

FIG. 1

Clone ID	K _D (M)	kon (M ⁻¹ s ⁻¹)	koff (s ⁻¹)	Clone ID	K _D (M)	kon (M ⁻¹ s ⁻¹)	koff (s ⁻¹)
27535	PF	PF	PF	29872	1.13E-08	1.75E+05	2.02E-03
27536	1.14E-07	6.59E+04	7.51E-03	31393	6.72E-10	2.98E+05	2.00E-04
27549	4.05E-08	1.93E+04	7.82E-04	31414	1.01E-08	4.31E+05	4.37E-03
27550	1.43E-07	4.44E+05	6.33E-02	31415	1.63E-08	2.27E+05	3.71E-03
27568	1.73E-07	2.72E+05	4.70E-02	31418	1.30E-08	3.14E+05	4.06E-03
27571	1.64E-08	6.39E+05	1.05E-02	31421	1.88E-08	2.81E+05	5.26E-03
27575	PF	PF	PF	31429	2.39E-08	4.73E+05	1.13E-02
27577	4.09E-07	8.93E+05	3.65E-01	31430	1.01E-08	3.26E+05	3.28E-03
27579	1.67E-07	9.55E+05	1.60E-01	31431	1.60E-08	1.73E+05	2.76E-03
27587	3.37E-08	2.11E+05	7.11E-03	31432	1.07E-09	2.68E+05	2.86E-04
27588	5.49E-08	1.17E+05	6.44E-03	31436	9.24E-10	2.63E+05	2.43E-04
27589	1.91E-07	2.02E+05	3.85E-02	31437	5.58E-10	3.82E+05	2.13E-04
27590	1.31E-07	1.76E+05	2.30E-02	31861	1.16E-09	2.46E+05	2.86E-04
27596	3.11E-08	1.72E+06	5.33E-02	31873	9.22E-10	3.11E+05	2.86E-04
27597	3.35E-07	2.73E+05	9.14E-02	31891	1.34E-09	4.53E+05	6.09E-04
28337	1.27E-08	1.43E+05	1.80E-03	31895	1.81E-09	4.63E+05	8.39E-04
28347	9.05E-09	9.01E+05	8.15E-03	31896	9.05E-09	9.01E+05	8.15E-03
29851	1.23E-09	3.13E+05	3.85E-04	31901	1.28E-10	1.03E+06	1.32E-04
29852	2.66E-10	5.03E+05	1.34E-04	31905	7.31E-11	1.52E+06	1.11E-04
29857	7.60E-10	3.02E+05	2.29E-04	31915	8.11E-10	3.53E+05	2.86E-04
29871	2.44E-07	2.73E+05	6.66E-02	A1	1.92E-09	1.66E+05	3.18E-04

FIGS. 2 A-B

A.

Clone Name	Human CD39 Inhibition Assay Cell Titer Glo Average Response (RLU)
27536	7489
27549	16867
27550	5574
27568	5727
27571	6823
27575	2598
27577	3596
27579	6471
27587	8733
27588	11166
27589	6580
27590	5680
27596	3929
27597	8889
Isotype Control	375

B.

Clone Name	Human CD39 Inhibition Assay Titer Glo Average Response (RLU)
28337	9399
28347	9083
27535	4890
Isotype Control	857

FIGS. 2 C-E

C.

Clone Name	Human CD39 Inhibition Assay Cell Titer Glo Average Response (RLU)
28337	11768
27549	15648
28347	11182
29851	11554
29852	11980
29857	11637
27571	8543
27579	8878
29871	8708
29872	8372
BY40va	415
no IgG	979

D.

Clone Name	Human CD39 Inhibition Assay Cell Titer Glo Average Response (RLU)
27571	10885
31393	12105
27579	8035
29872	8368
31414	10254
31415	10289
31418	9447
31421	7263
31429	11441
31430	8380
31431	9993
28347	13306
31436	14157
31437	13509
31393	12105
Isotype Control	38

E.

