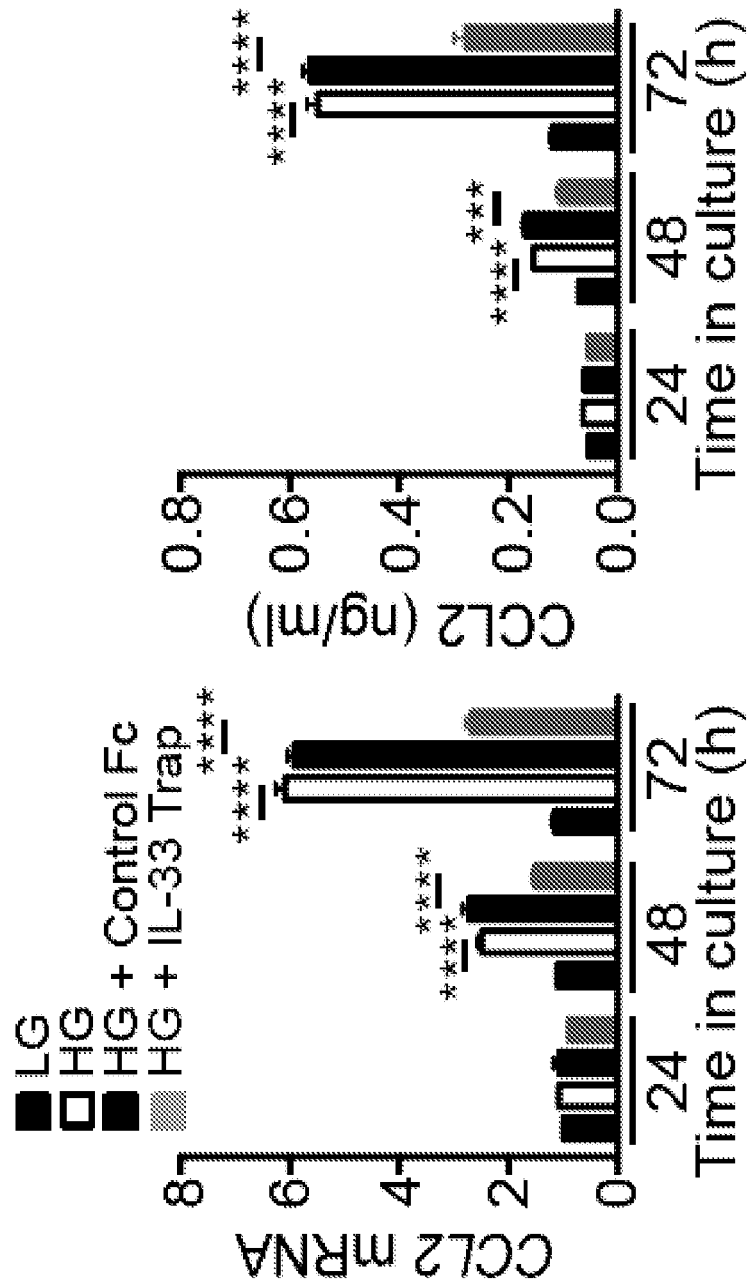


Figure 12A

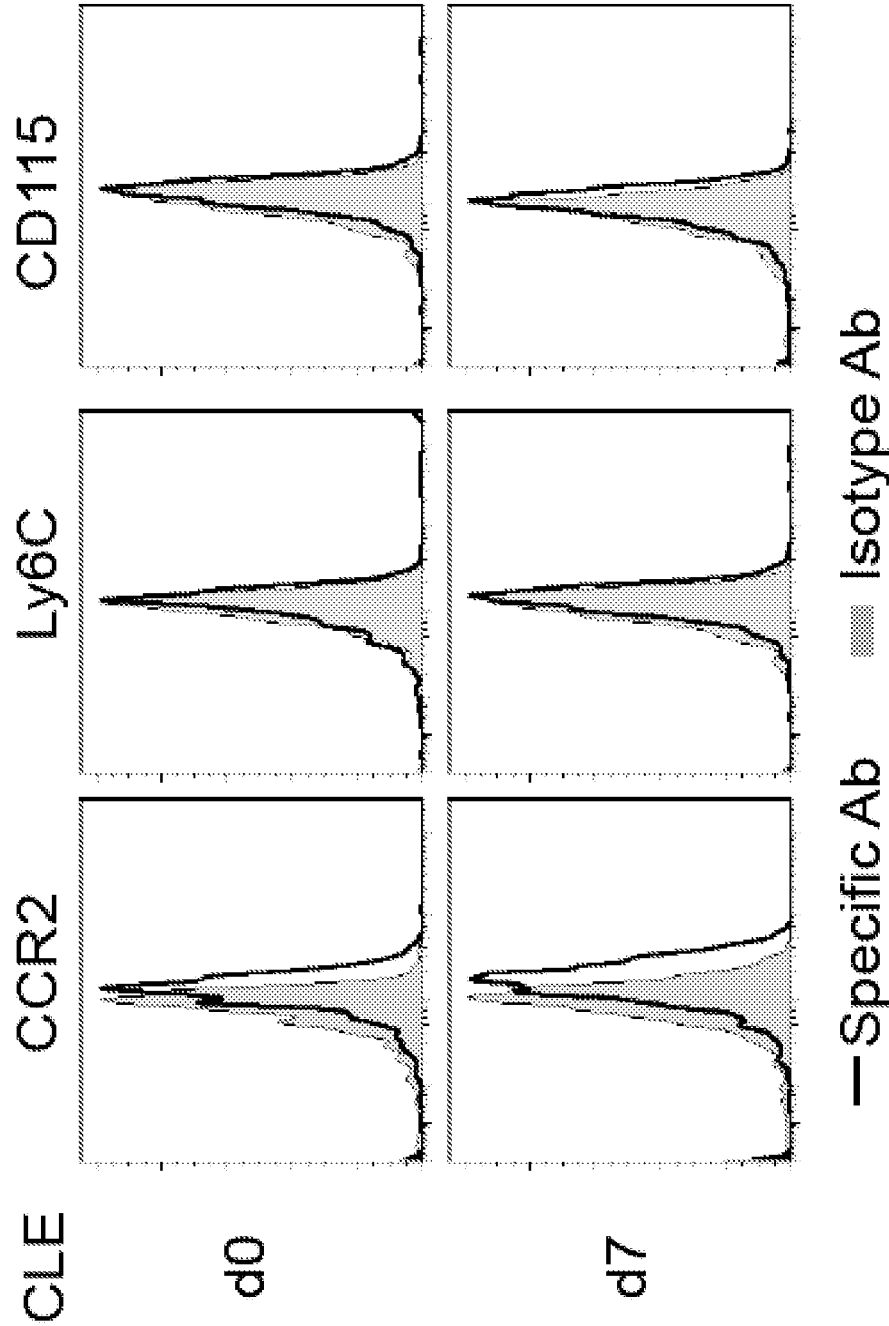


Figure 12B

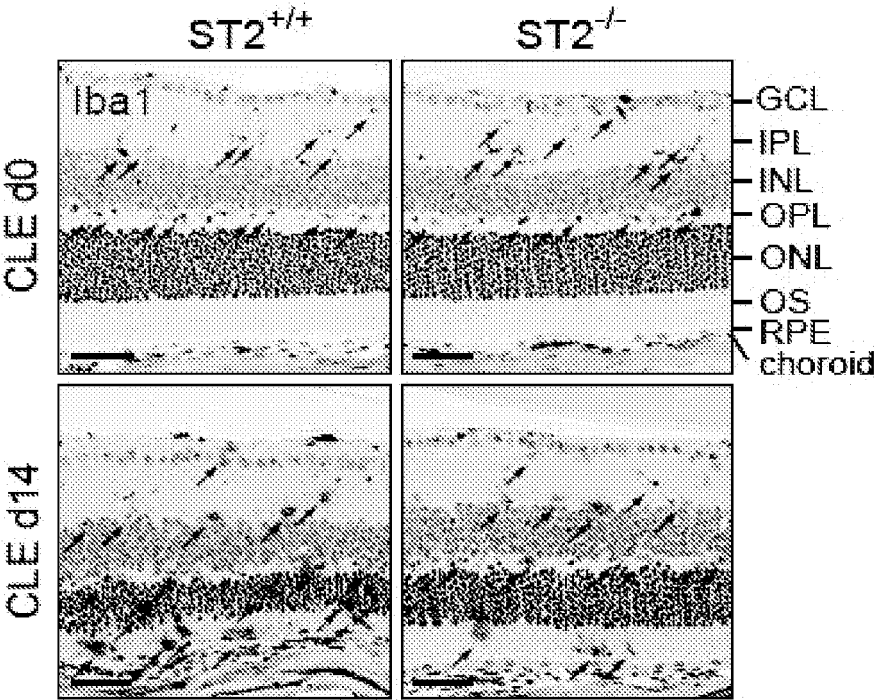


Figure 12C

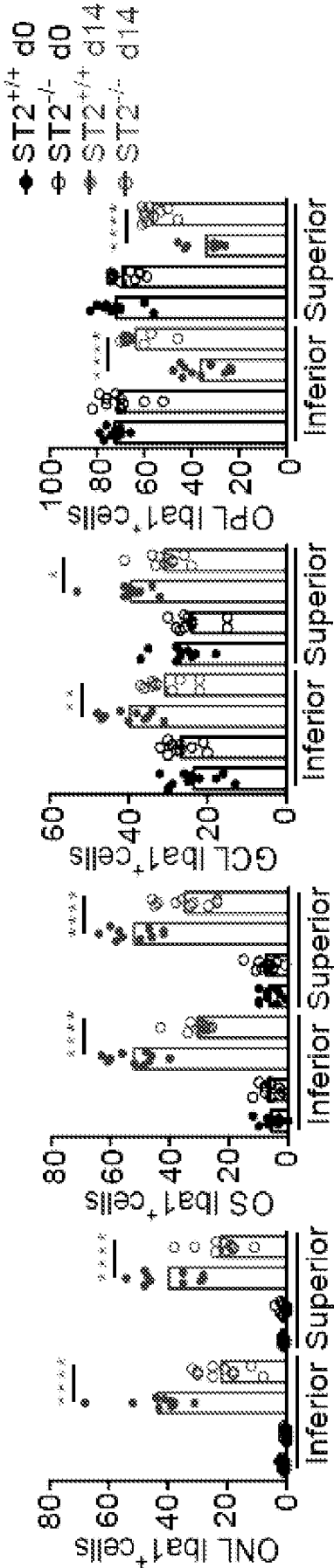


Figure 12D

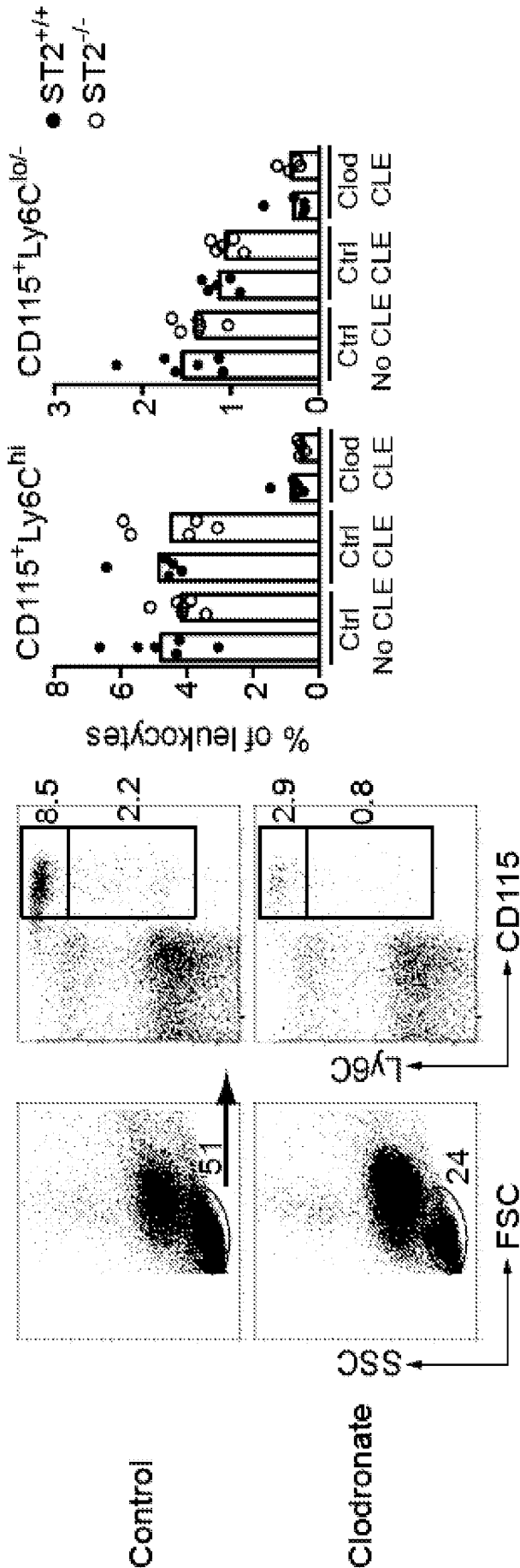


Figure 12E

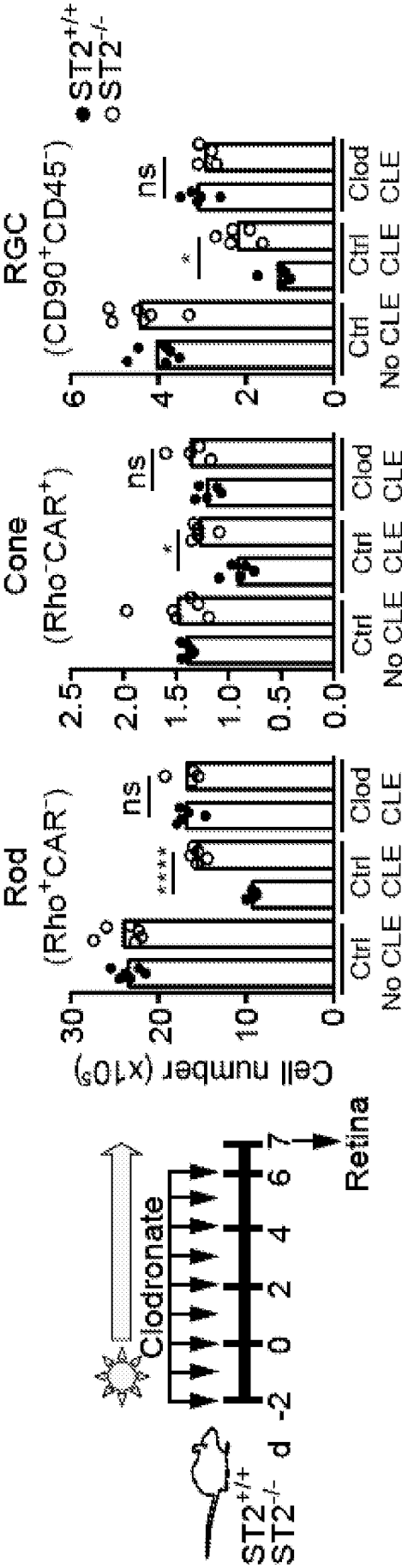


Figure 12F

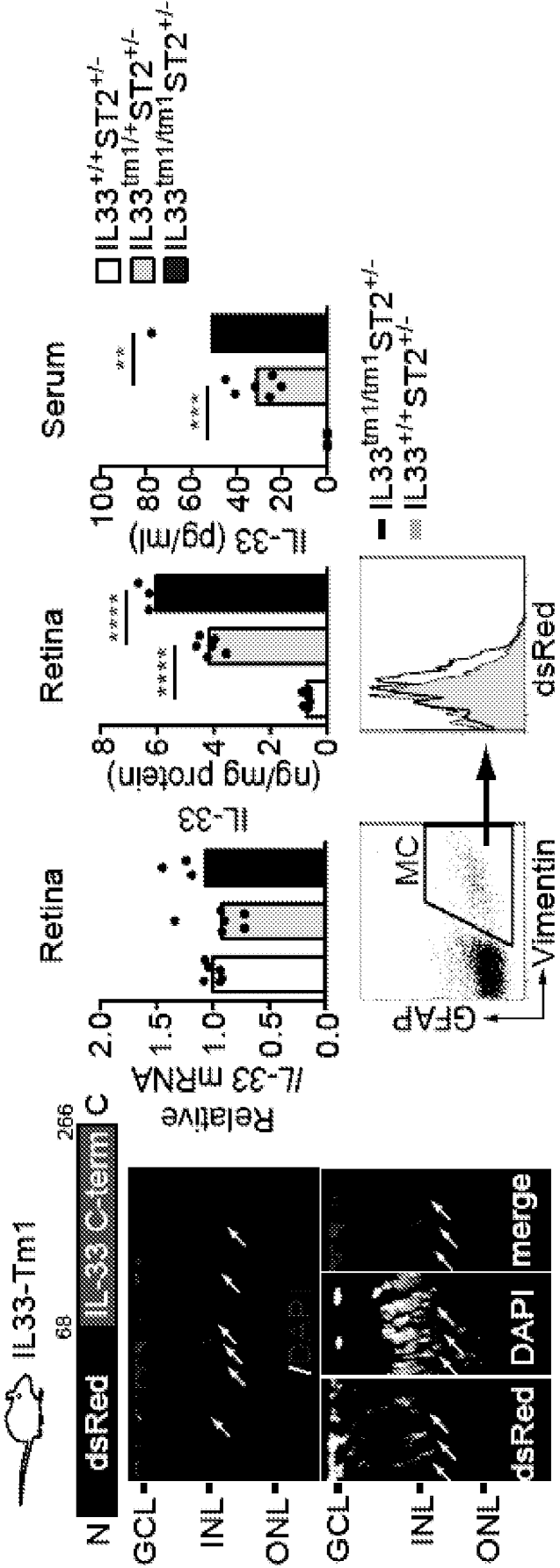


Figure 12G

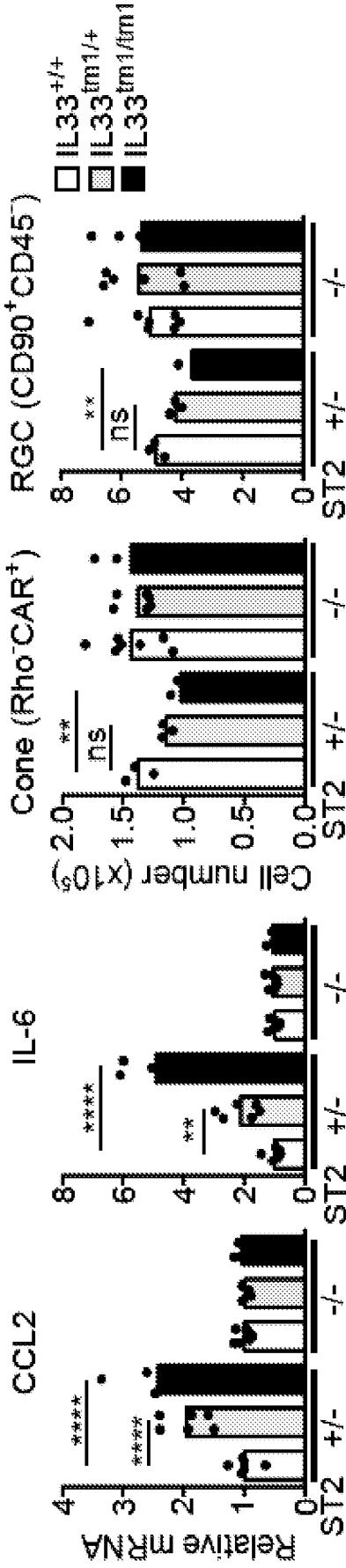


Figure 13A

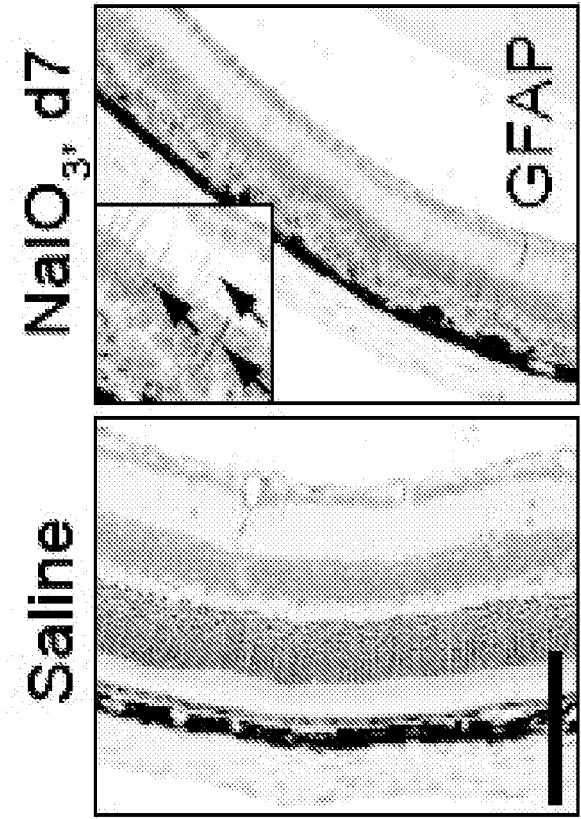


Figure 13B

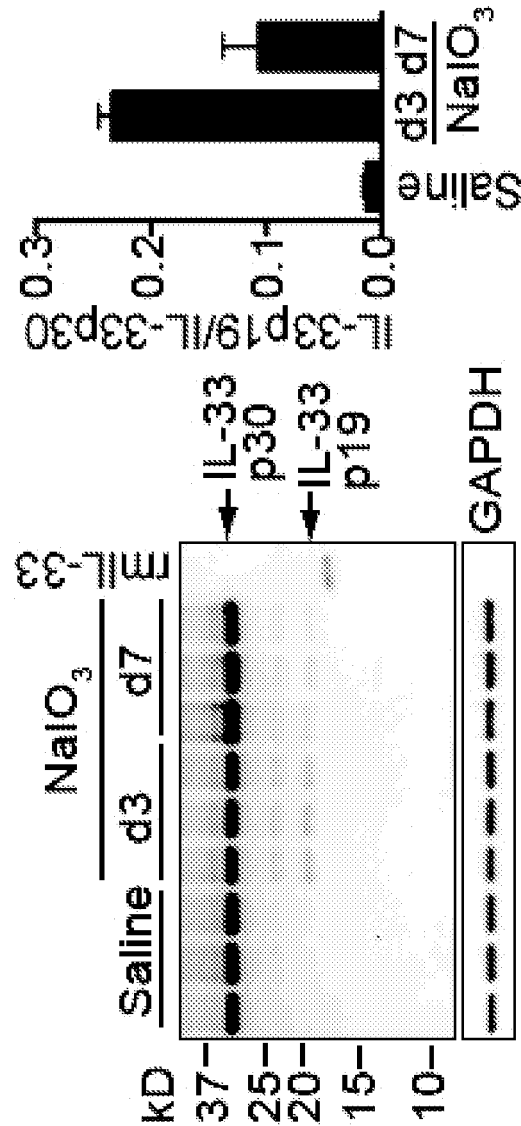