Clone Name	Human CD39 Inhibition Assay Cell Titer Glo Average Response (RLU)
27571	14303
31861	17866
31873	16845
27579	6575
31414	11375
31891	13470
31895	12828
28347	18736
31432	18610
31896	11911
31901	14798
31905	20329
31915	15694
Isotype Control	44
BY40va	11

FIG. 2F

Clone Number	Cell Binding (FOB)		Clone Number	Cell Binding (FOB)	
	hCD39-CHO	cCD39-CHO		hCD39-CHO	cCD39-CHO
27535	301	738	31393	1064	2955
27536	89	113	31414	1236	3568
27549	822	566	31415	1168	3365
27550	2,033	2870	31418	1077	3183
27568	267	260	31421	1075	3053
27571	1,405	1607	31429	1291	3800
27575	2	128	31430	1222	3573
27577	390	339	31431	1235	3533
27579	1,953	2667	31432	1167	5697
27587	1,450	1403	31436	1317	3568
27588	10	14	31437	1292	3643
27589	311	531	31861	1432	5477
27590	33	44	31873	1321	5083
27596	252	257	31891	1026	4651
27597	799	908	31895	1042	4493
28337	4	17	31896	1042	4539
28347	1,020	1340	31901	1113	4662
29851	129	398	31905	1077	4937
29852	337	1418	31915	1087	4578
29857	224	1145	A1	796-2191	2426-3054
29871	451	3350	8Y40va	1292	3867
29872	1454	4191	Isotype Control	1	1

FIG. 3

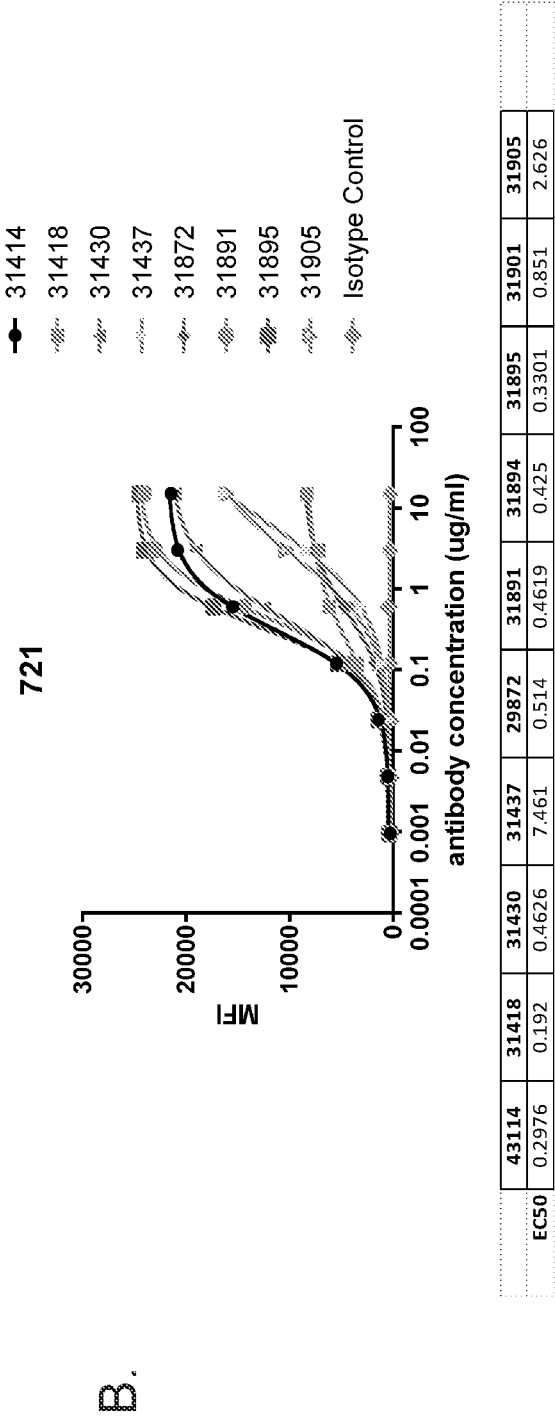
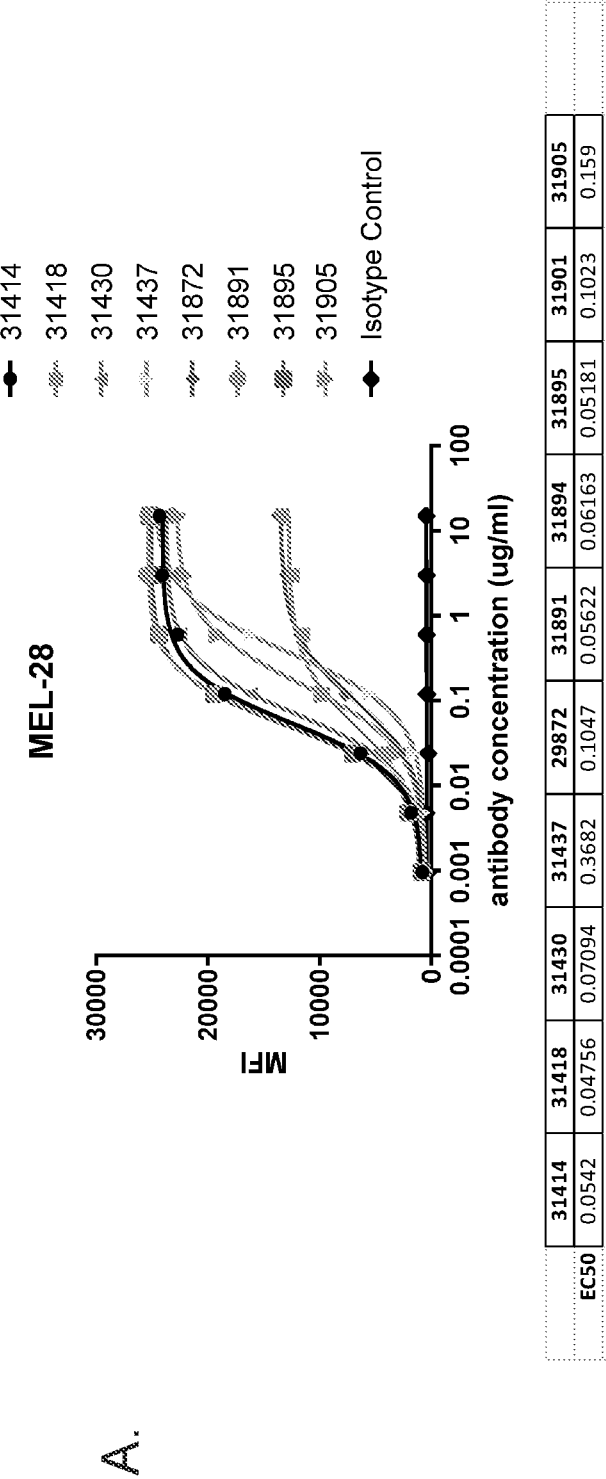