Figure 13C

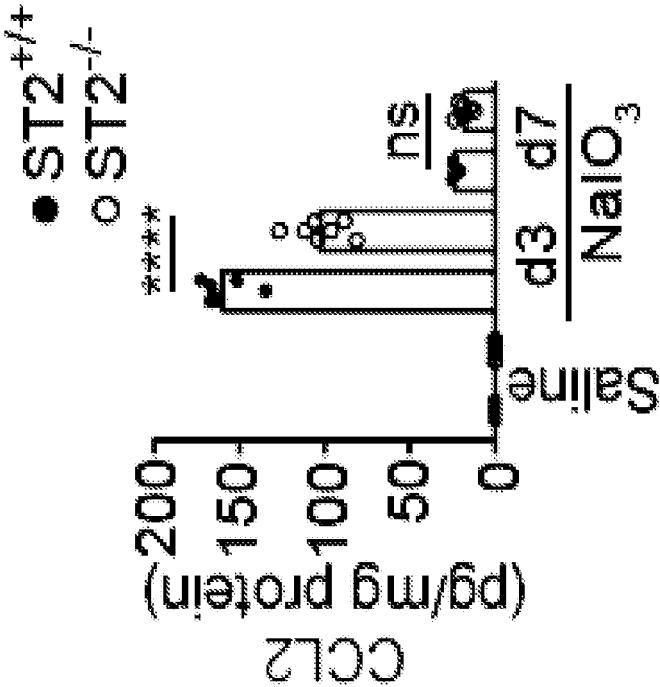


Figure 13D

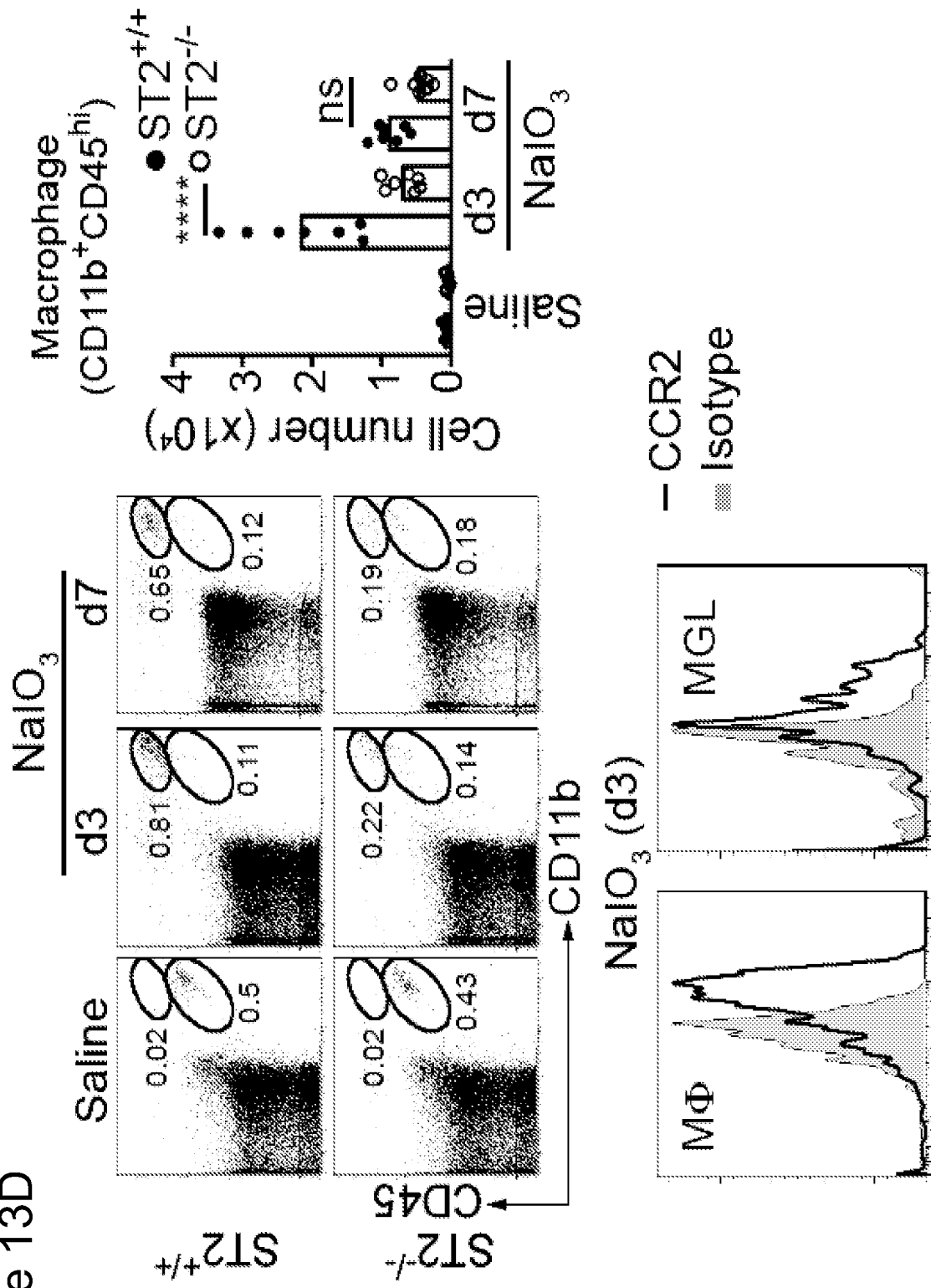


Figure 13E

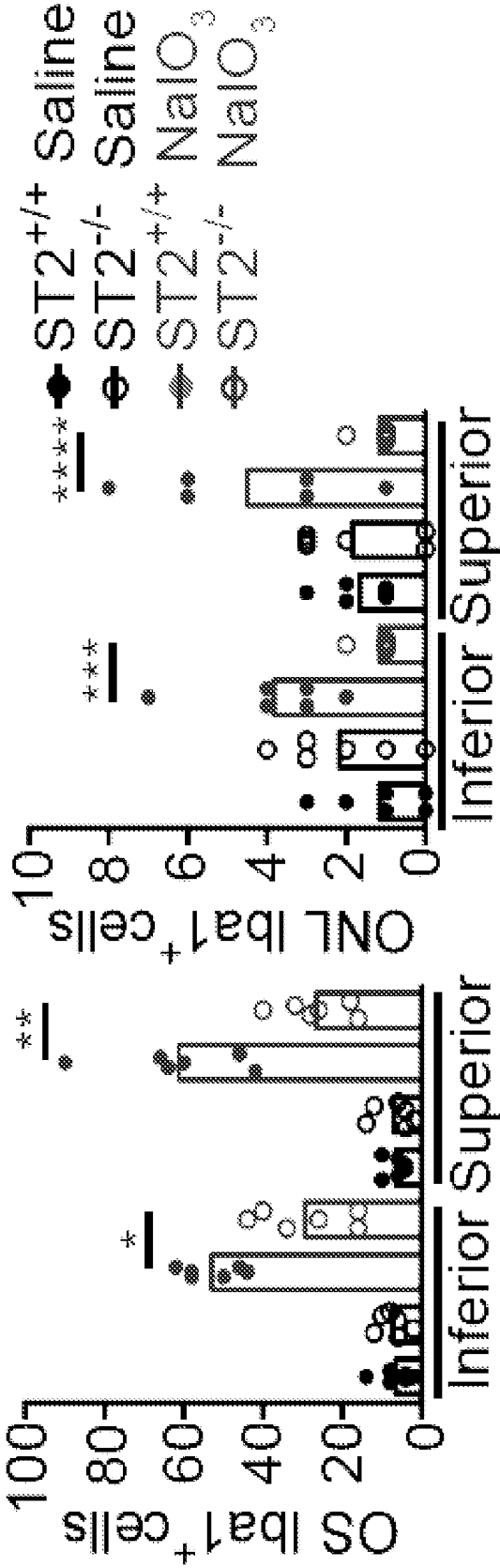
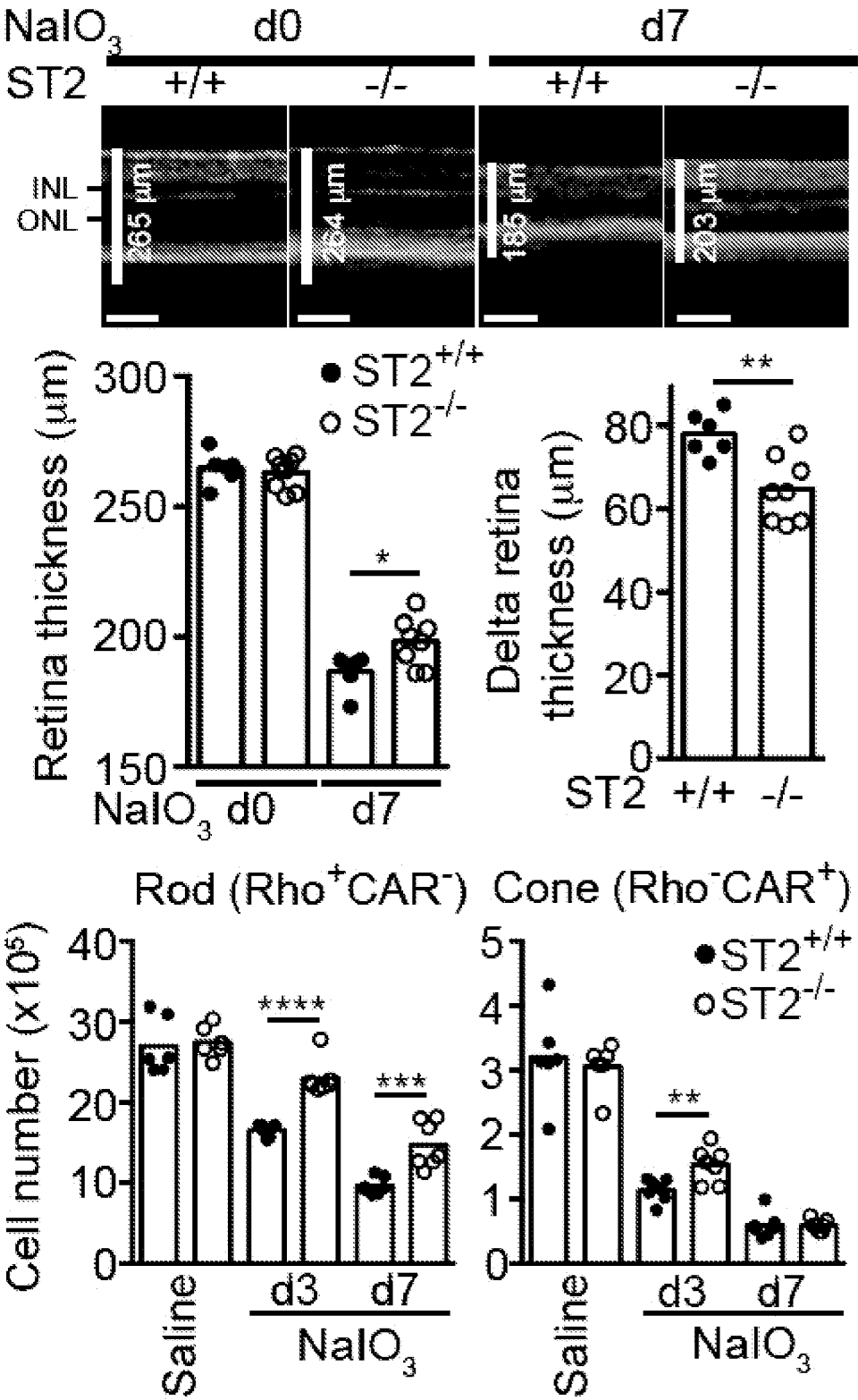


Figure 13F



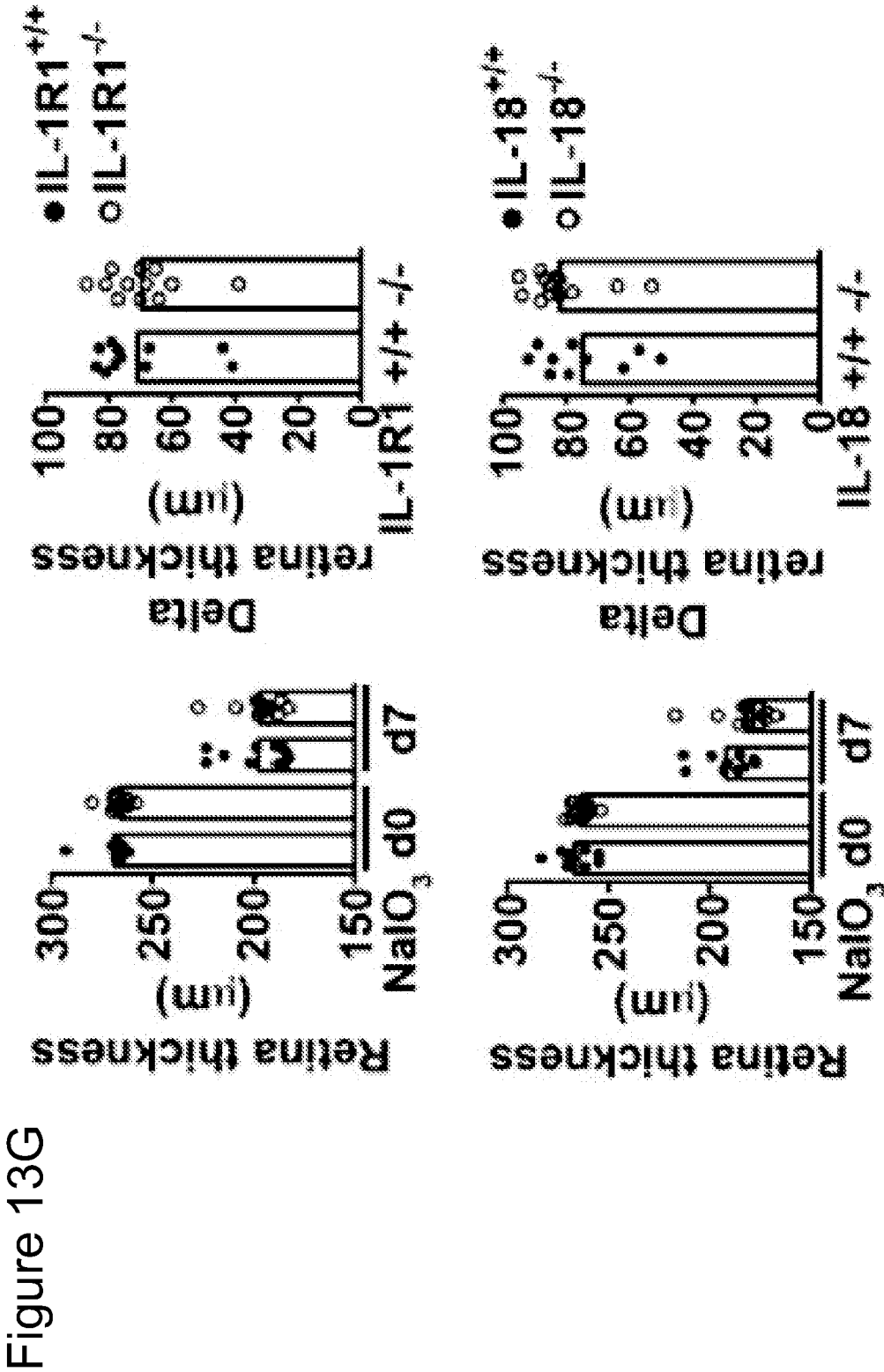


Figure 13H

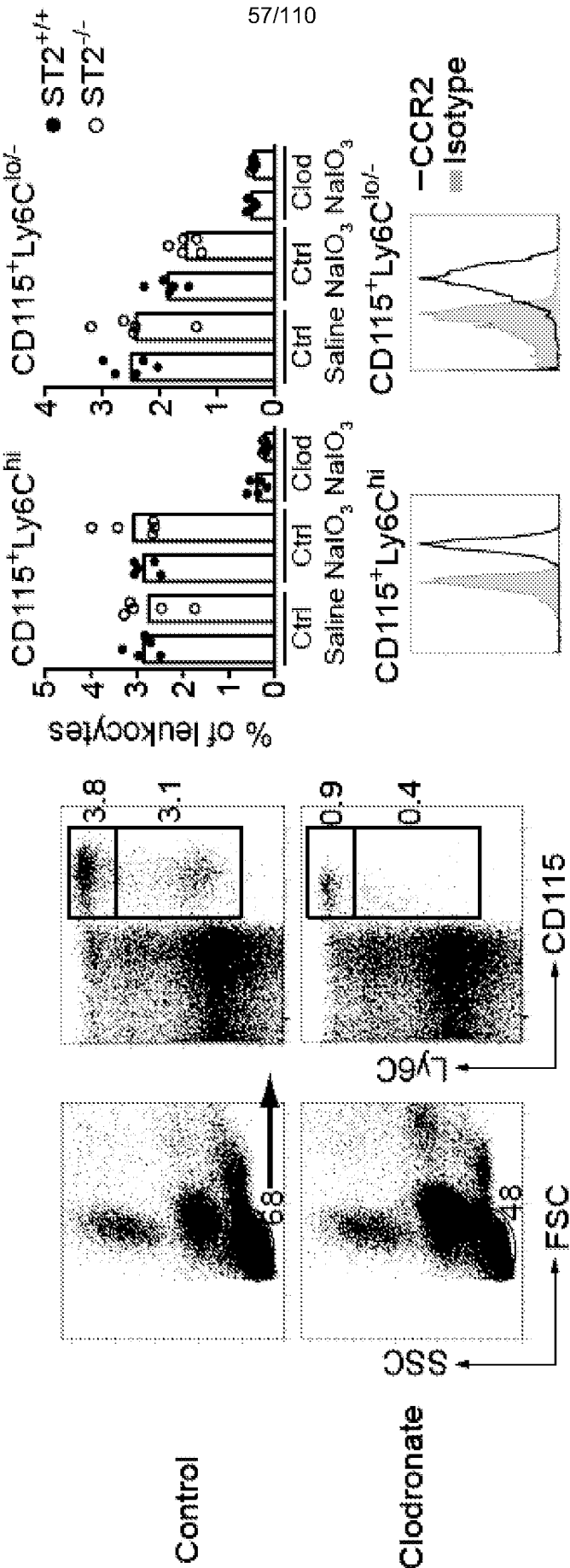


Figure 13I

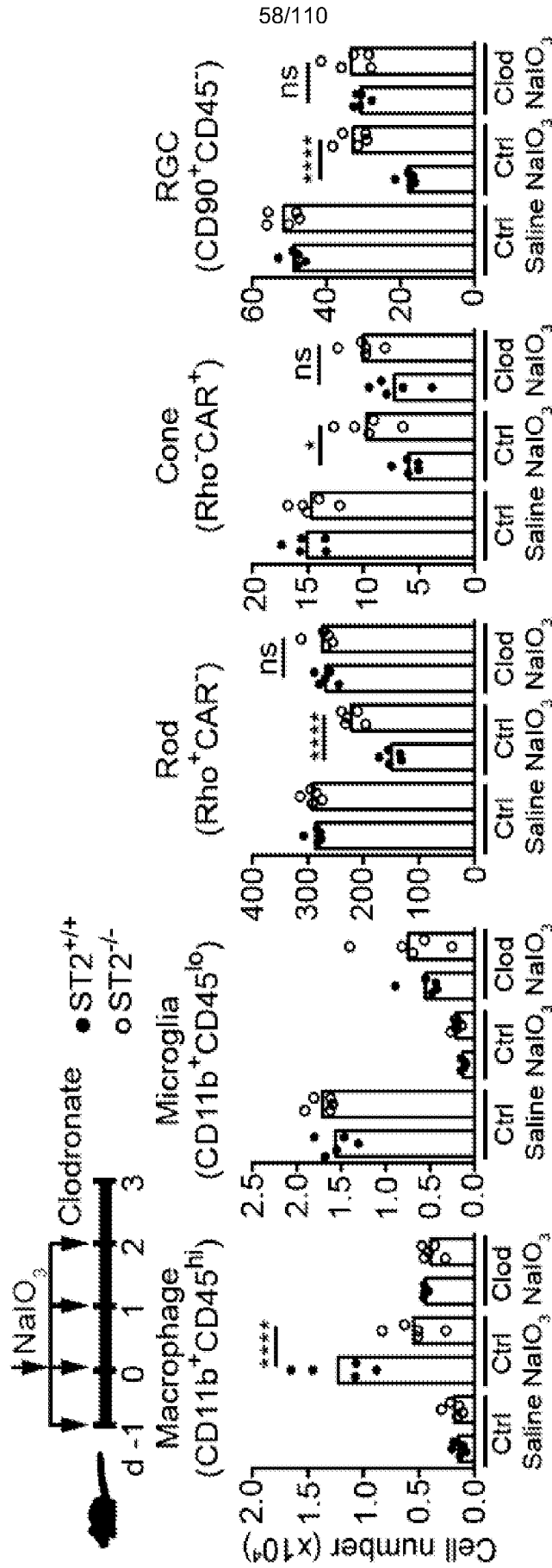


Figure 14A

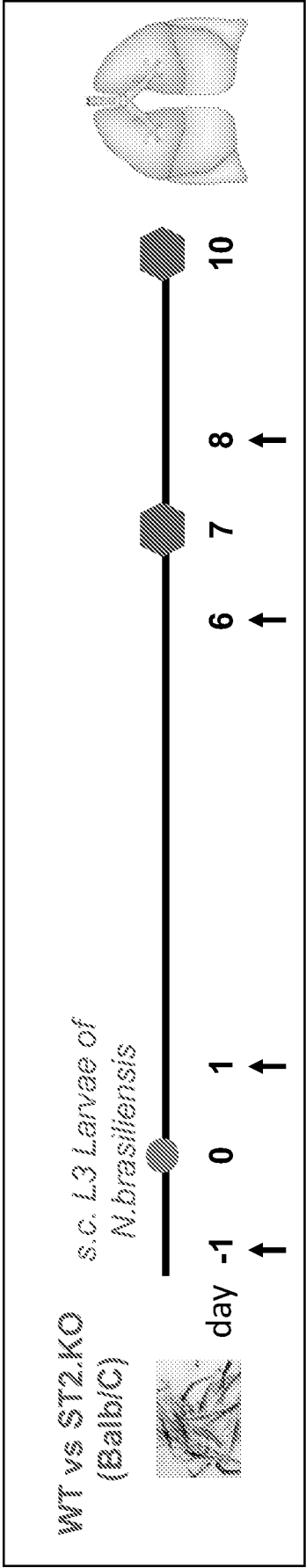
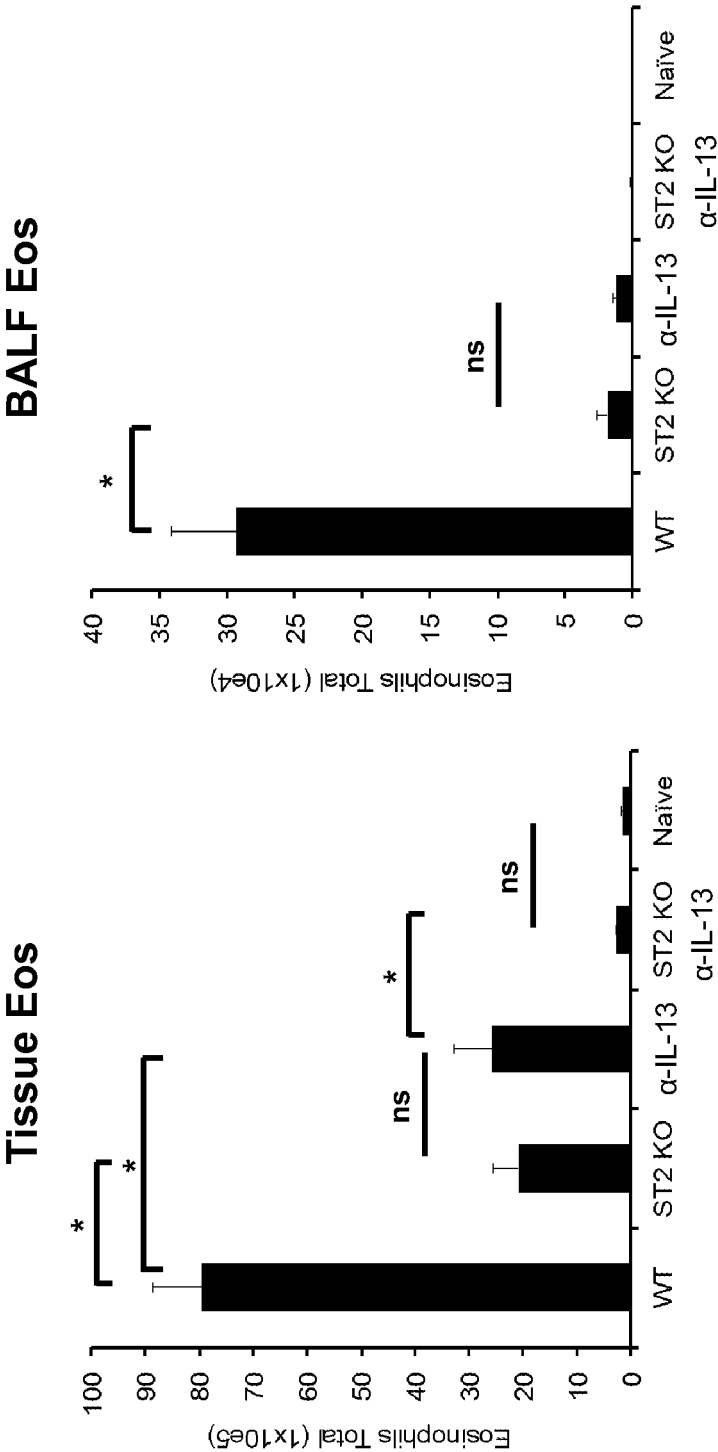
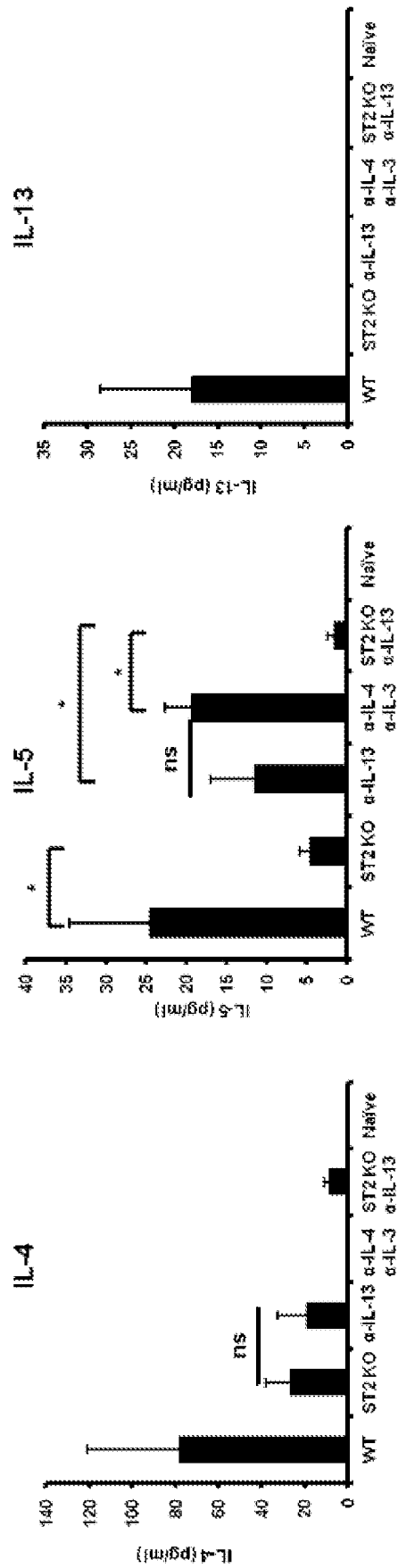


Figure 14B Lung flow cytometry analysis day 10 post-infection



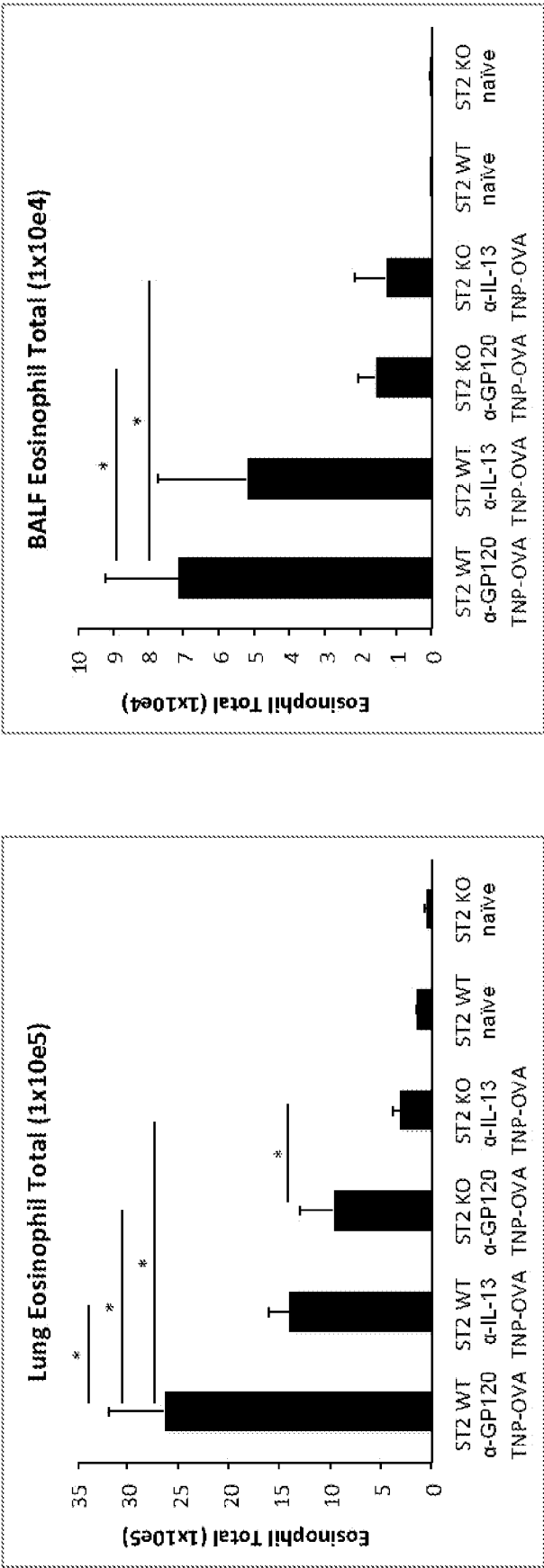
Group	Lung Day 10 Eosinophils (1x10e5)	BALF Day 10 Eosinophils (1x10e4)
WT	79.6 ± 9.1	29.3 ± 4.8
ST2 KO	20.8 ± 4.7	1.8 ± 0.8
α-IL-13	25.9 ± 6.9	1.2 ± 0.2
α-IL-13 ST2 KO	2.6 ± 0.1	0.1 ± 0.0
Naïve	1.6 ± 0.3	0.0 ± 0.0

Figure 14C
BALF cytokine analysis day 10 post-infection



Group	BALF Day 10 IL-4 (pg/ml)	BALF Day 10 IL-5 (pg/ml)	BALF Day 10 IL-13 (pg/ml)
WT	78 ± 42	25 ± 10	18 ± 11
ST2 KO	26 ± 11	5 ± 1	0 ± 0
α -IL-13	19 ± 13	11 ± 6	0 ± 0
α -IL-13 ST2 KO	9 ± 2	2 ± 1	0 ± 0
Naïve	0 ± 0	0 ± 0	0 ± 0

Figure 15A



Group	Lung Eosinophils (1x10e5)	BALF Eosinophils (1x10e4)
WT	26.5 ± 5.4	7.2 ± 2.0
α-IL-13	14.1 ± 2.0	5.2 ± 2.5
ST2 KO	9.7 ± 3.3	1.6 ± 0.5
α-IL-13 ST2 KO	3.2 ± 0.6	1.3 ± 0.9
WT Naïve	1.5 ± 0.1	0.0 ± 0.0
ST2 KO Naïve	0.5 ± 0.1	0.0 ± 0.0

Figure 15B

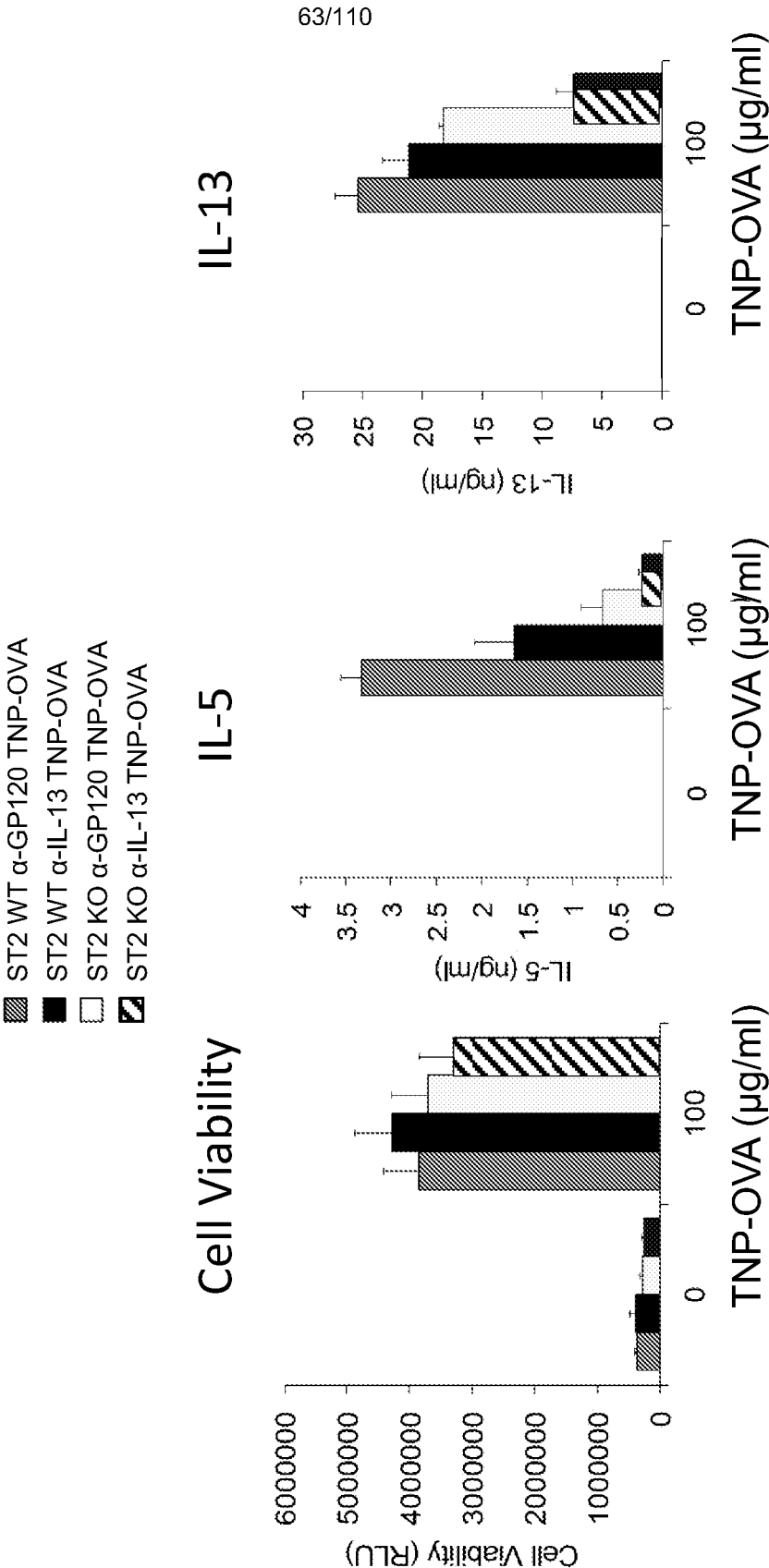


Figure 16A

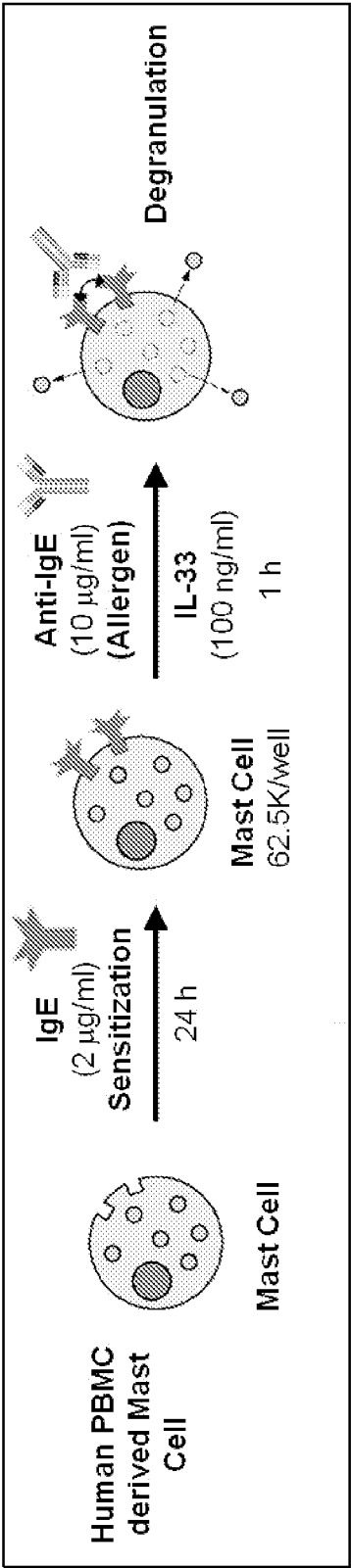
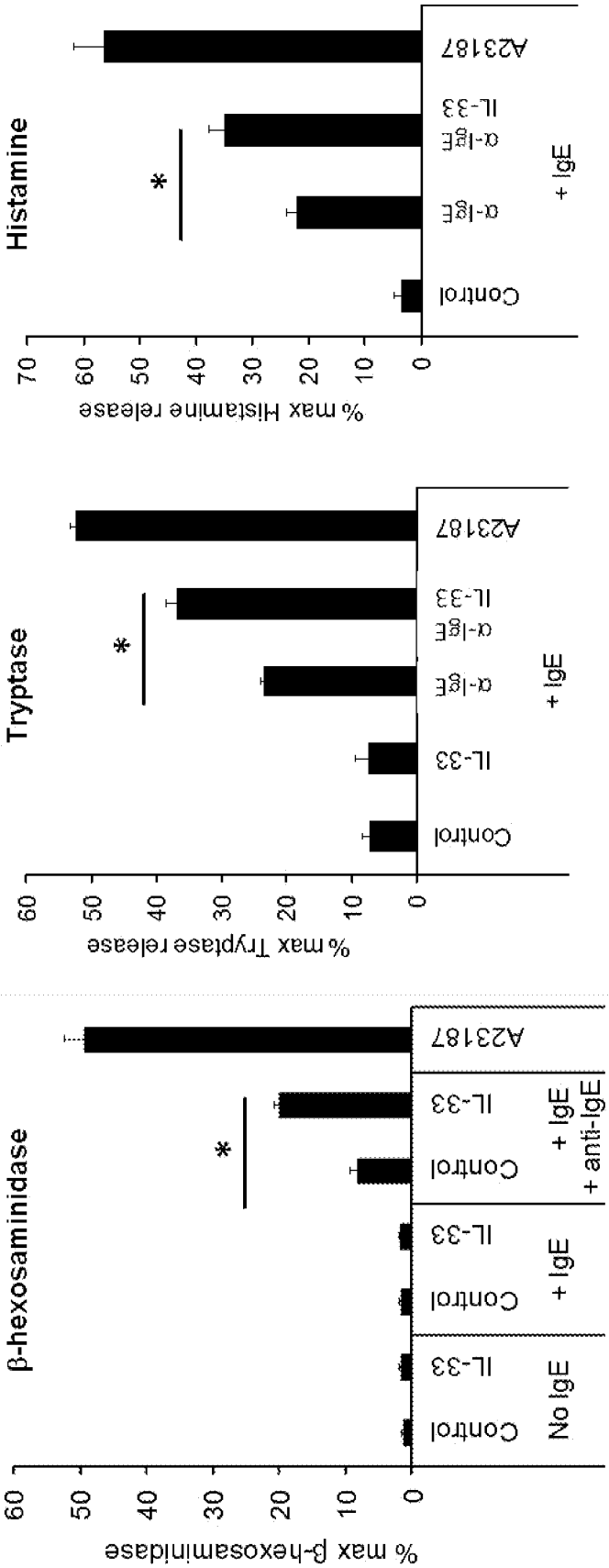
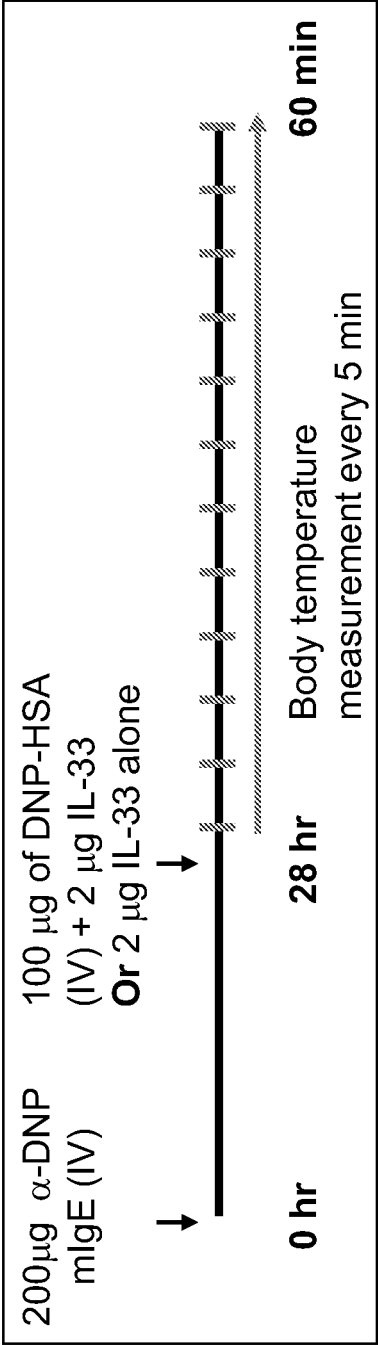
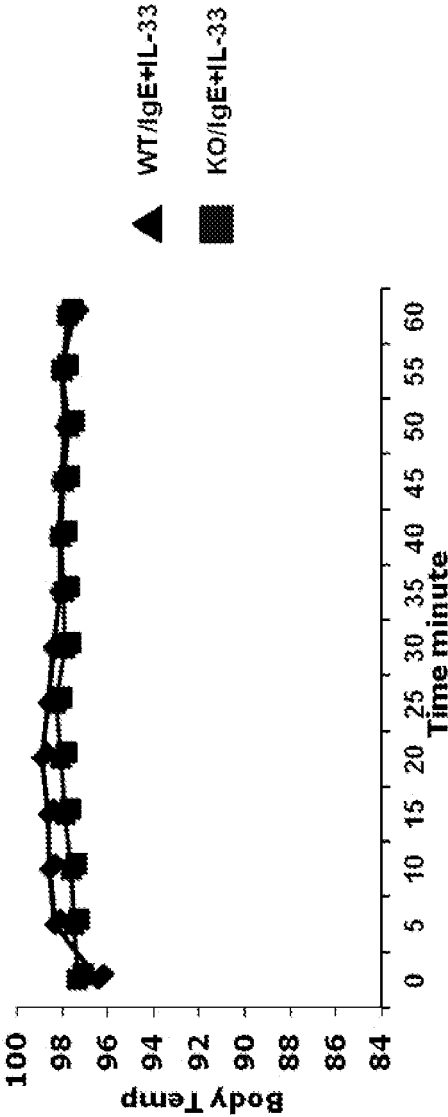


Figure 16B

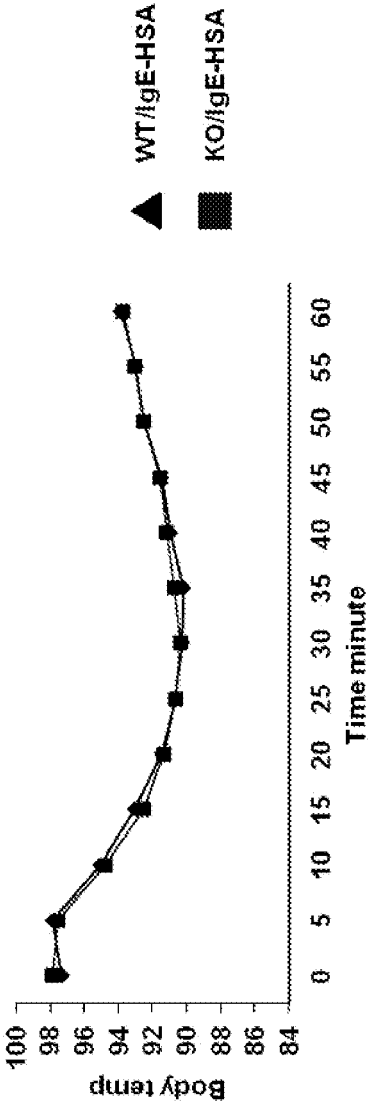


Figures 16C-16D

C.



D.



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Figure 16E

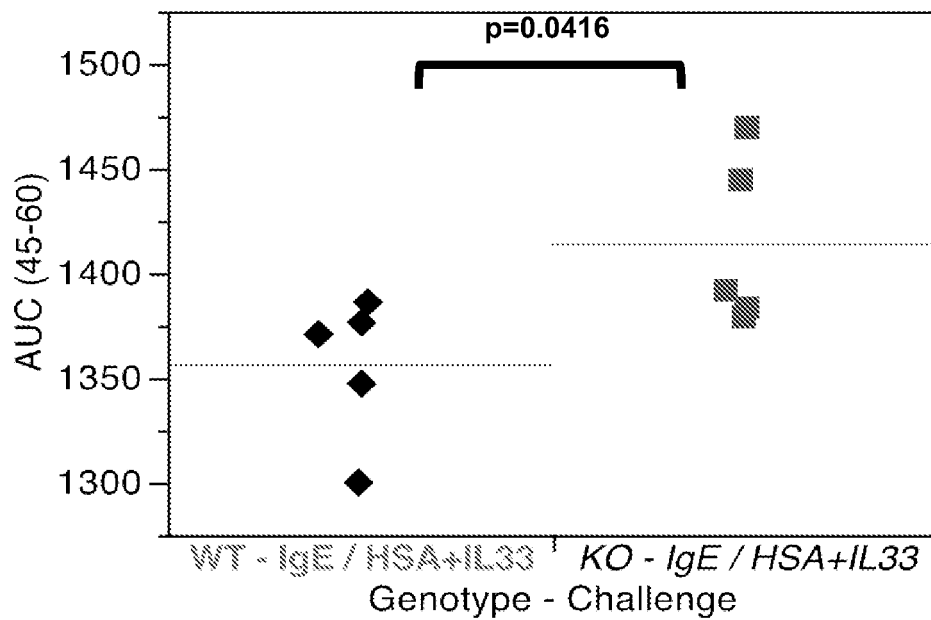
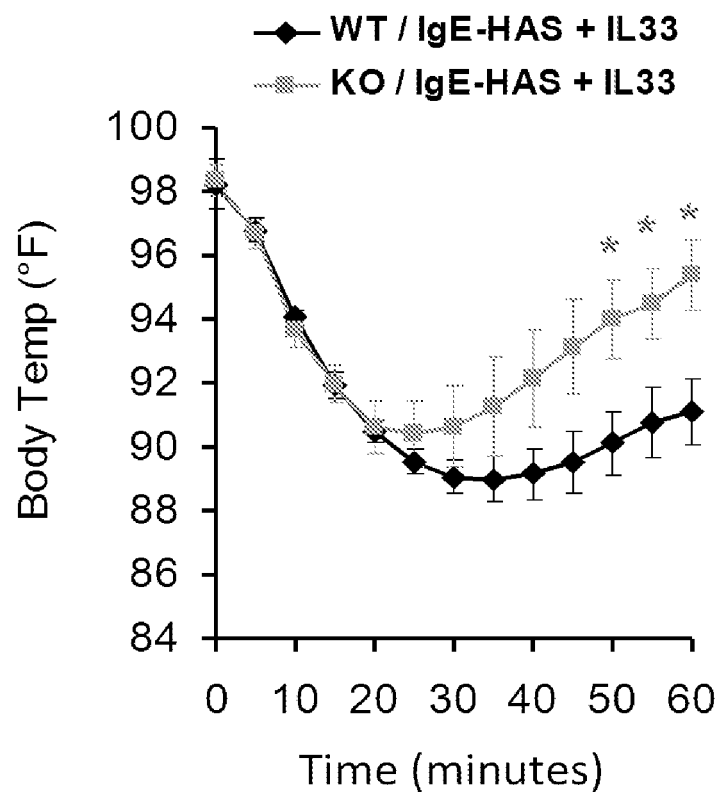


Figure 16F

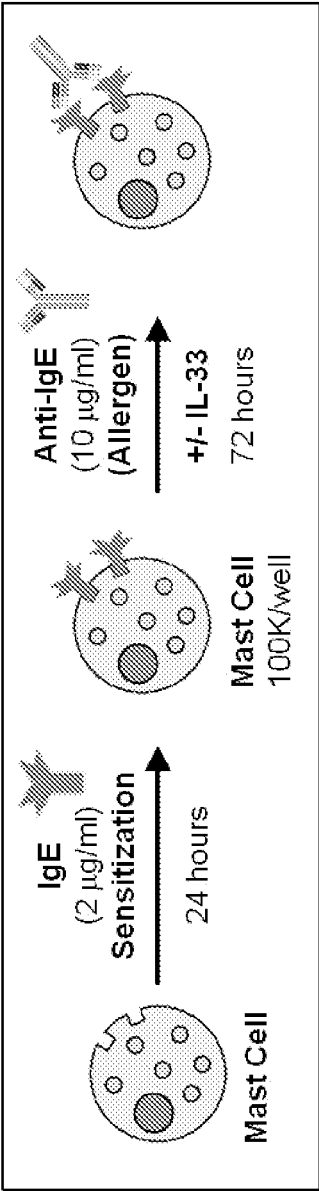
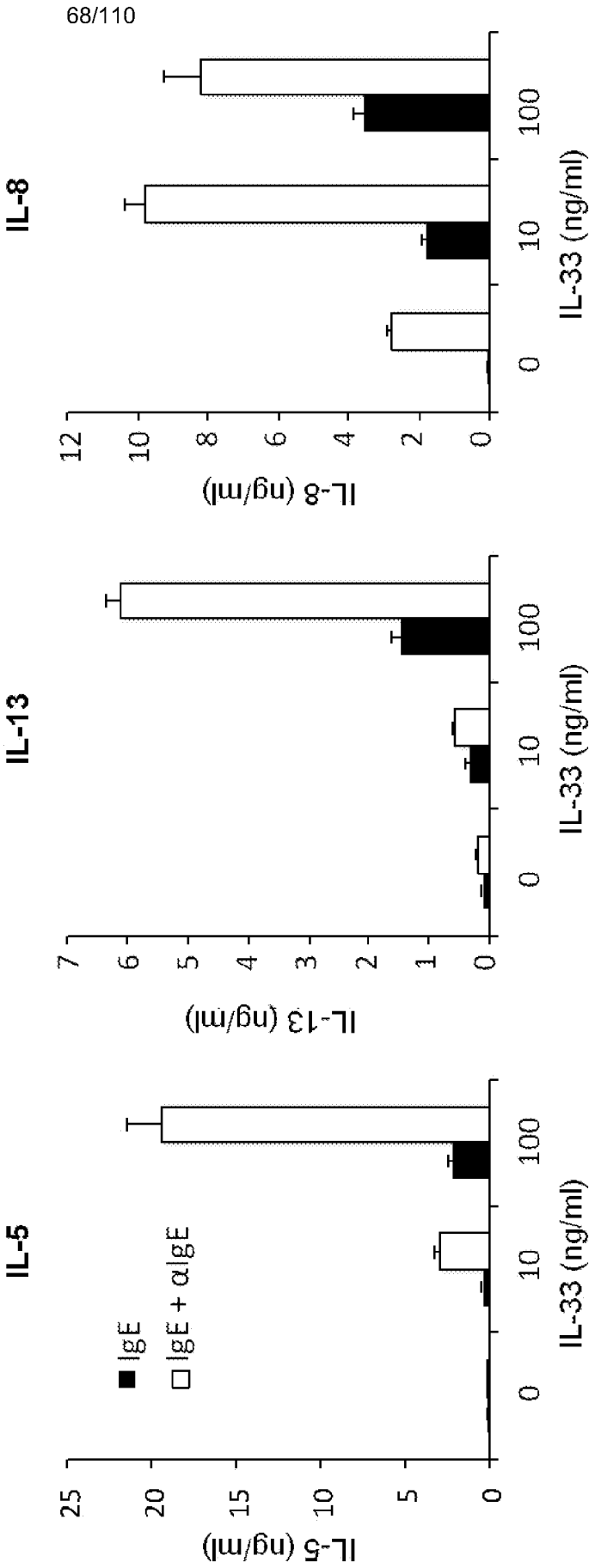