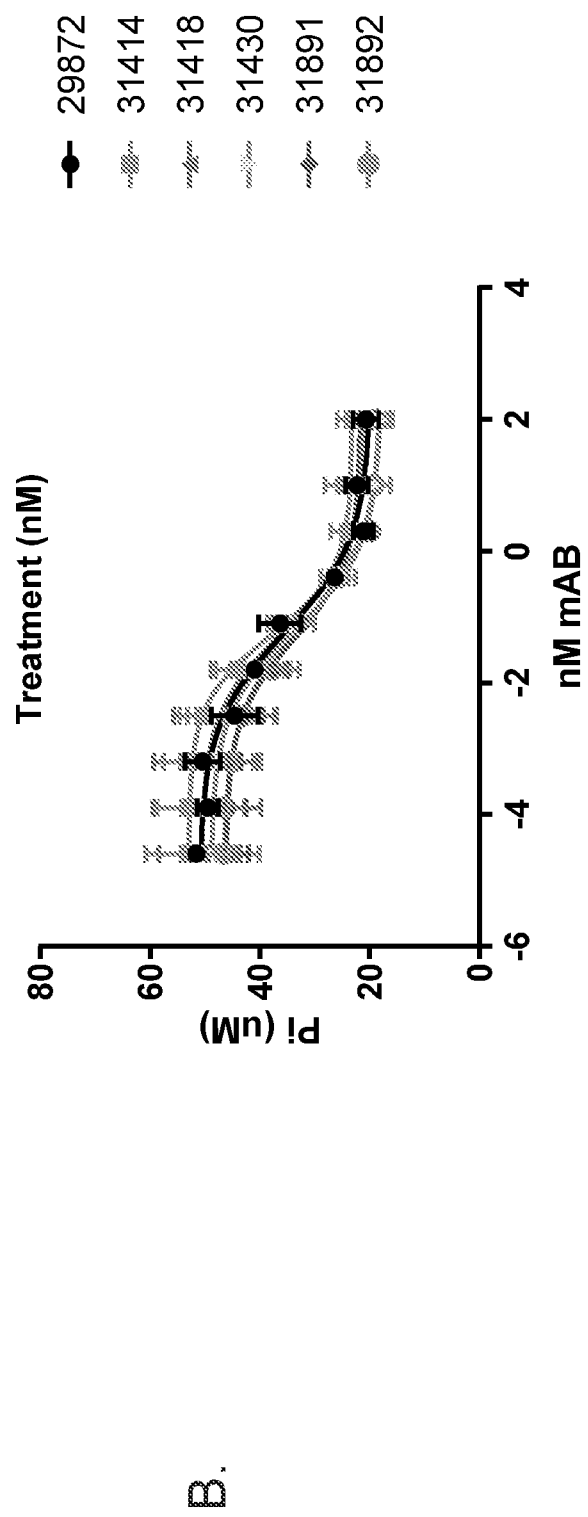
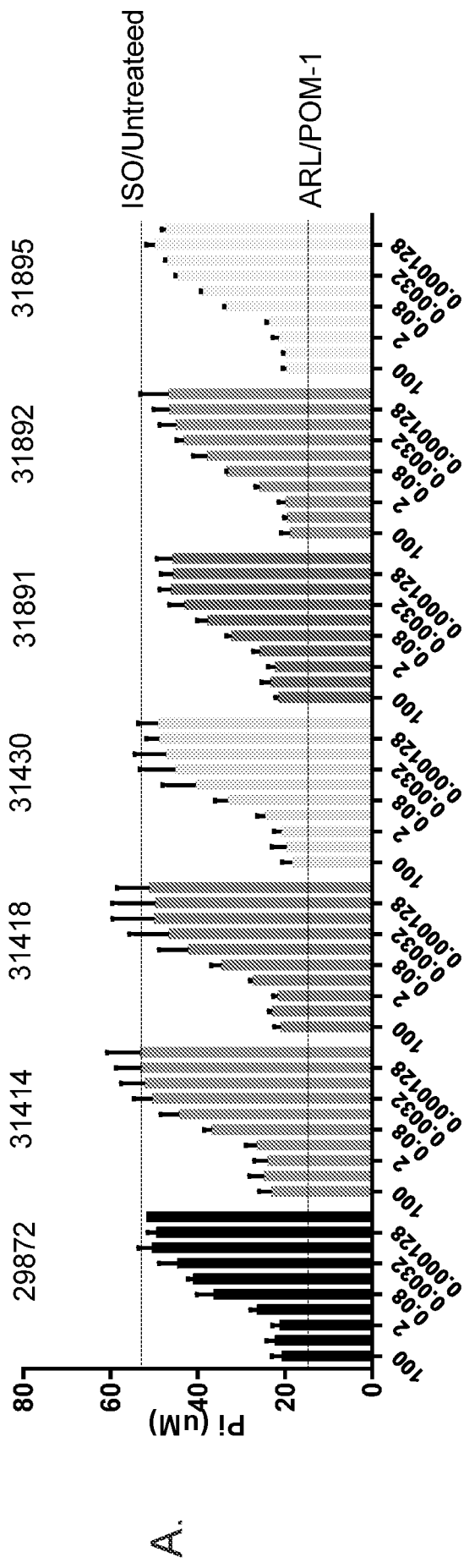