Figure 16G

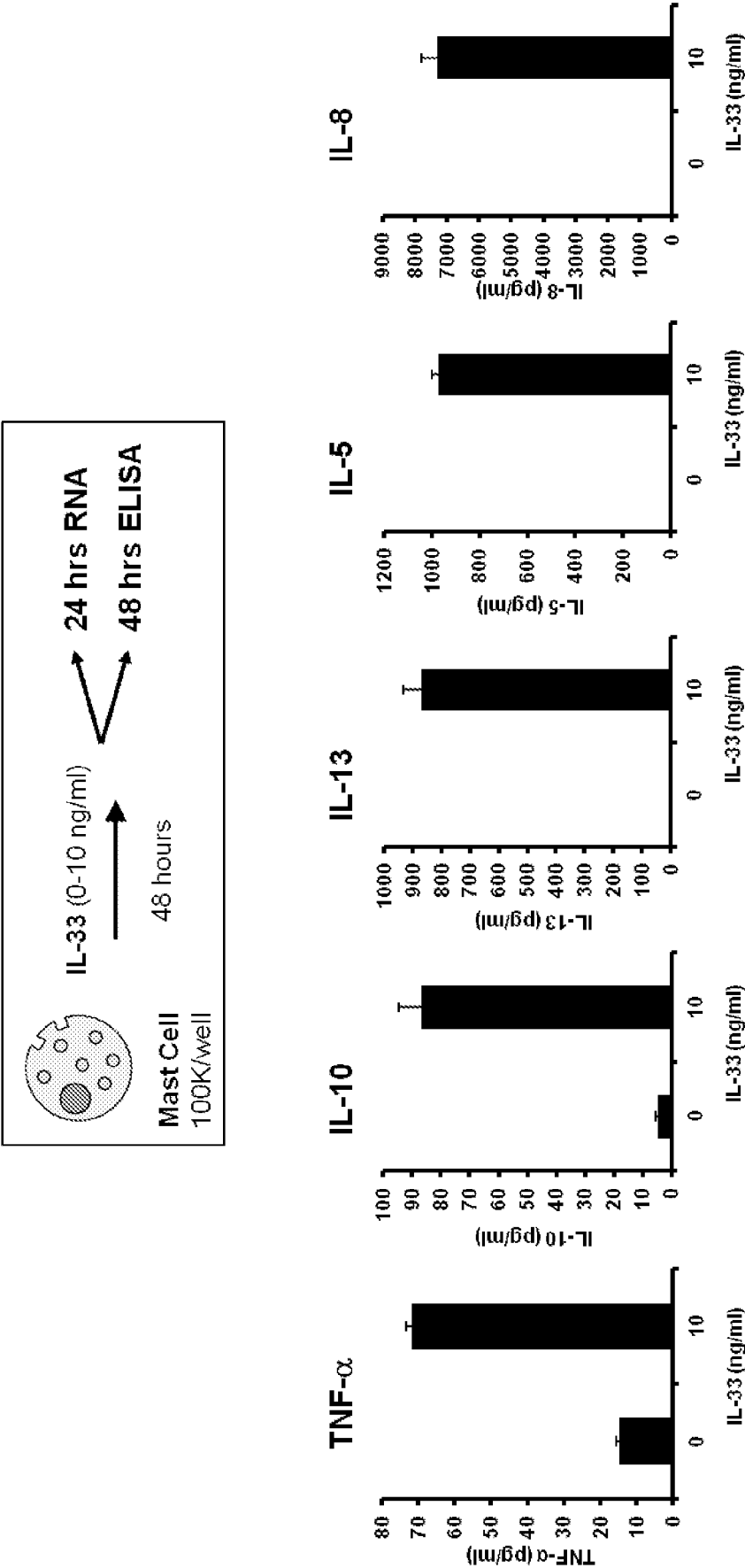


Figure 16H

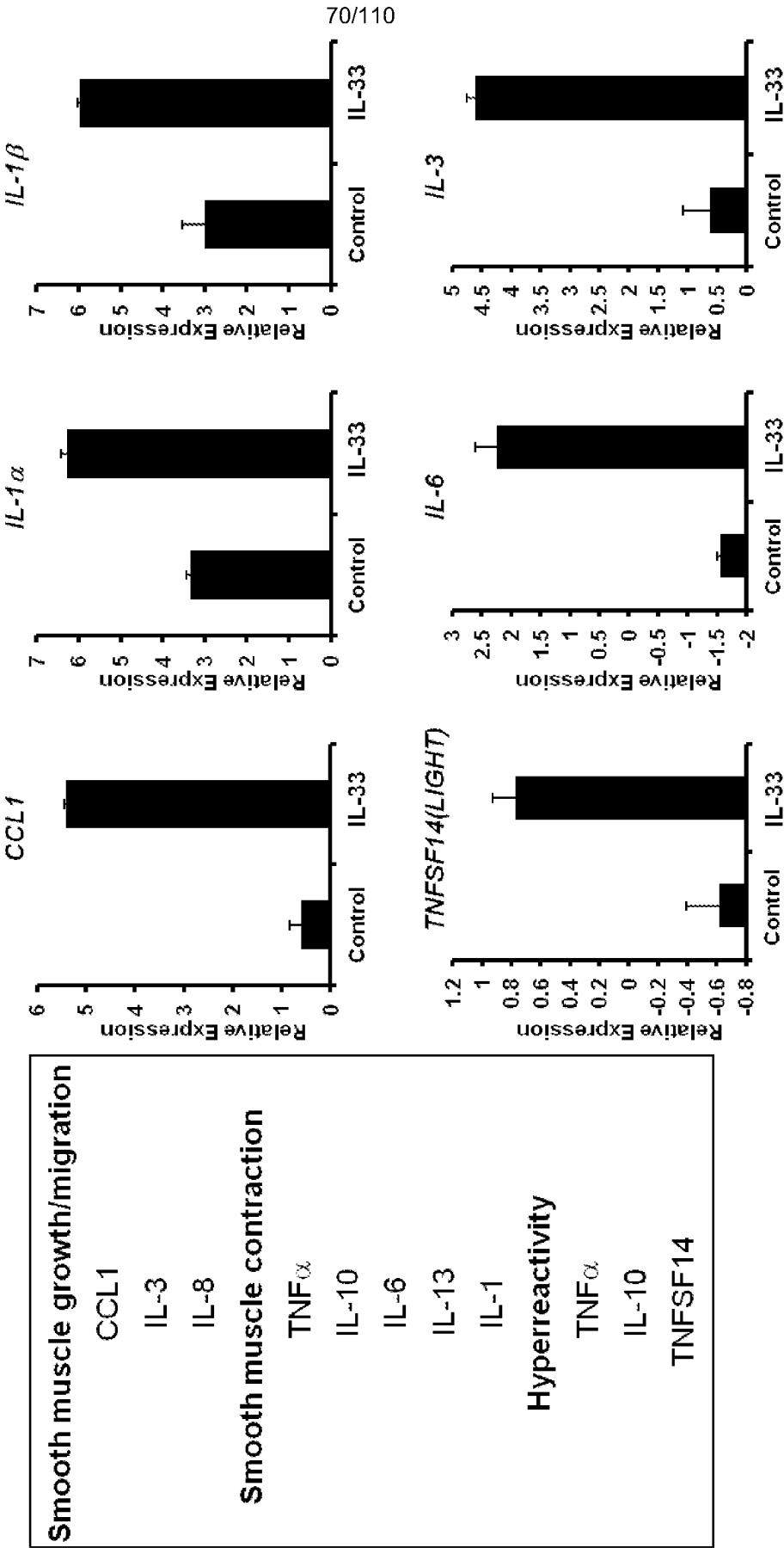


Figure 17A

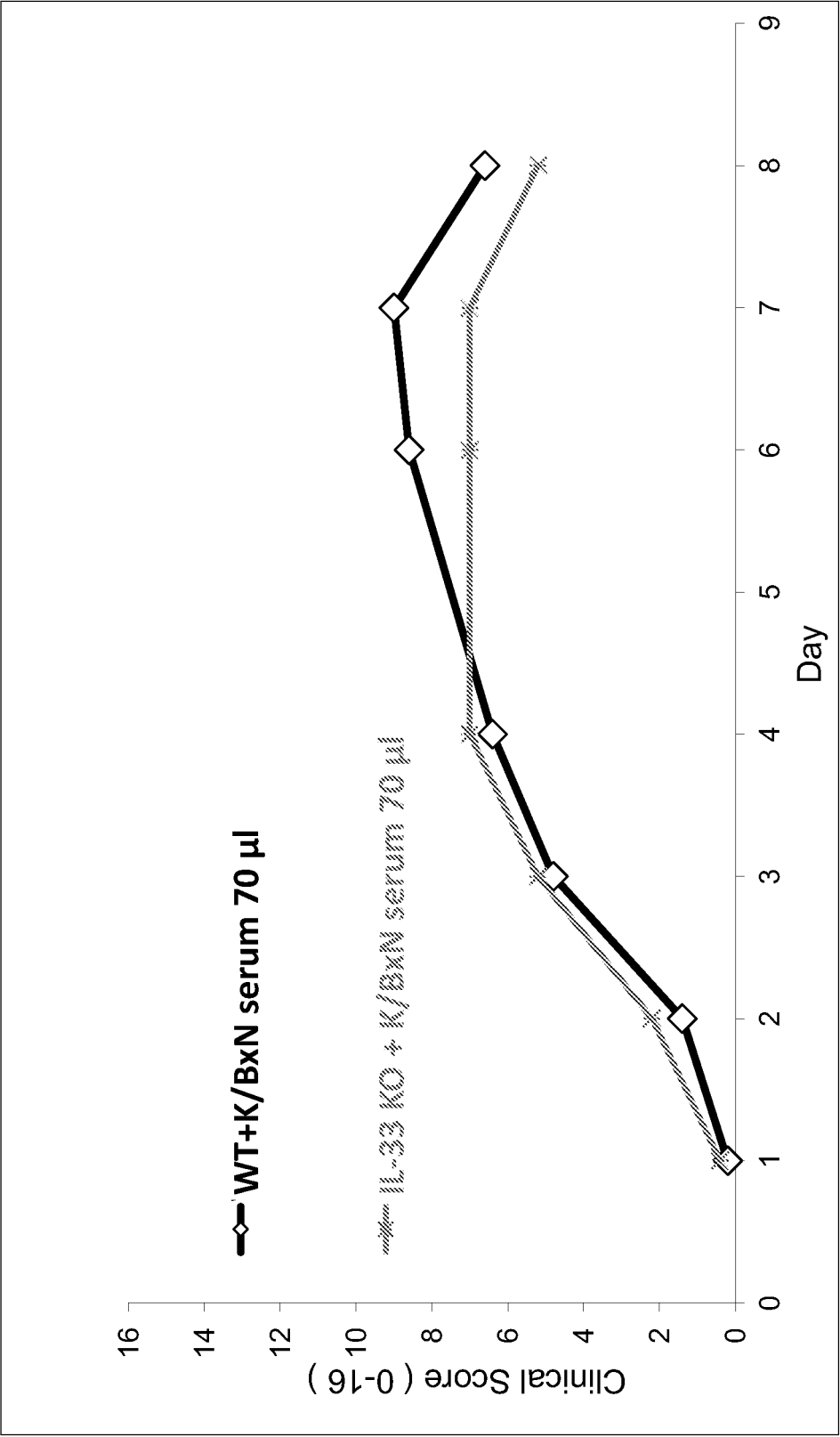
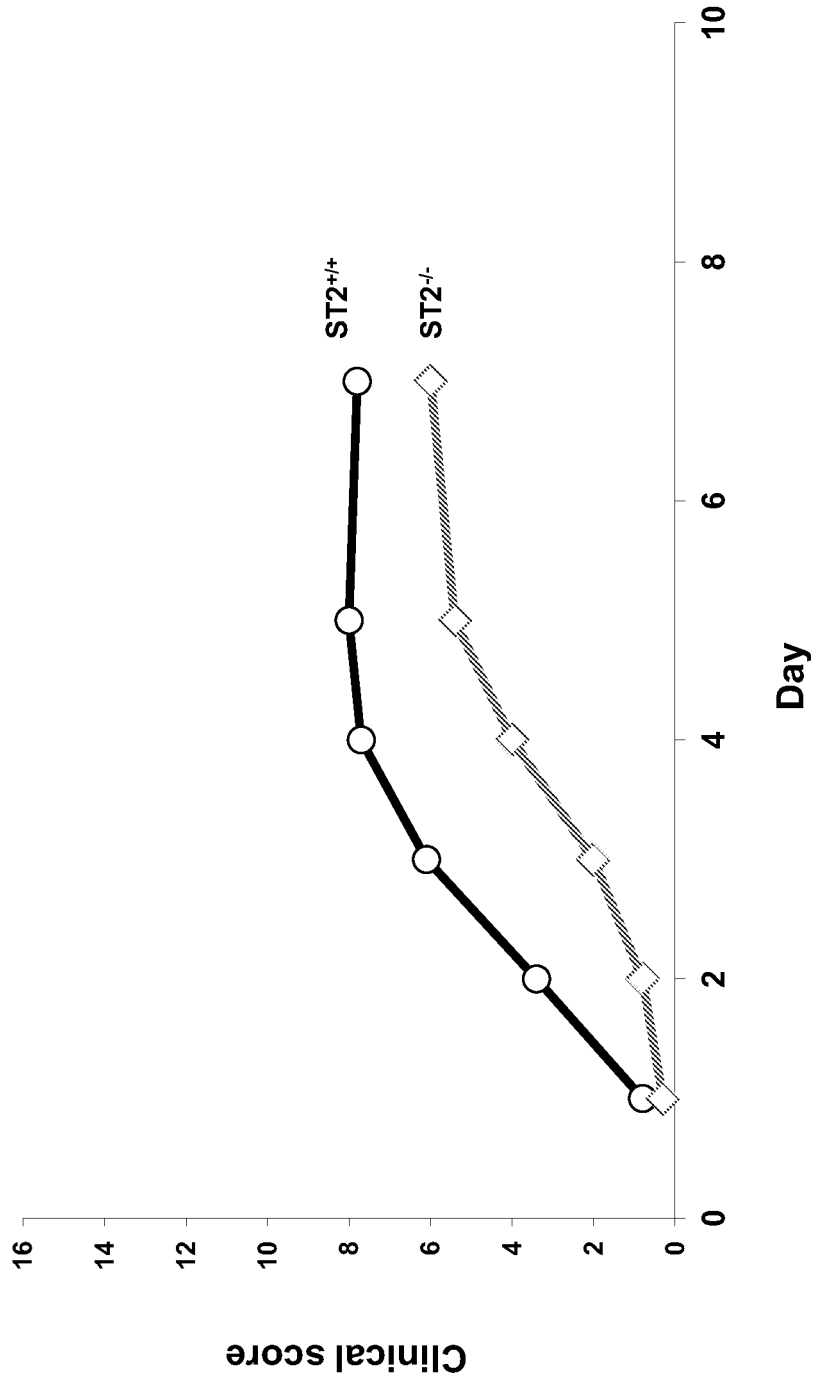
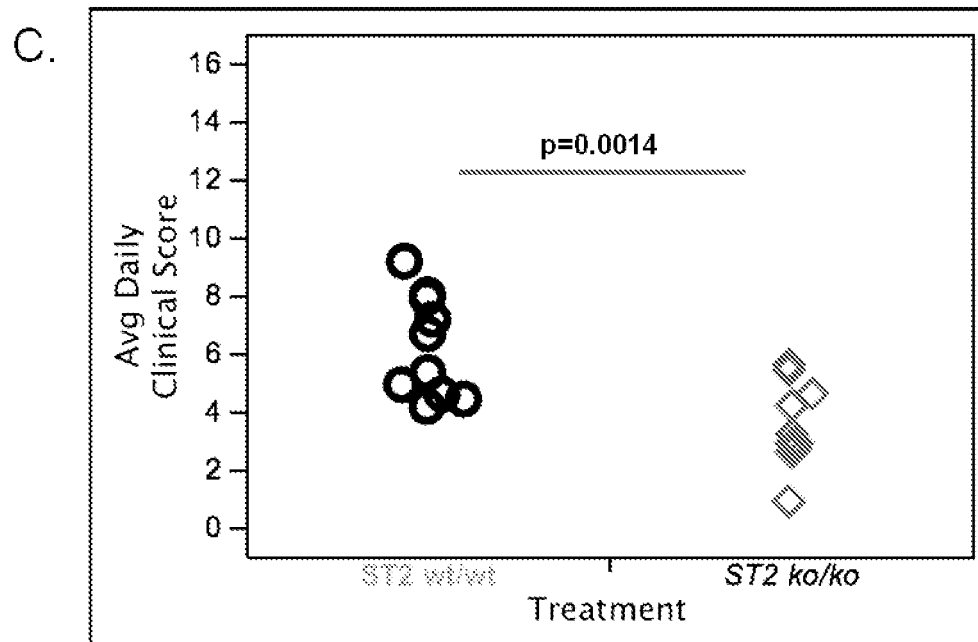
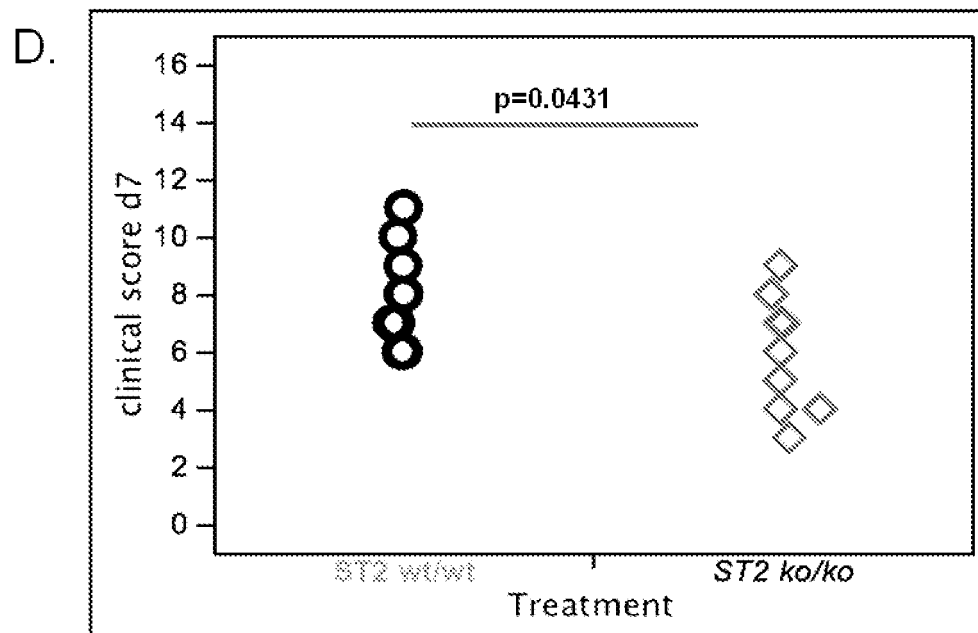


Figure 17B



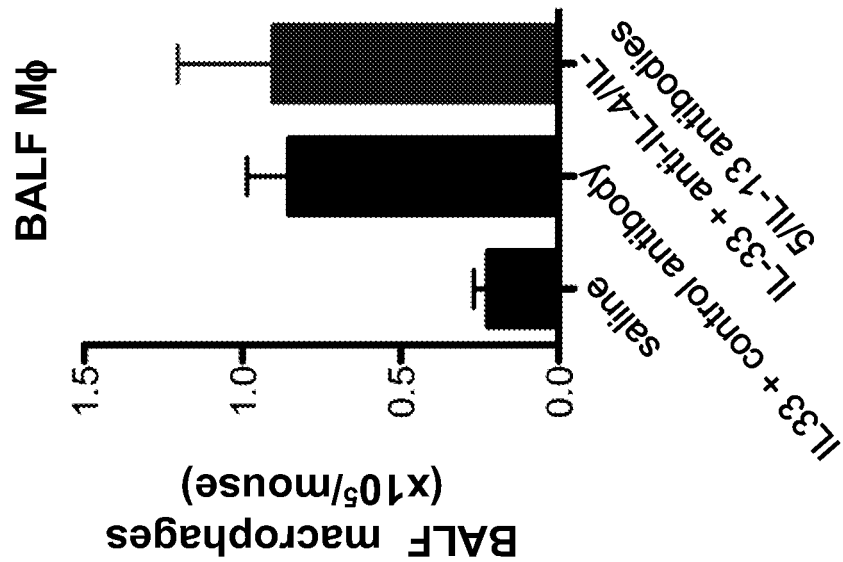
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Figures 17C-17D



Figures 18B-18C

B.



C.

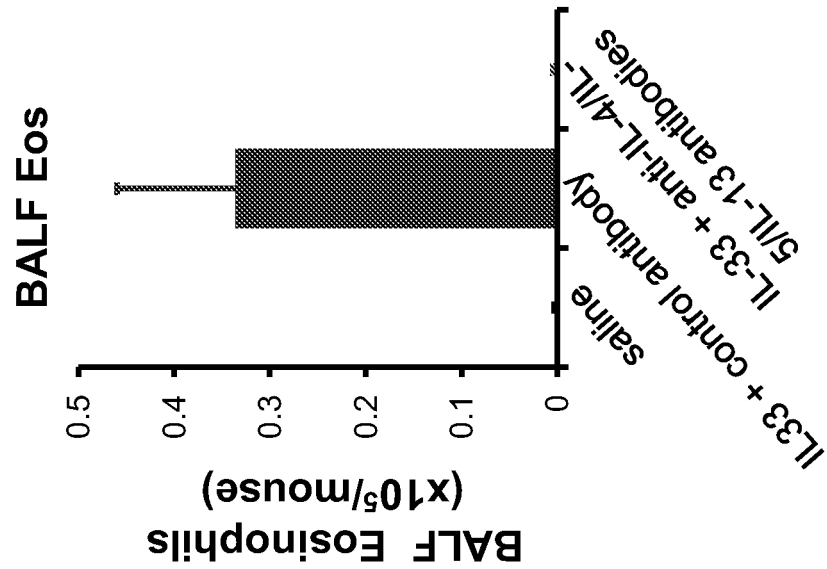
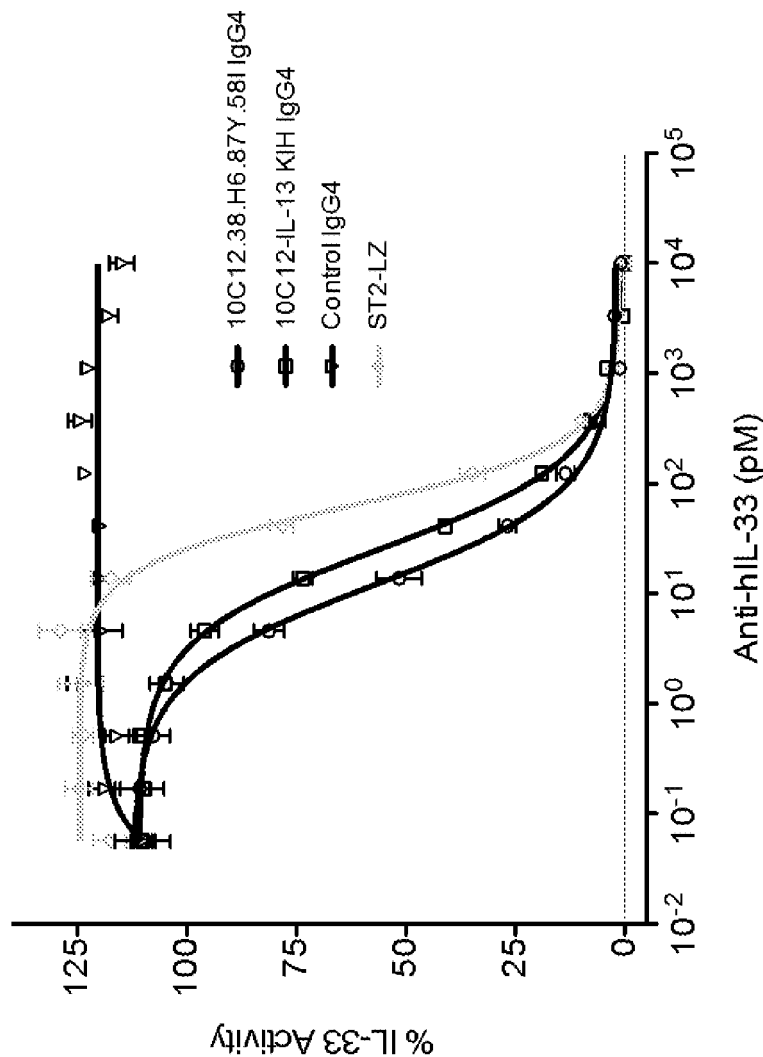


Figure 19A HEK-BLUE™ cell-based IL-33 blocking assay



10C12.38.H6.87Y.58I IgG4	10C12-IL-13 KIH IgG4	Control IgG4	ST2-LZ
102.1 (0.0153 µg/ml)	204.7 (0.0307 µg/ml)	1.082e-006	256.6

IC90 (pM)

10C12.38.H6.87Y.58I IgG4	10C12-IL-13 KIH IgG4	Control IgG4	ST2-LZ
11.99	25.35	7.633e-006	62.11

IC50 (pM)

Figure 19B

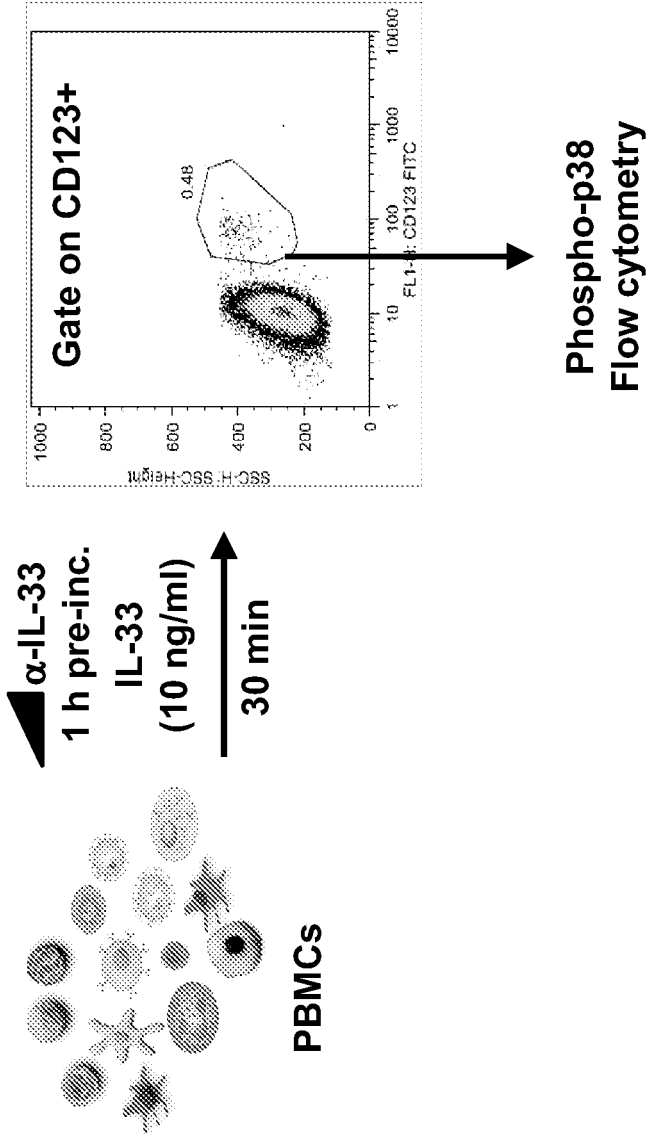


Figure 19C

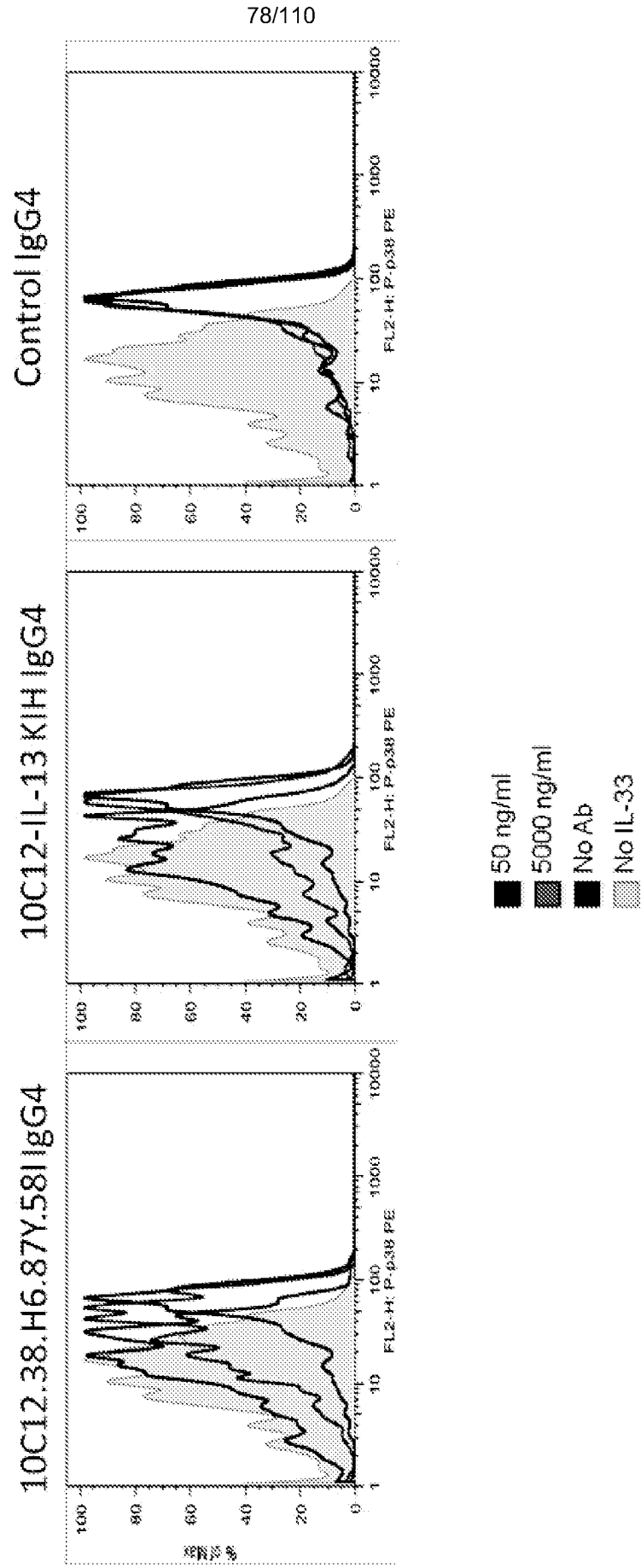


Figure 19D

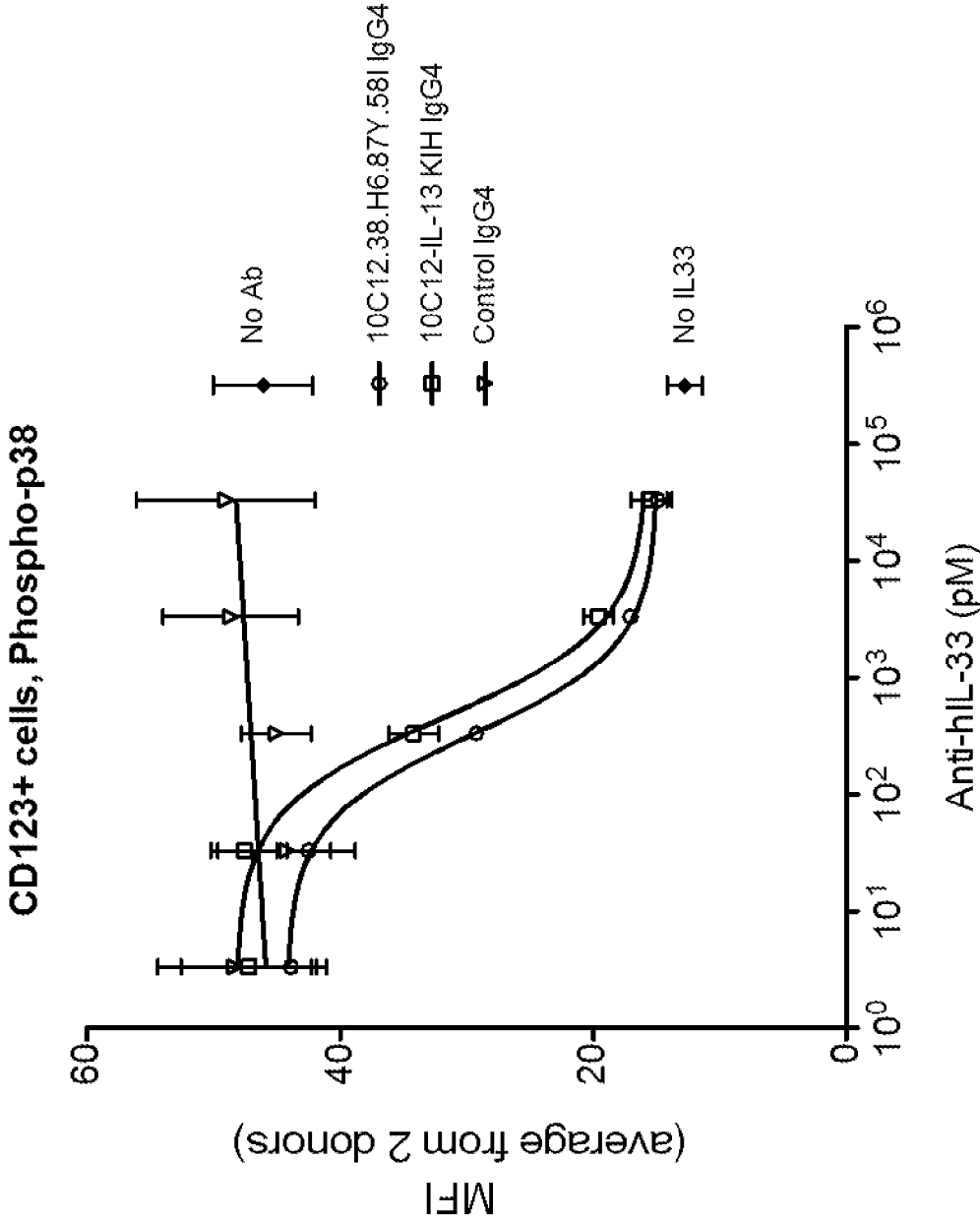


Figure 20

10C12.38.H6.87Y.58I/IL-13 IgG4 bispecific antibody

Lot	Human IL-33			Cyno IL-33			Human IL-13		
	k_{on} (1/Ms) (x10 ⁵)	k_{off} (1/s) (x10 ⁻⁴)	K_D (nM)	k_{on} (1/Ms) (x10 ⁵)	k_{off} (1/s) (x10 ⁻⁴)	K_D (nM)	k_{on} (1/Ms) (x10 ⁵)	k_{off} (1/s) (x10 ⁻⁴)	K_D (nM)
1	11.0	0.11	0.010	6.7	0.72	0.107	14.9	0.02	<0.010
2	11.4	0.30	0.026	6.5	0.40	0.062	14.7	0.04	<0.010
3	9.9	0.40	0.041	7.0	0.41	0.059	14.5	0.06	<0.010

Figure 21A

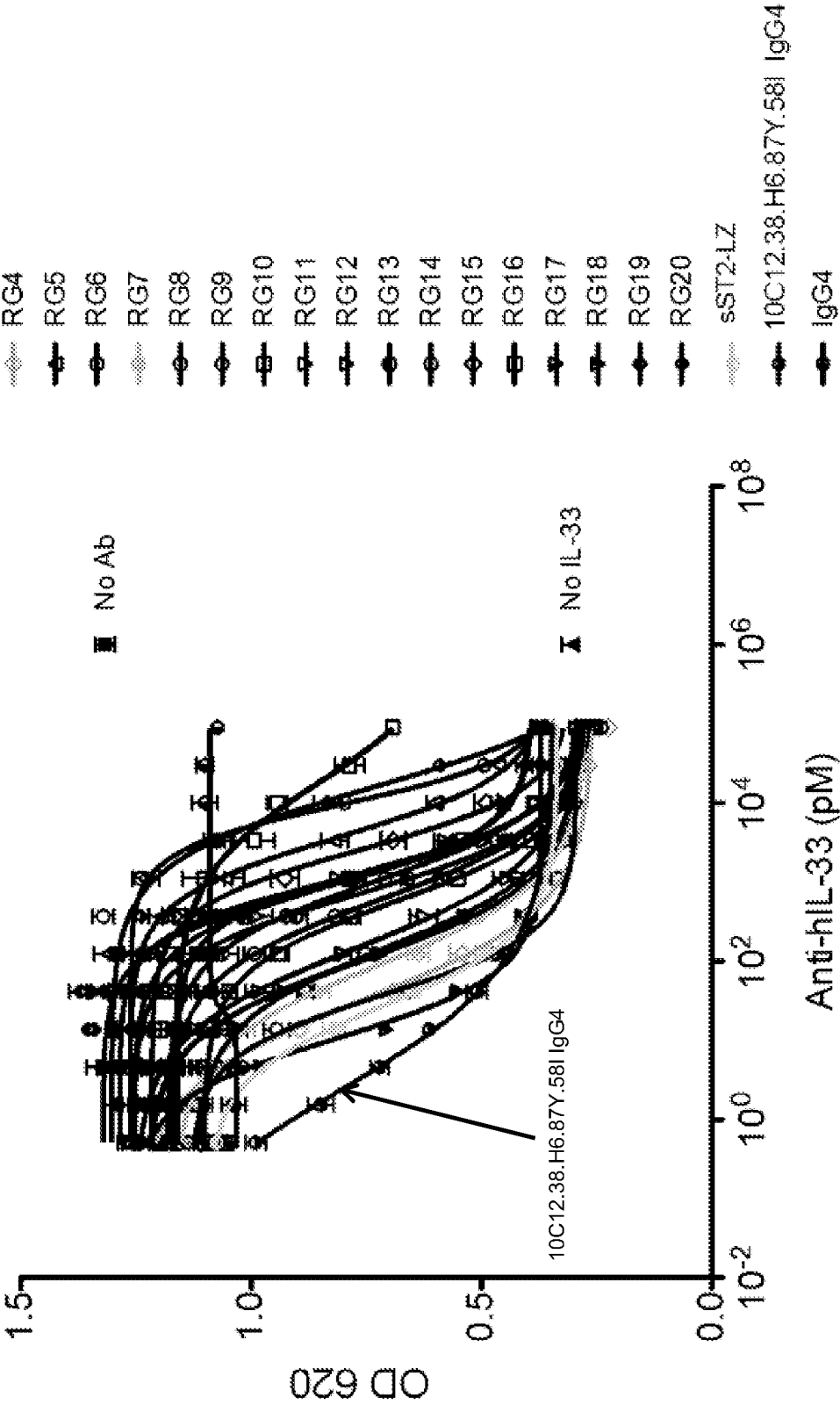


Figure 21B

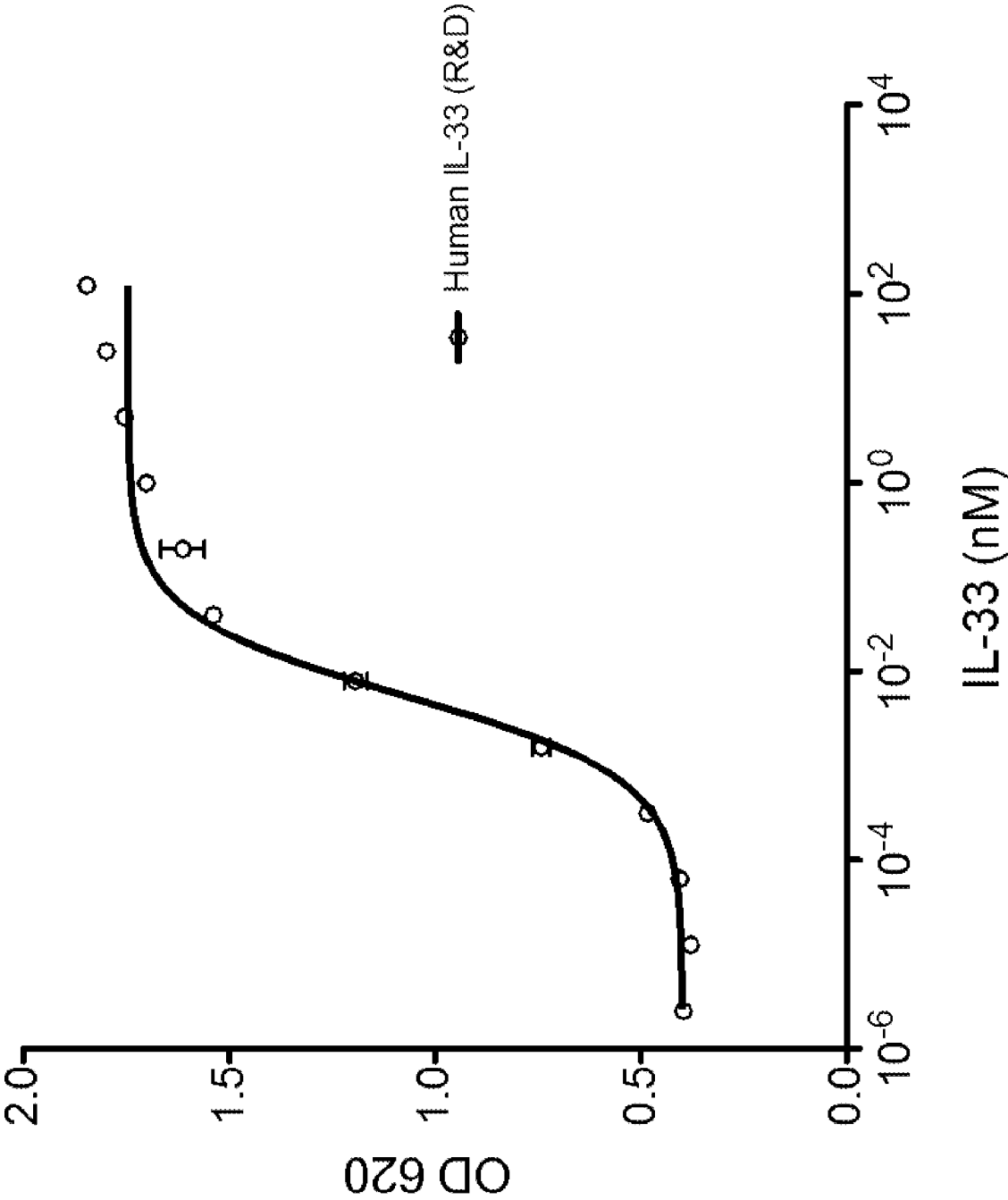


Figure 21C

Species	Human	Cyno
EC50 [M]	5.5E-12	2.1E-11
IL-33	10pM hIL-33	5pM cIL-33-Nhis
Ab	IC50 [M]	IC50 [M]
10C12.38.H6.87Y.58I IgG4	2.4E-12	4.2E-09
sST2	2.7E-11	3.0E-11
RG1	9.5E-09	non-blocking
RG2	1.7E-08	non-blocking
RG3	1.1E-10	2.9E-08
RG4	3.3E-11	non-blocking
RG5	3.7E-09	non-blocking
RG6	6.1E-10	non-blocking
RG7	9.2E-11	6.6E-08
RG8	3.8E-11	4.8E-08
RG9	1.5E-10	3.4E-08
RG10	1.5E-09	2.3E-08
RG11	1.5E-10	non-blocking
RG12	1.1E-09	1.1E-08
RG13	7.1E-10	non-blocking
RG14	1.0E-09	non-blocking
RG15	2.6E-09	non-blocking
RG16	5.7E-10	5.0E-08
RG17	9.8E-10	non-blocking
RG18	1.1E-11	5.7E-08
RG19	8.2E-10	non-blocking
RG20	1.6E-08	6.1E-09

Figure 21D

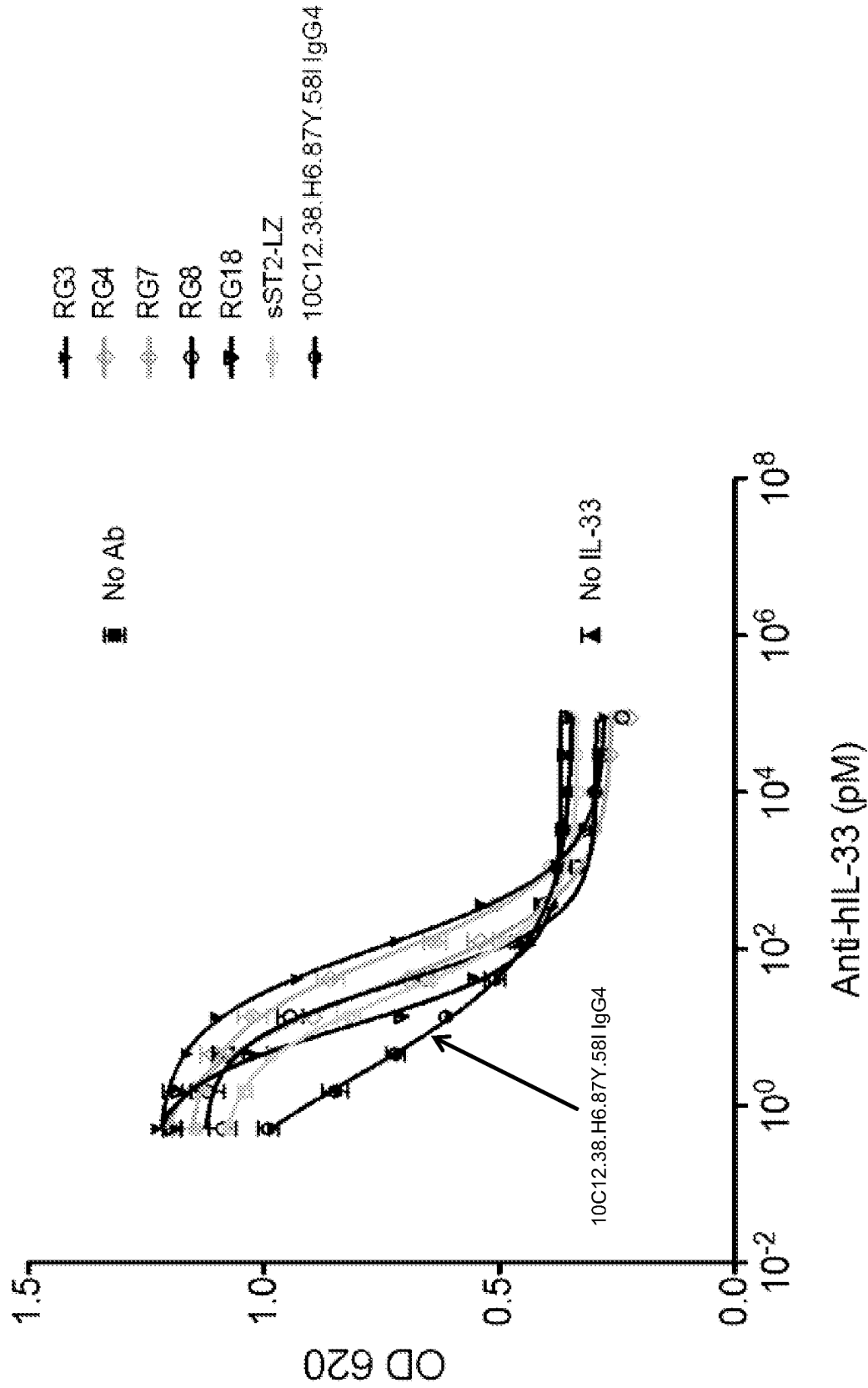
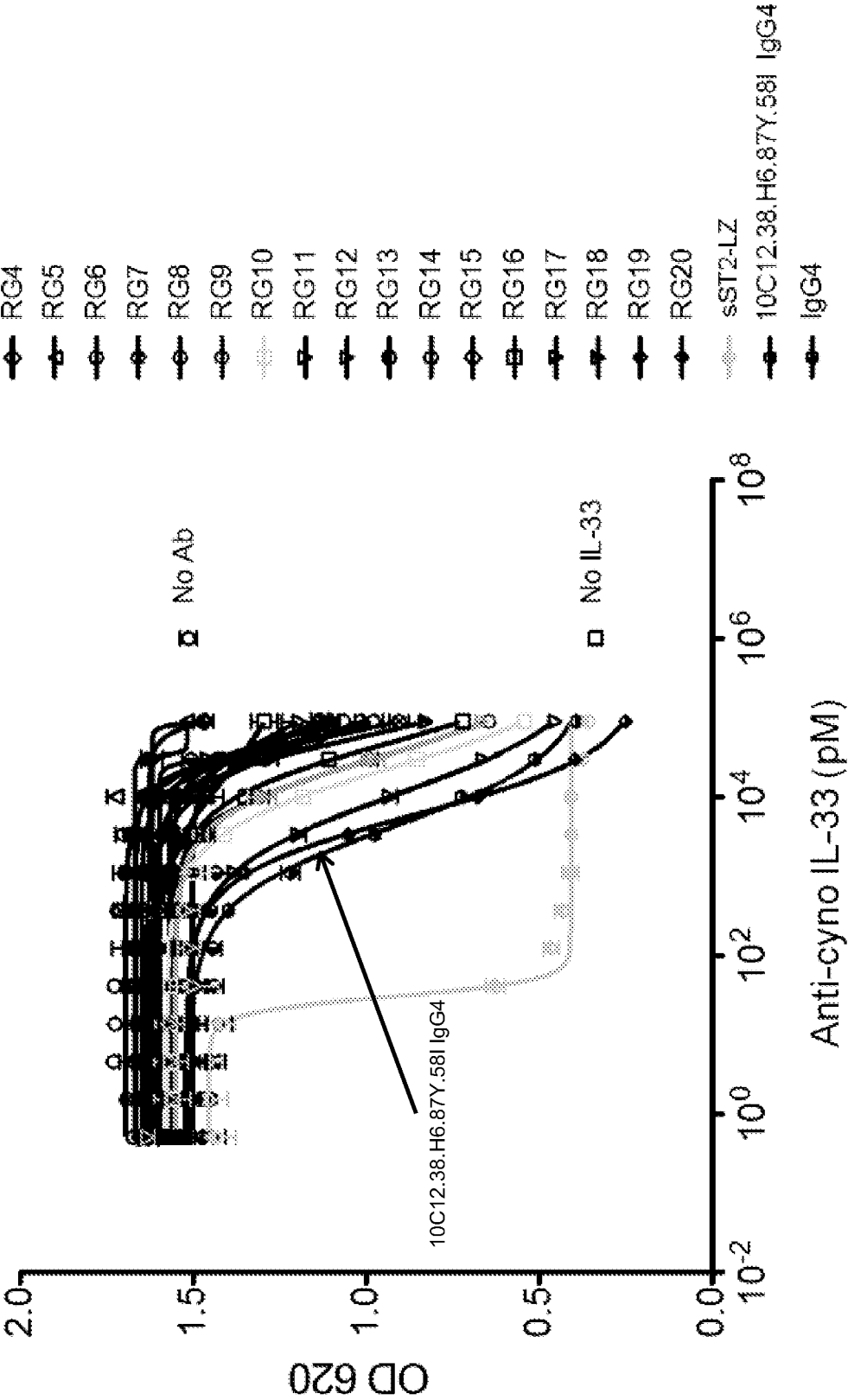