FIG.4



	29872	31414	31418	31430	31891	31892	31895
IC50	0.05947	0.05216	0.0589	0.0656	0.04535	0.07836	0.05816

FIG. 5

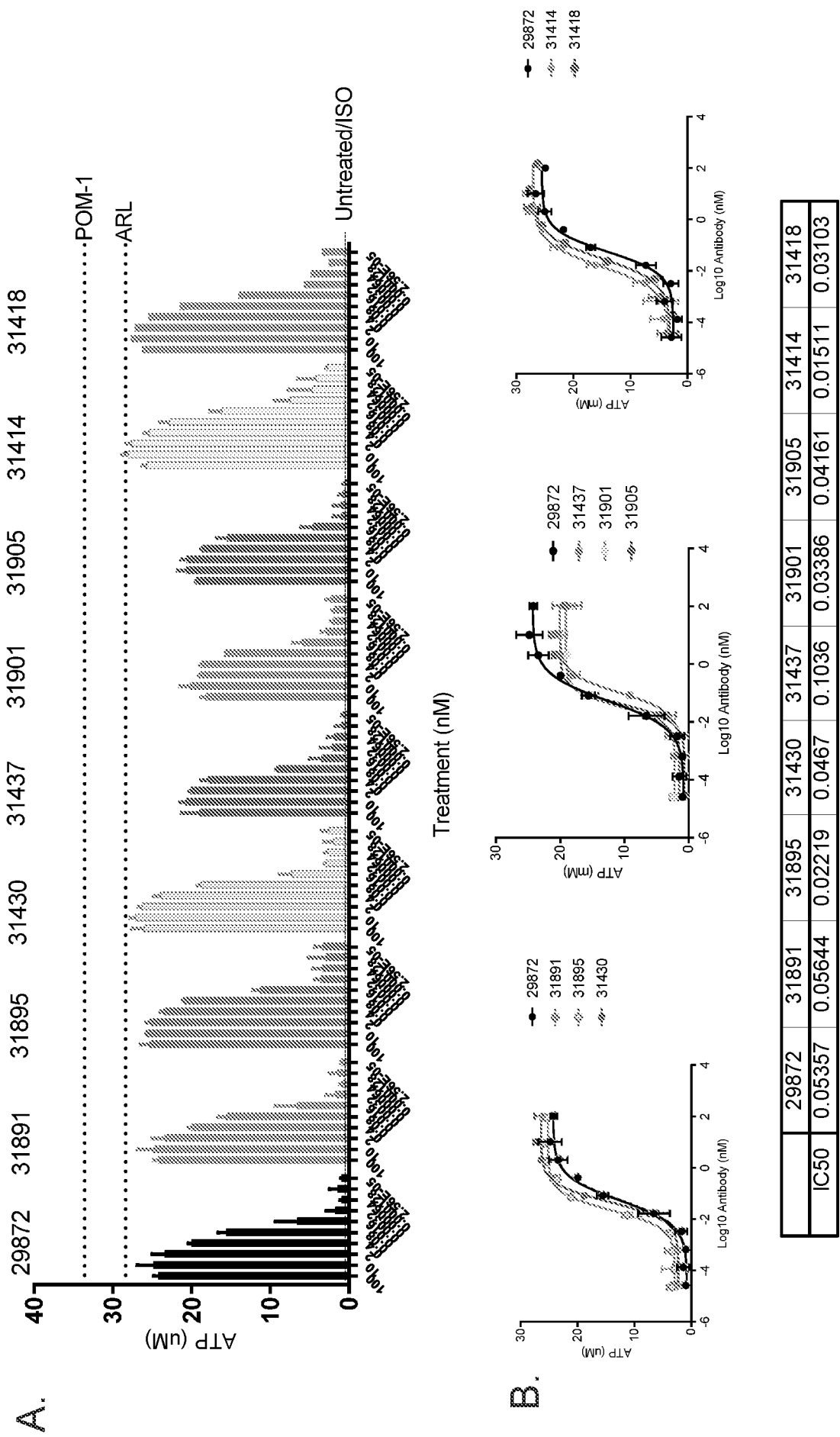


FIG. 6

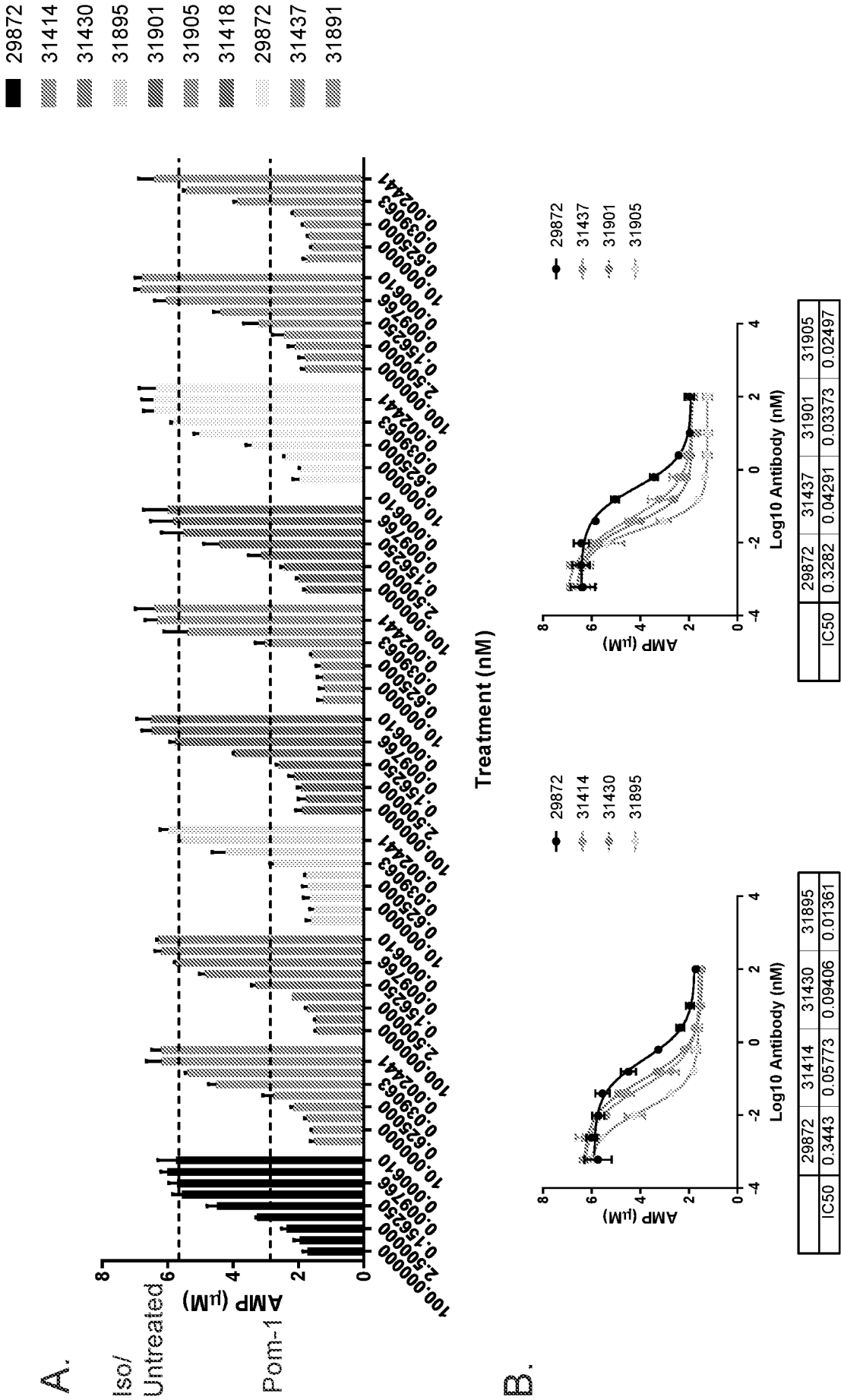