Figure 22A



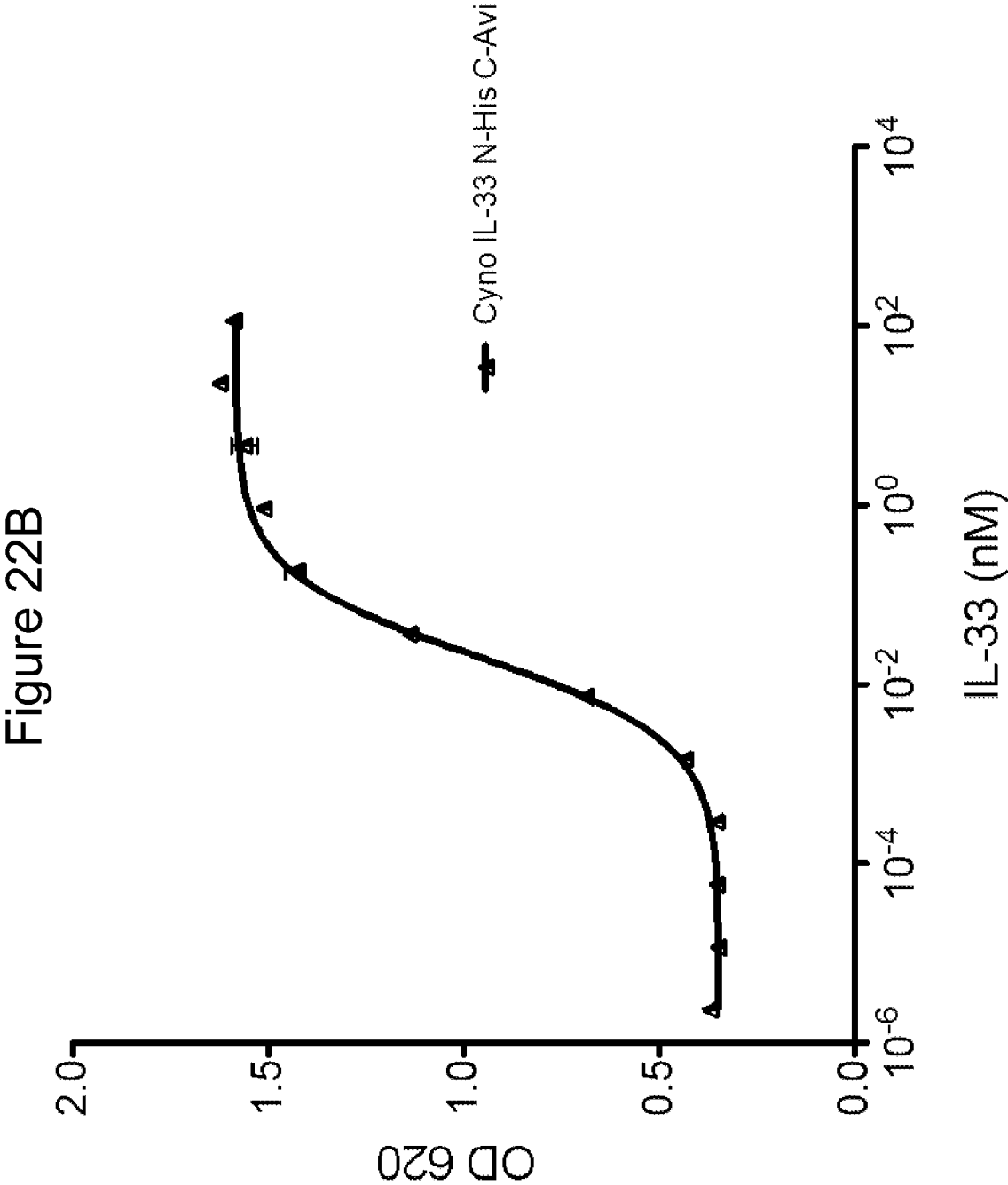
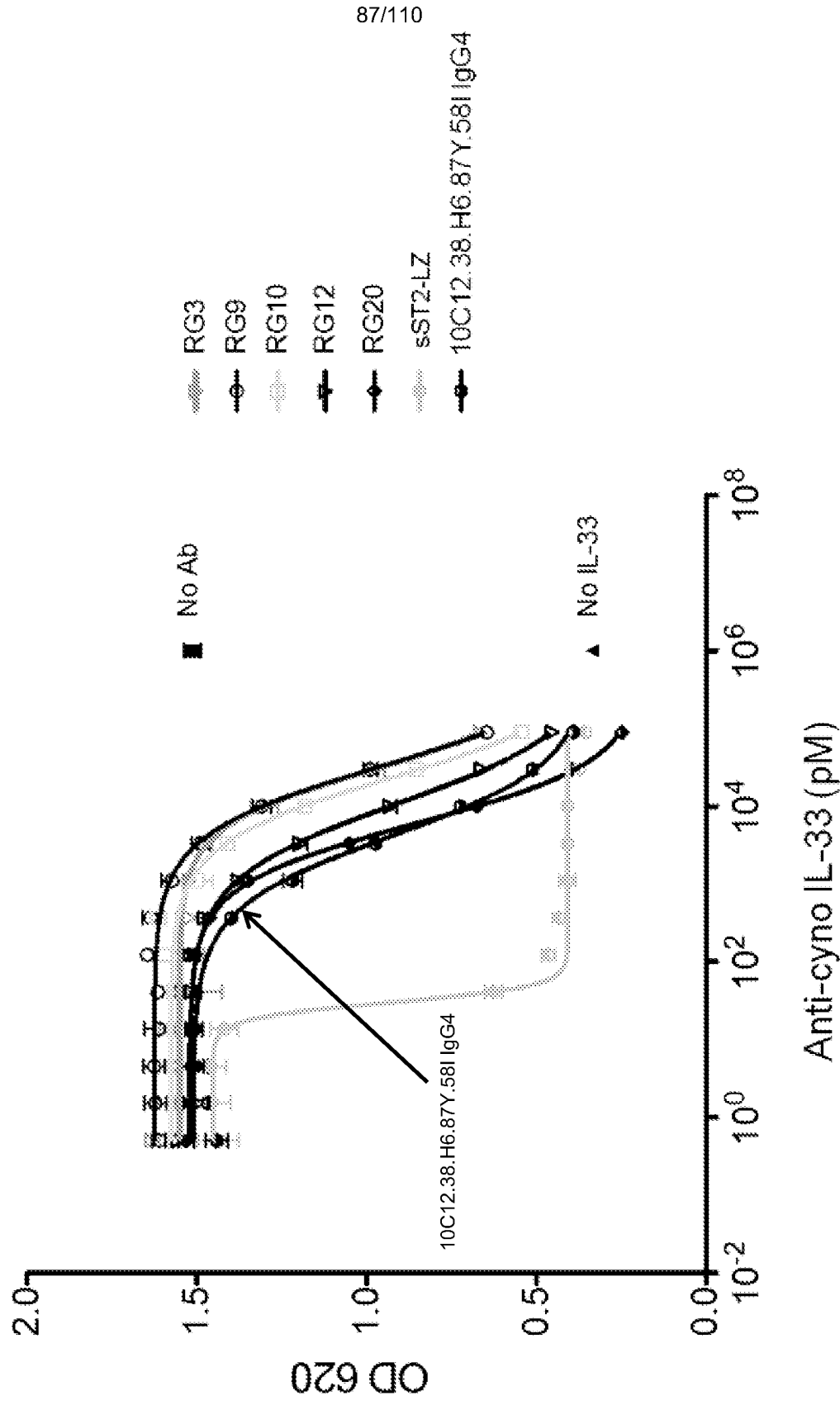


Figure 22C



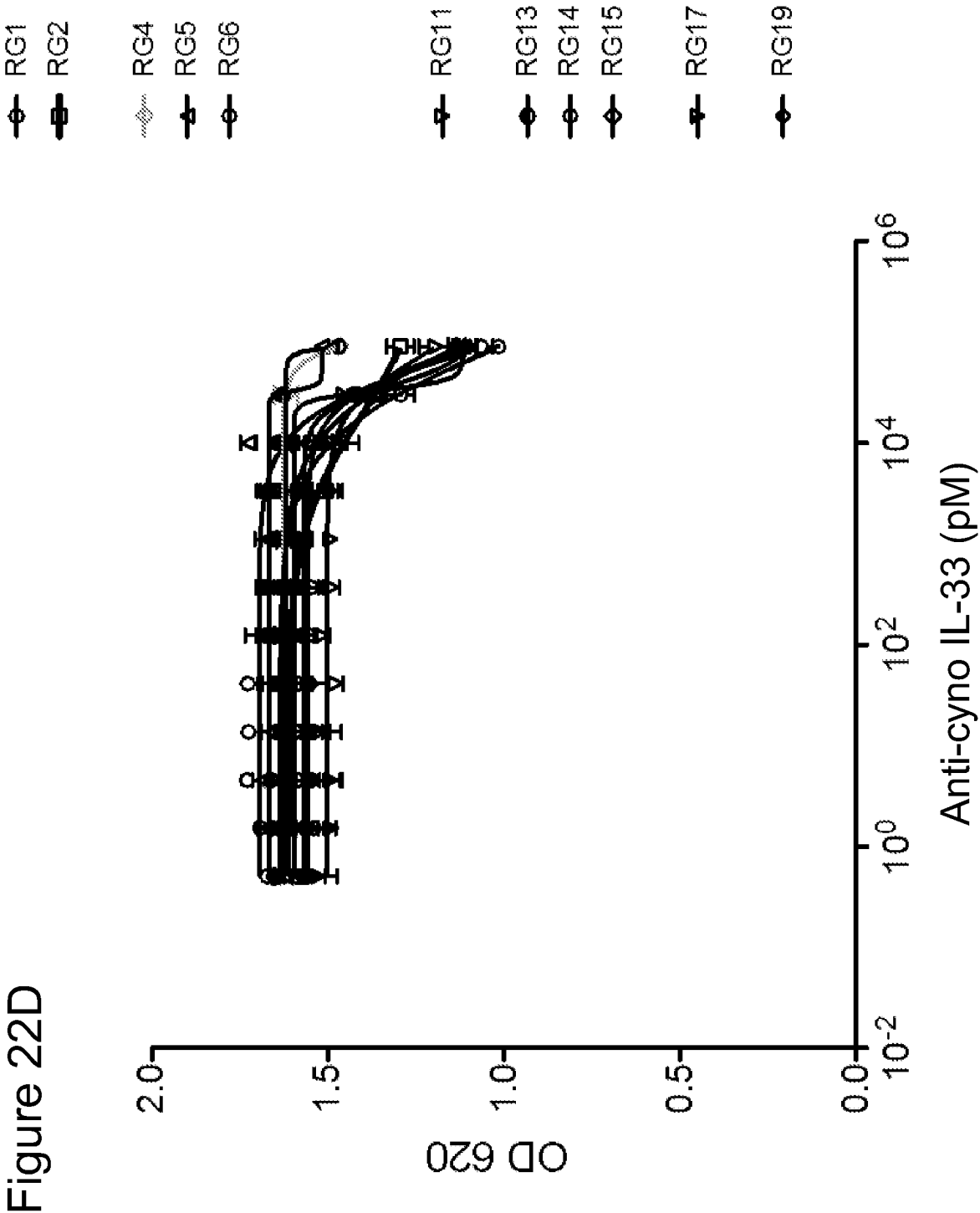


Figure 23A

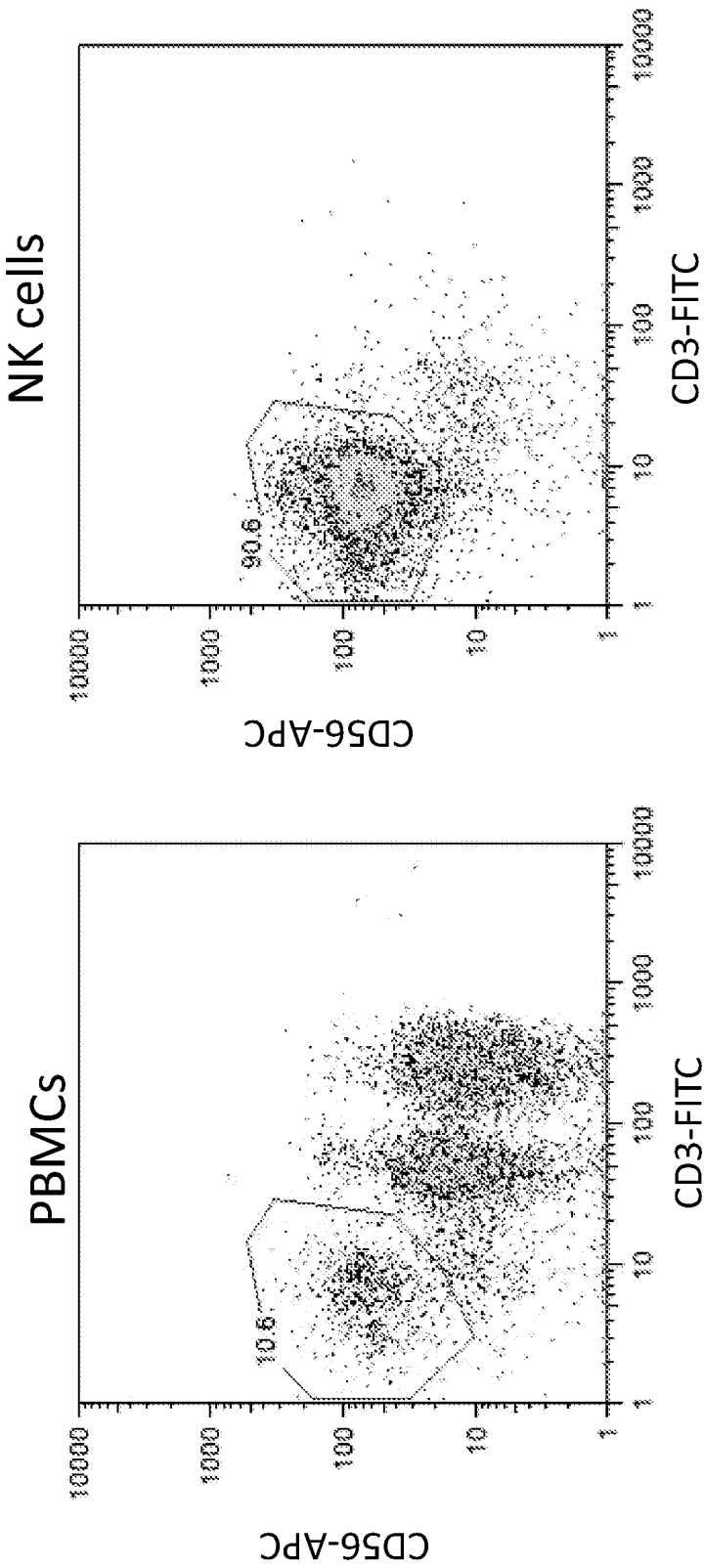


Figure 23B

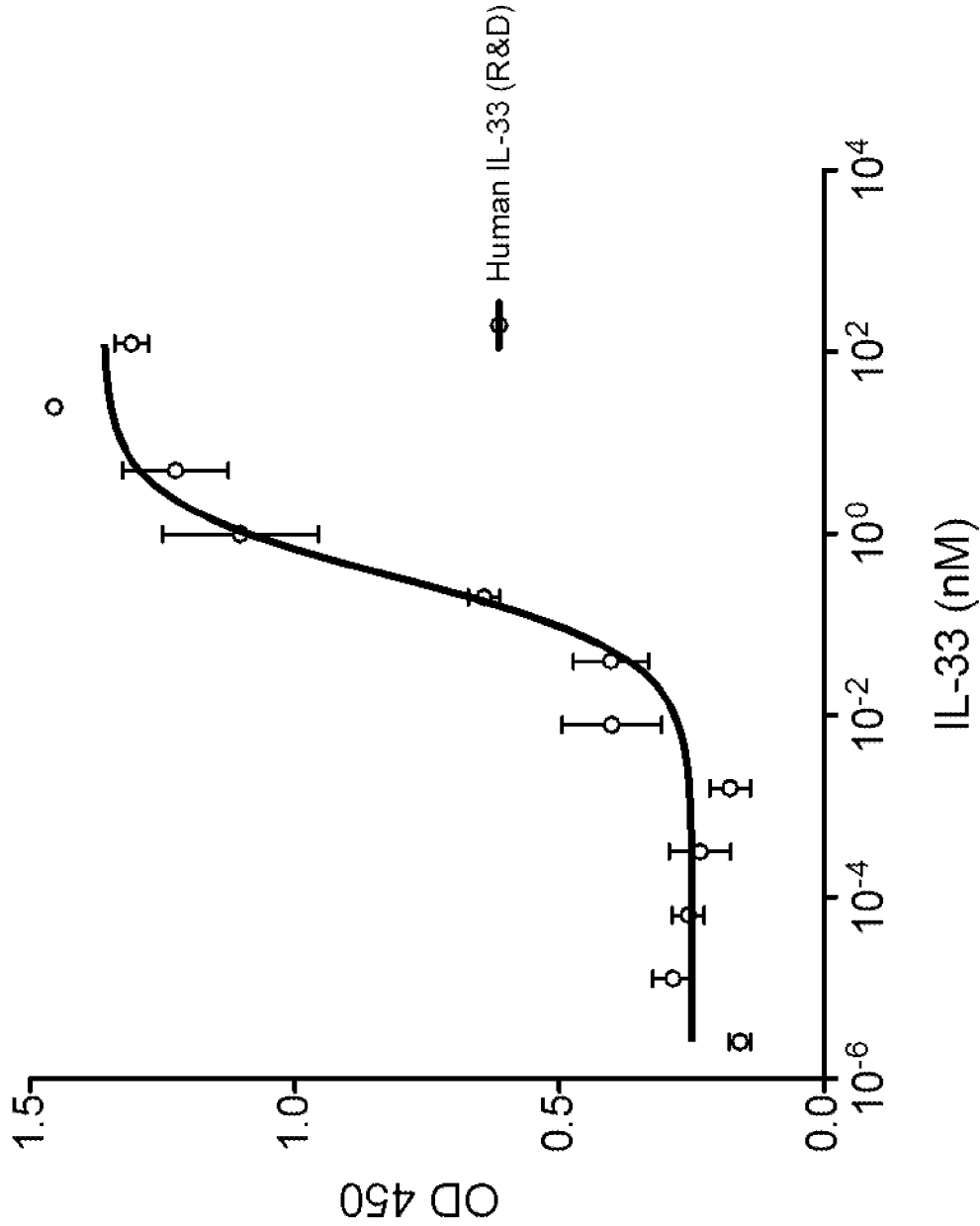
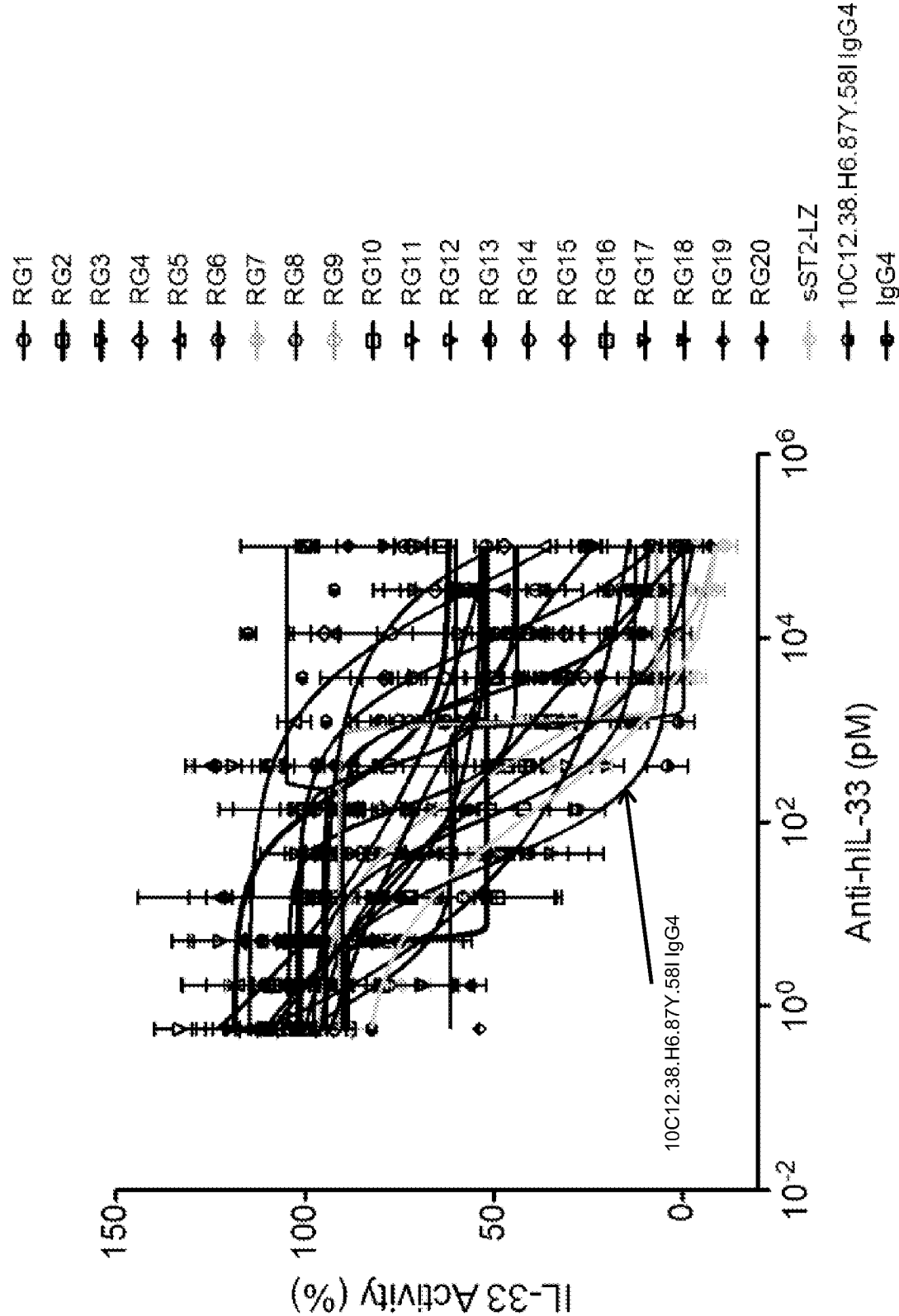


Figure 23C



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Figure 23D

NK assay

Species	Human
EC50 [M]	3.3E-10
IL-33	260pM hIL-33
Ab	IC50 [M]
10C12.38.H6.87Y.58I IgG4	3.3E-11
sST2	1.5E-10
RG1	non-blocking
RG2	non-blocking
RG3	non-blocking
RG4	non-blocking
RG5	4.1E-08
RG6	2.4E-09
RG7	5.1E-10
RG8	2.4E-10
RG9	1.2E-09
RG10	4.6E-09
RG11	non-blocking
RG12	non-blocking
RG13	1.0E-08
RG14	non-blocking
RG15	non-blocking
RG16	non-blocking
RG17	non-blocking
RG18	9.7E-11
RG19	1.2E-09
RG20	non-blocking

Figure 23F

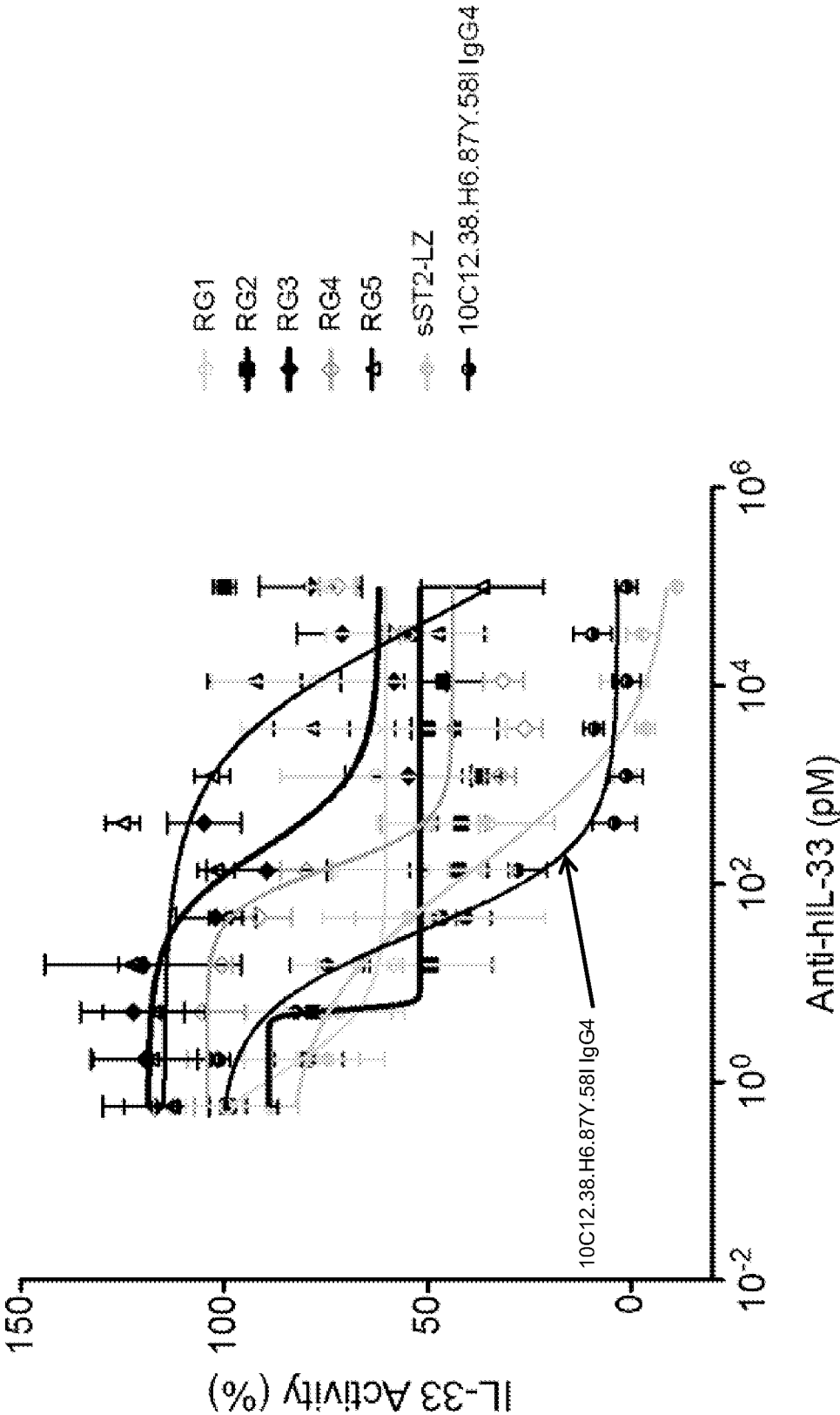


Figure 23G

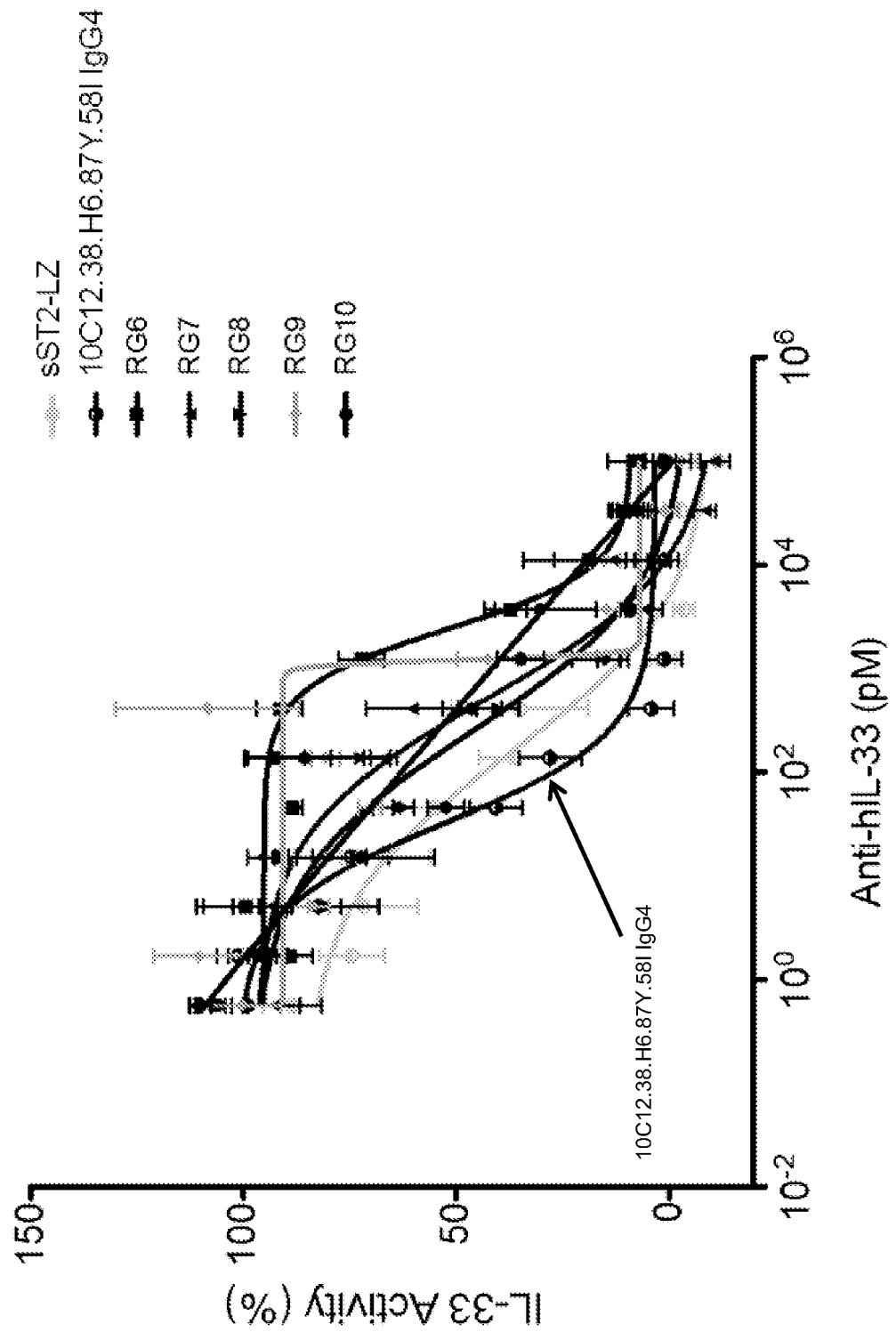


Figure 23H

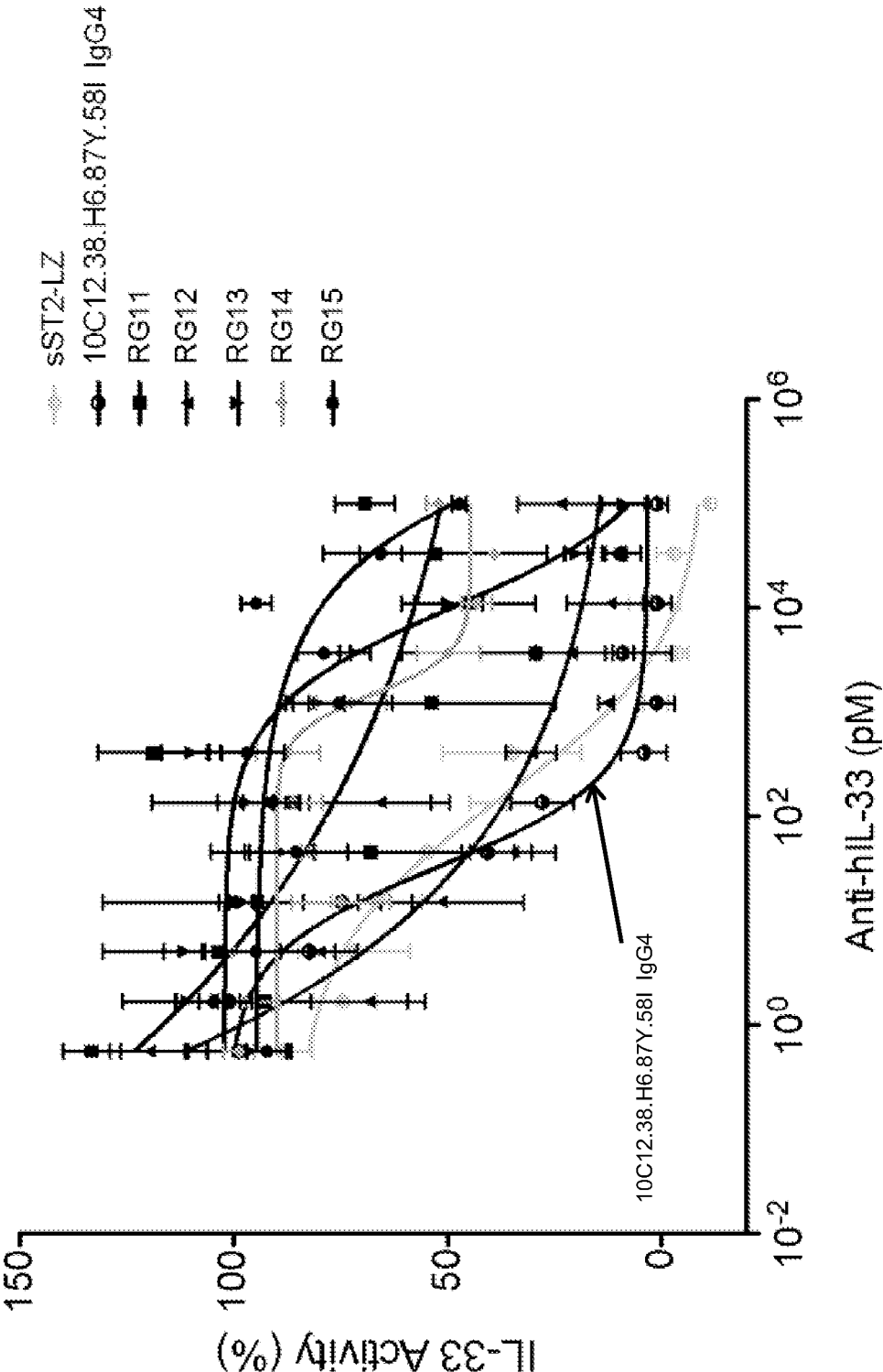


Figure 23I

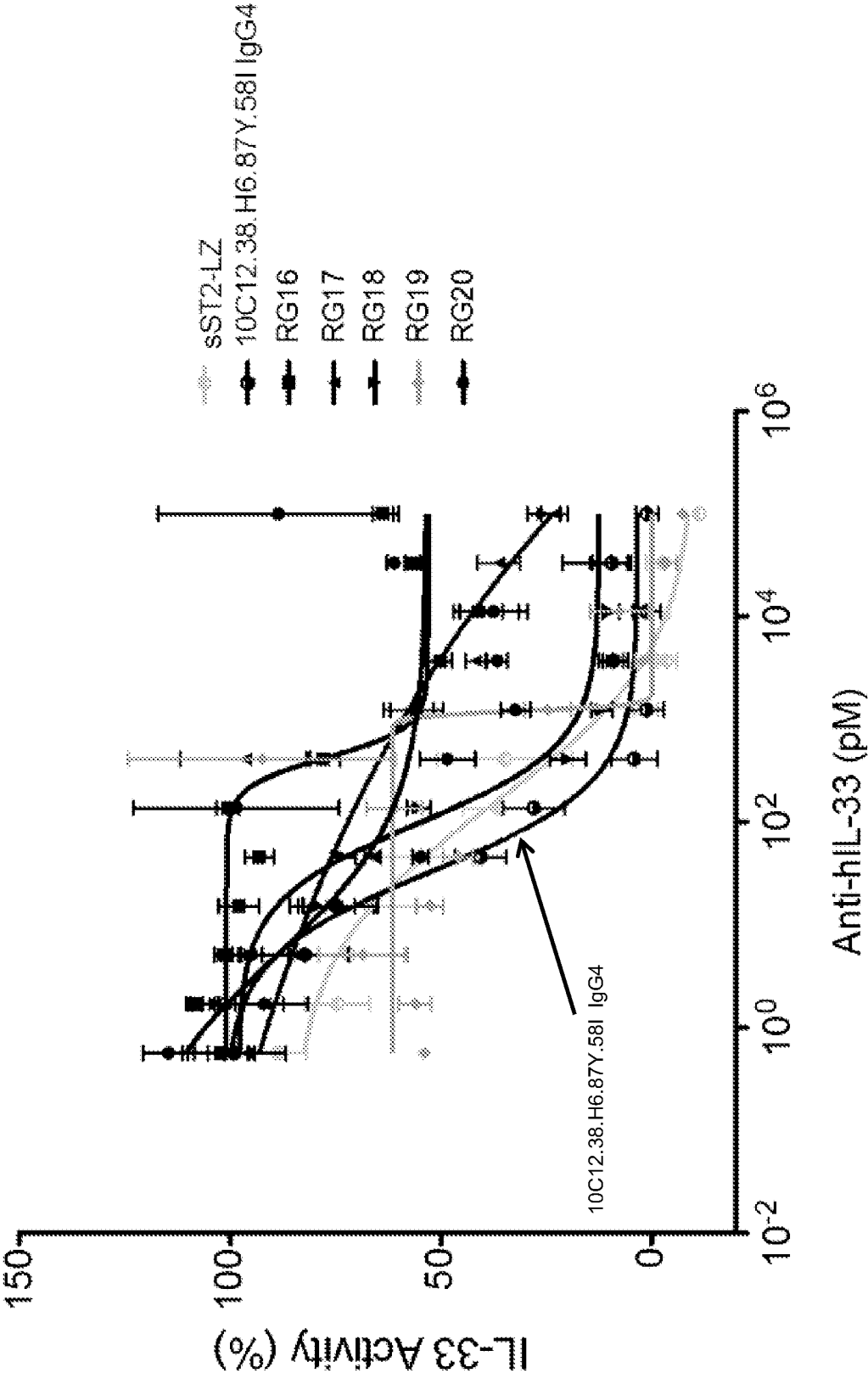


Figure 24A

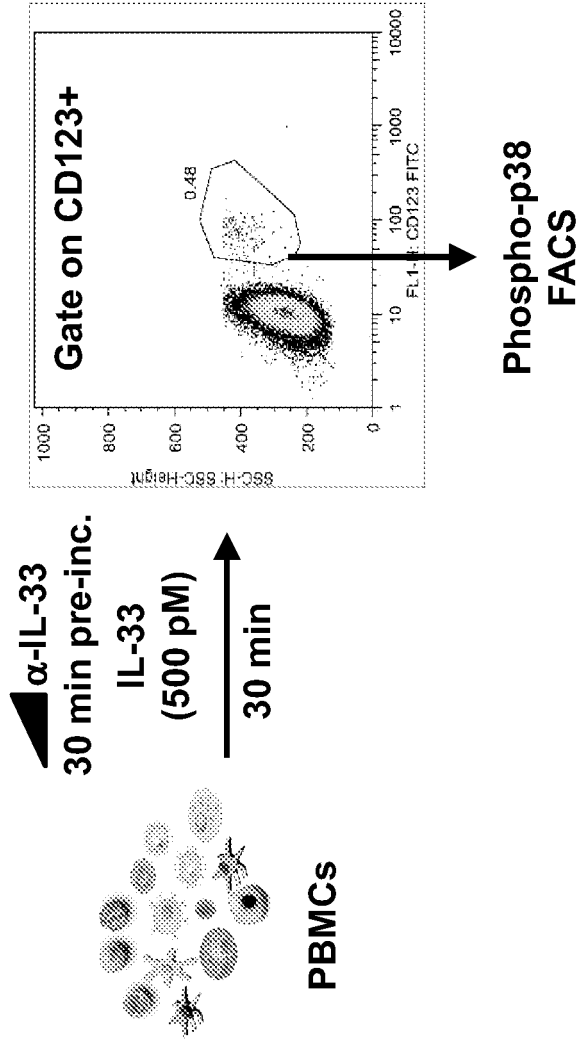


Figure 24B

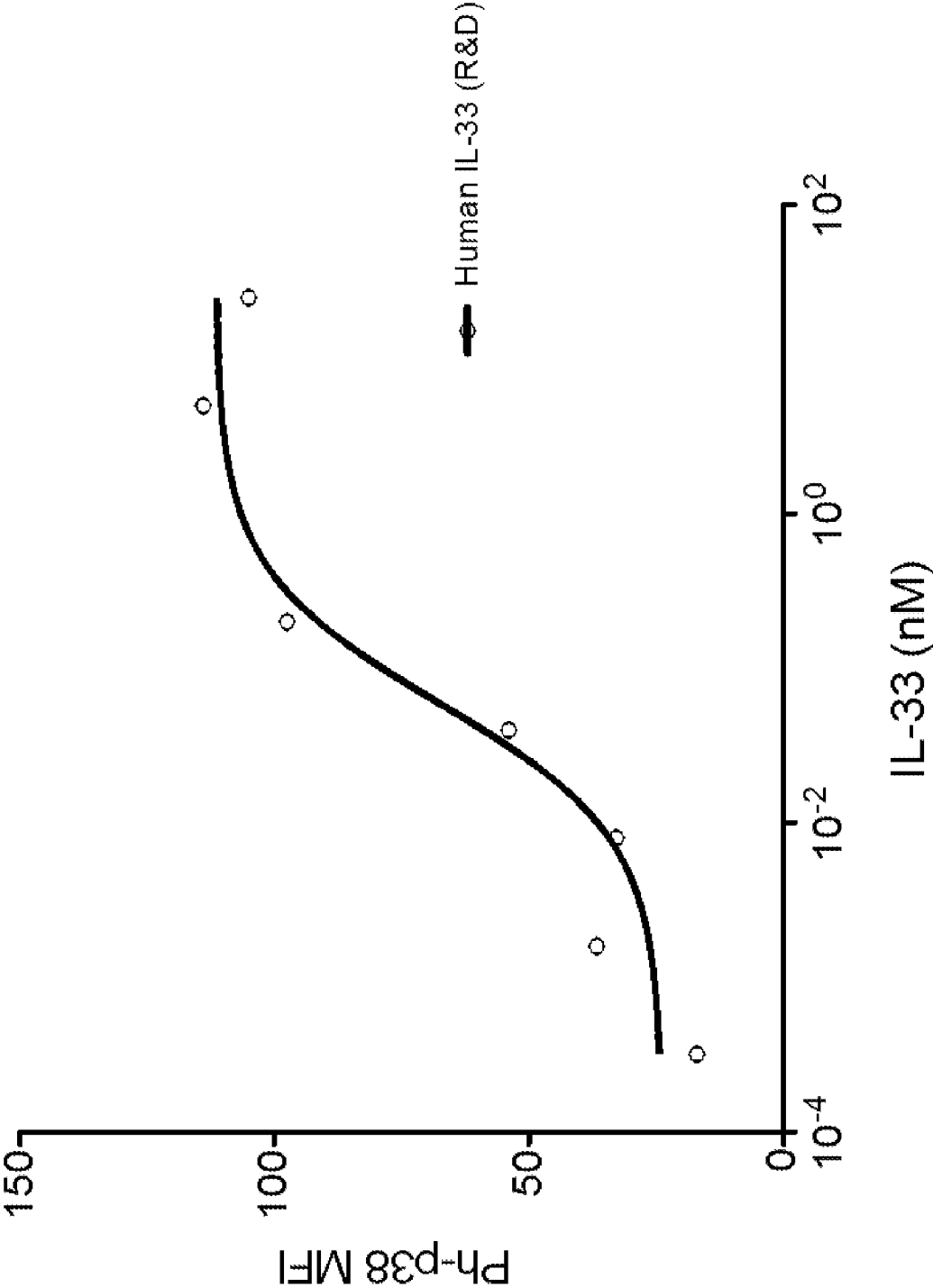
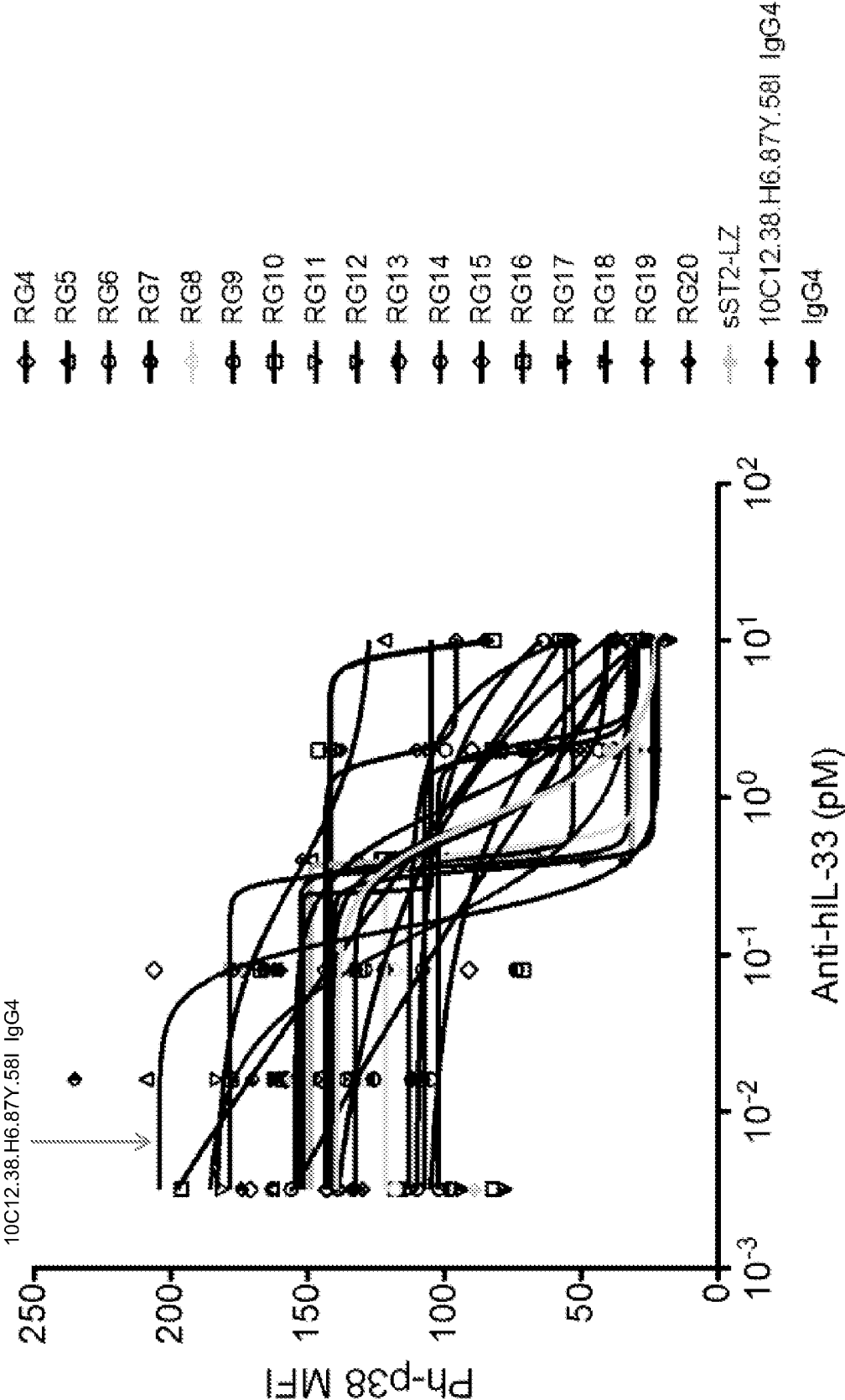


Figure 24C

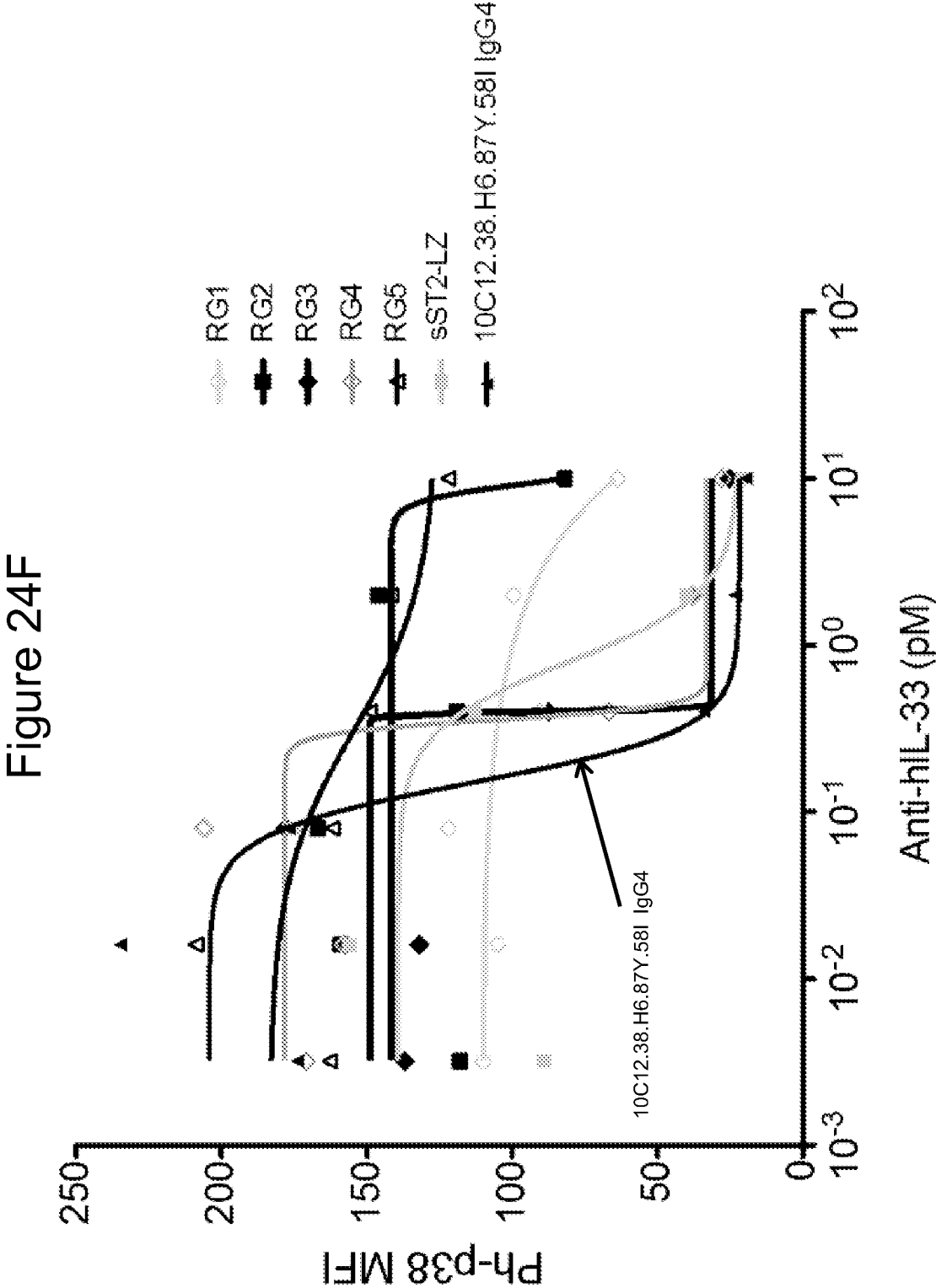


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Figure 24D

Basophil assay

Species	Human
EC50 [M]	6.4E-11
IL-33	500pM hIL-33
Ab	IC50 [M]
10C12.38.H6.87Y.58I IgG4	1.5E-13
sST2	7.9E-13
RG1	non-blocking
RG2	non-blocking
RG3	4.0E-13
RG4	3.6E-13
RG5	non-blocking
RG6	3.9E-13
RG7	6.7E-13
RG8	4.8E-13
RG9	2.5E-09
RG10	partial-blocking
RG11	1.4E-13
RG12	2.4E-09
RG13	7.6E-06
RG14	2.0E-12
RG15	9.4E-03
RG16	2.3E-12
RG17	5.7E-13
RG18	3.5E-13
RG19	9.1E-13
RG20	non-blocking



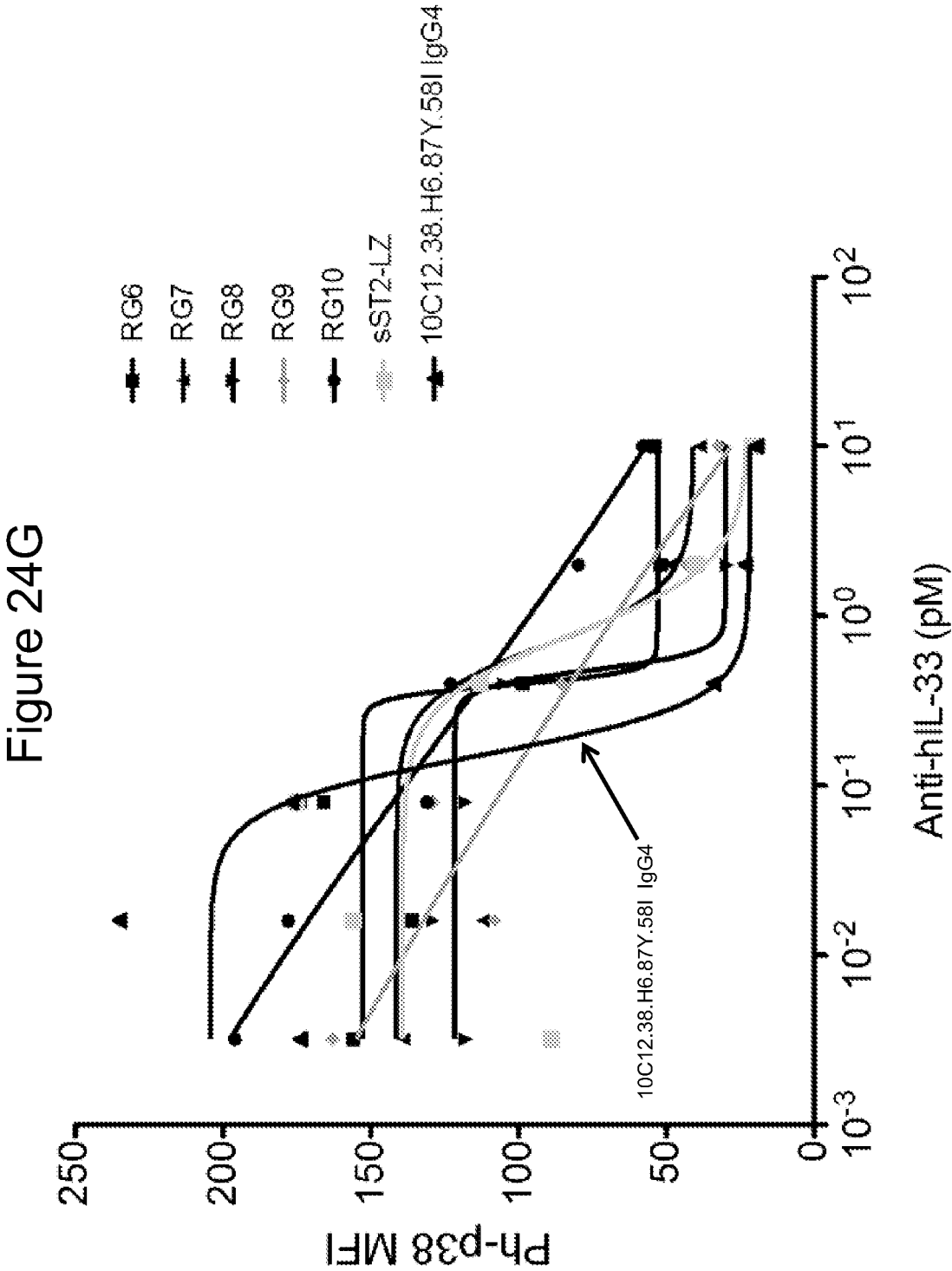


Figure 24H

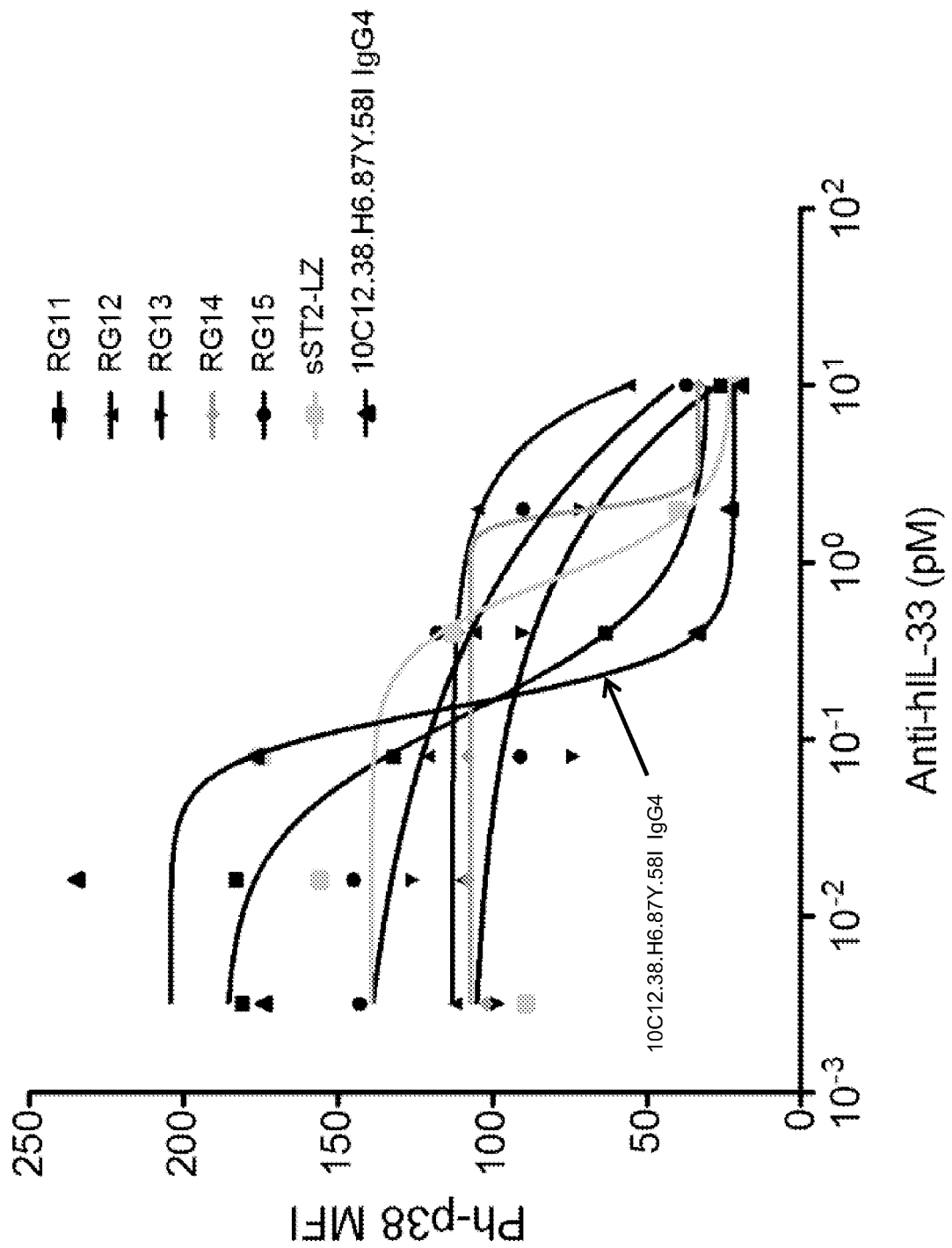
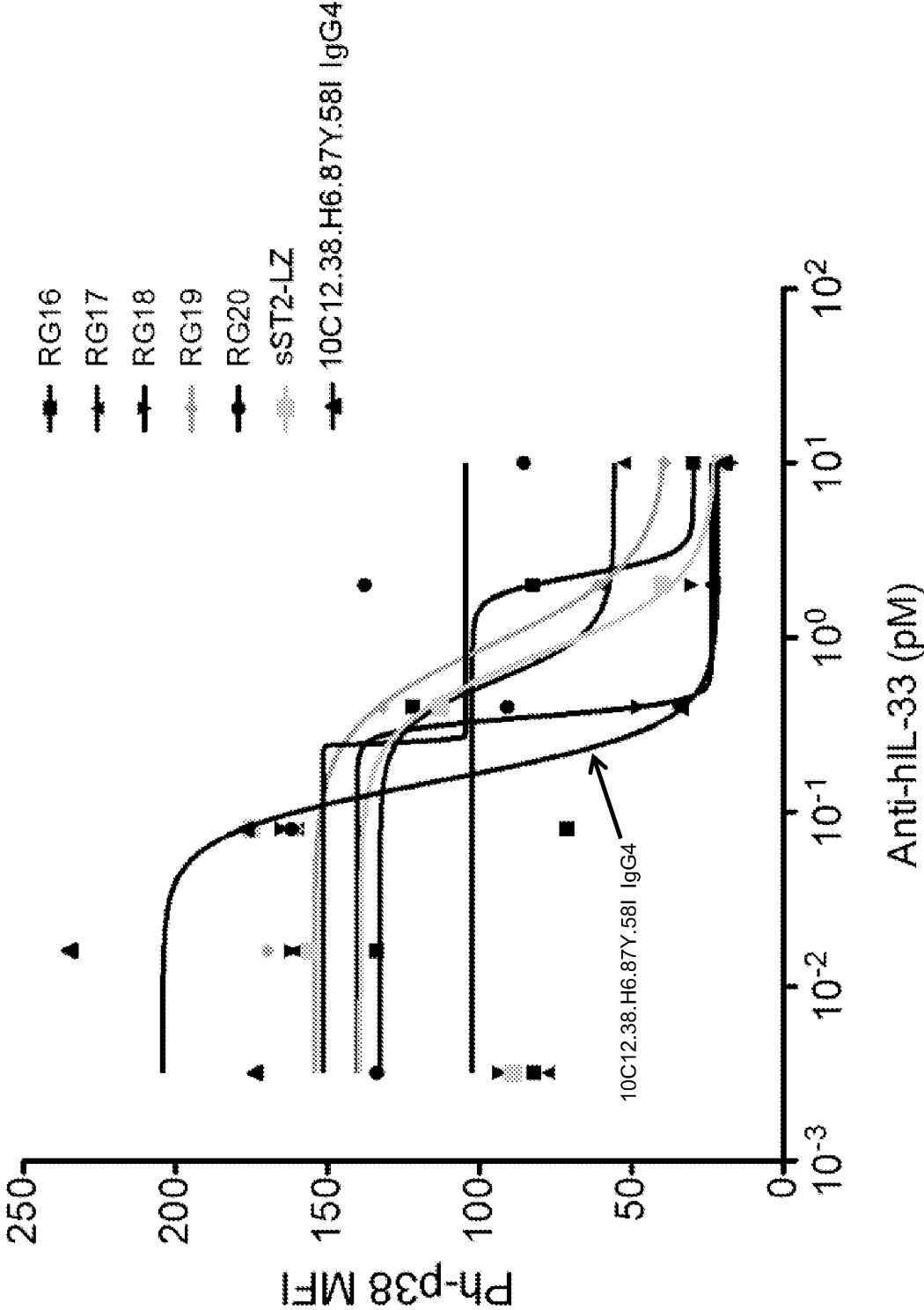
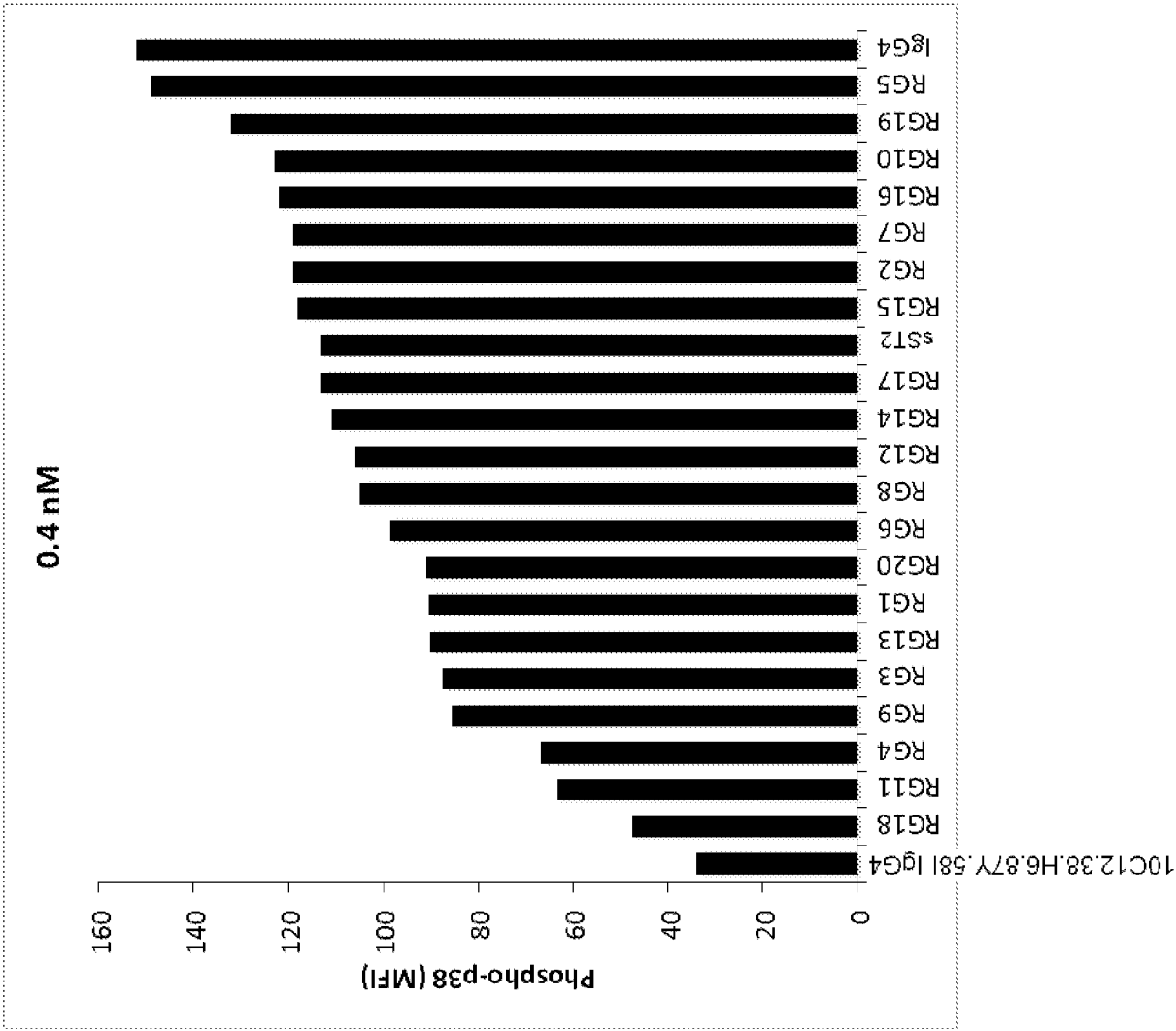


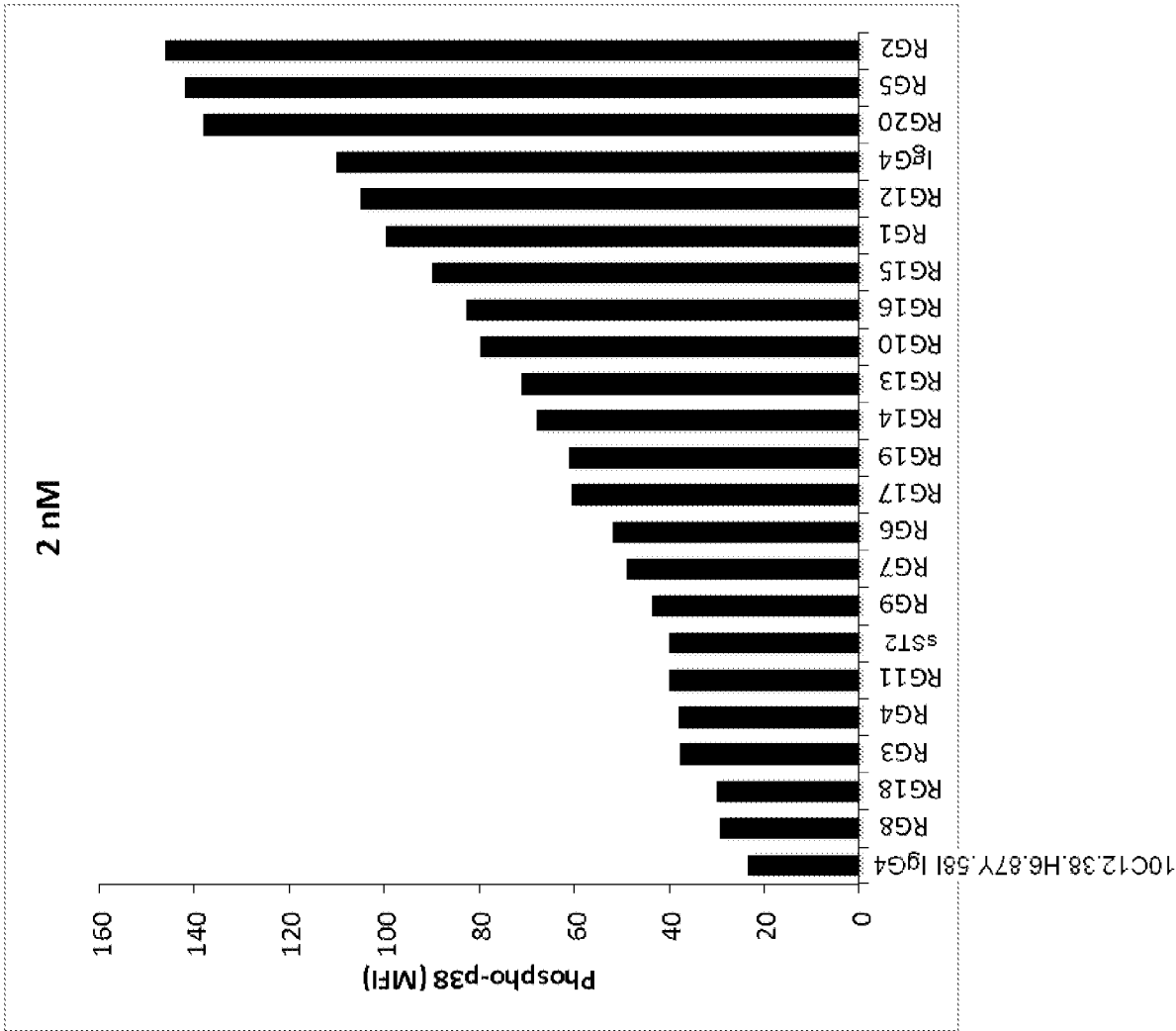
Figure 24I





0.4 nM Ab	Ph-p38 MFI
10C12.38.H6.87Y.581 IgG4	34
RG18	48
RG11	63
RG4	67
RG9	86
RG3	88
RG13	90
RG1	90
RG20	91
RG6	99
RG8	105
RG12	106
RG14	111
RG17	113
sST2	113
RG15	118
RG2	119
RG7	119
RG16	122
RG10	123
RG19	132
RG5	149
IgG4	152

Figure 24J



2 nM Ab	Ph-p38 MFI
10C12.38.H6.87Y.58I IgG4	23
RG8	29
RG18	30
RG3	38
RG4	38
RG11	40
sST2	40
RG9	44
RG7	49
RG6	52
RG17	61
RG19	61
RG14	68
RG13	71
RG10	80
RG16	83
RG15	90
RG1	100
RG12	105
IgG4	110
RG20	138
RG5	142
RG2	146

Figure 24K

Figure 25A

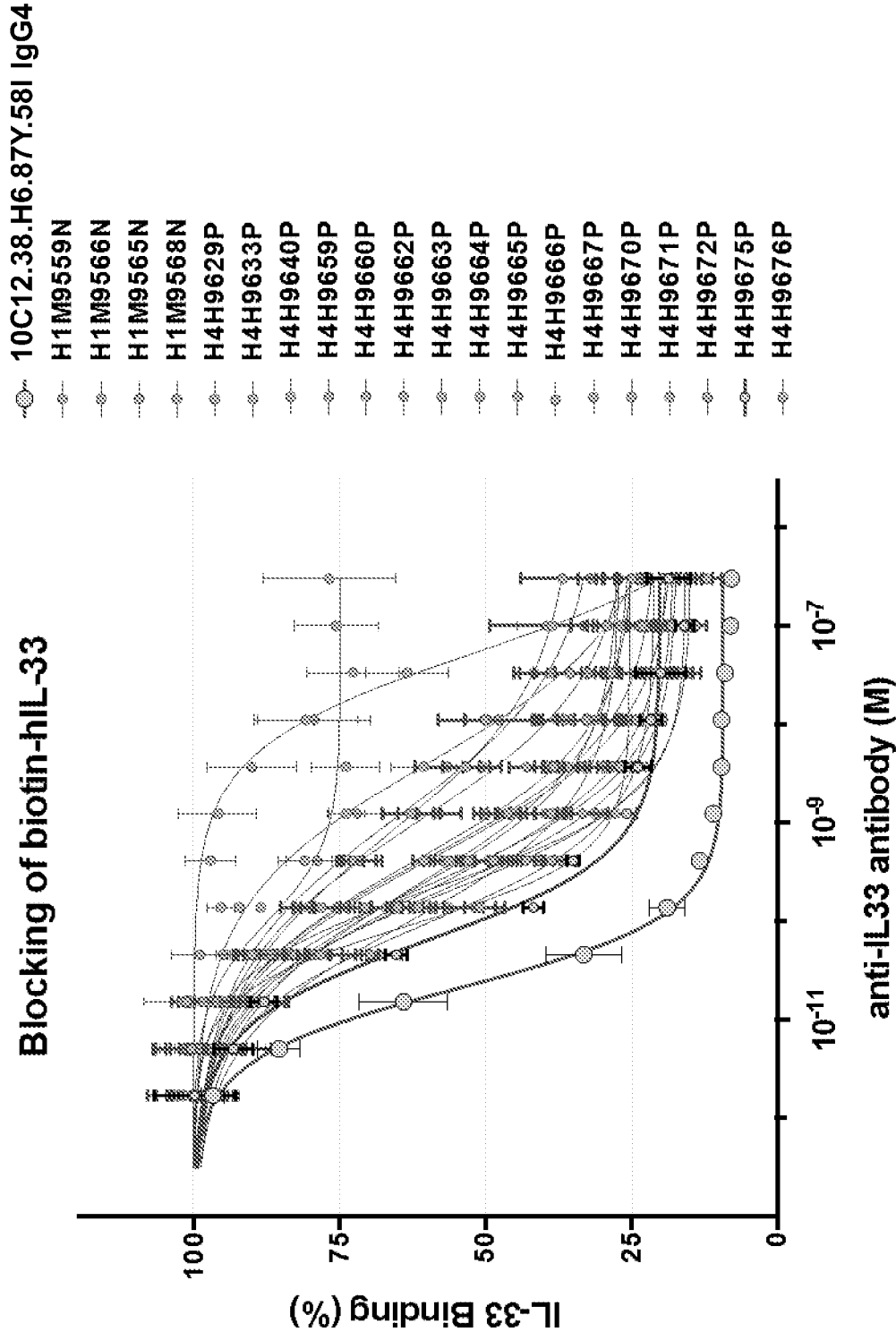


Figure 25B