FIG. 7

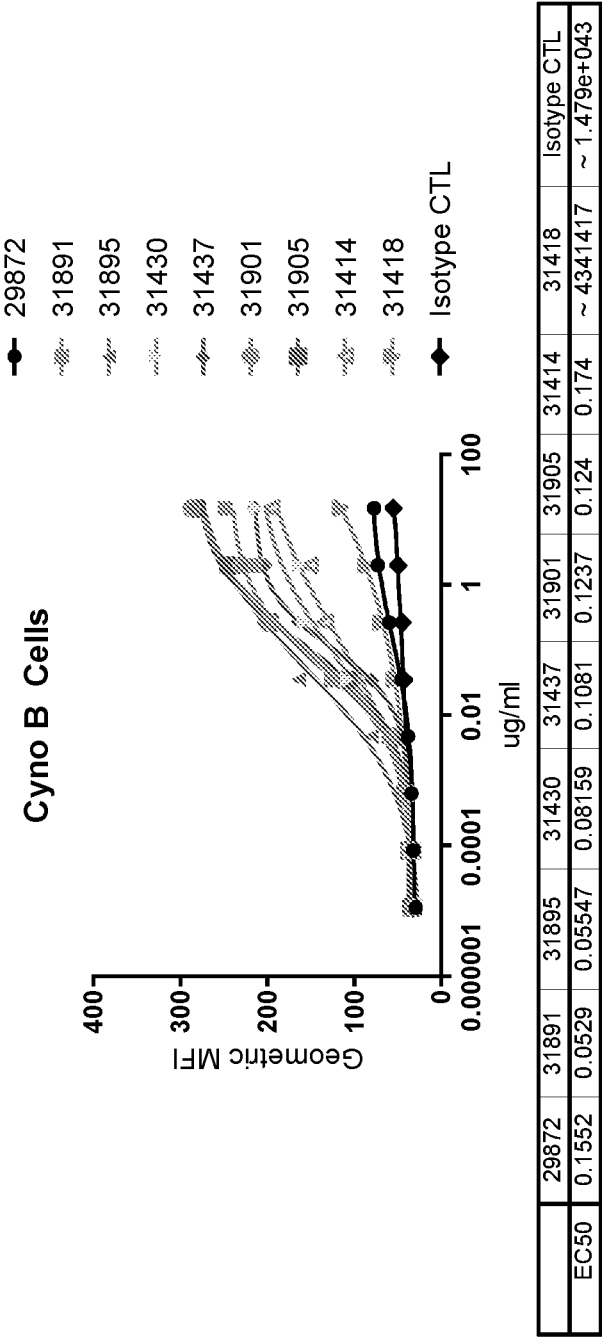
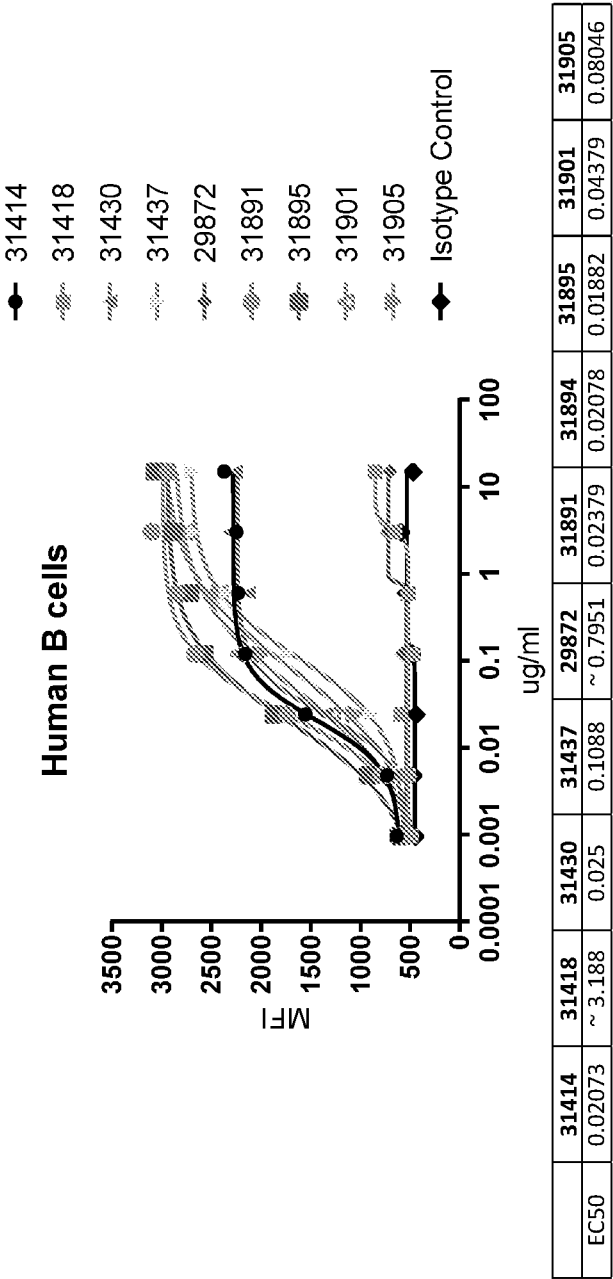


FIG. 8

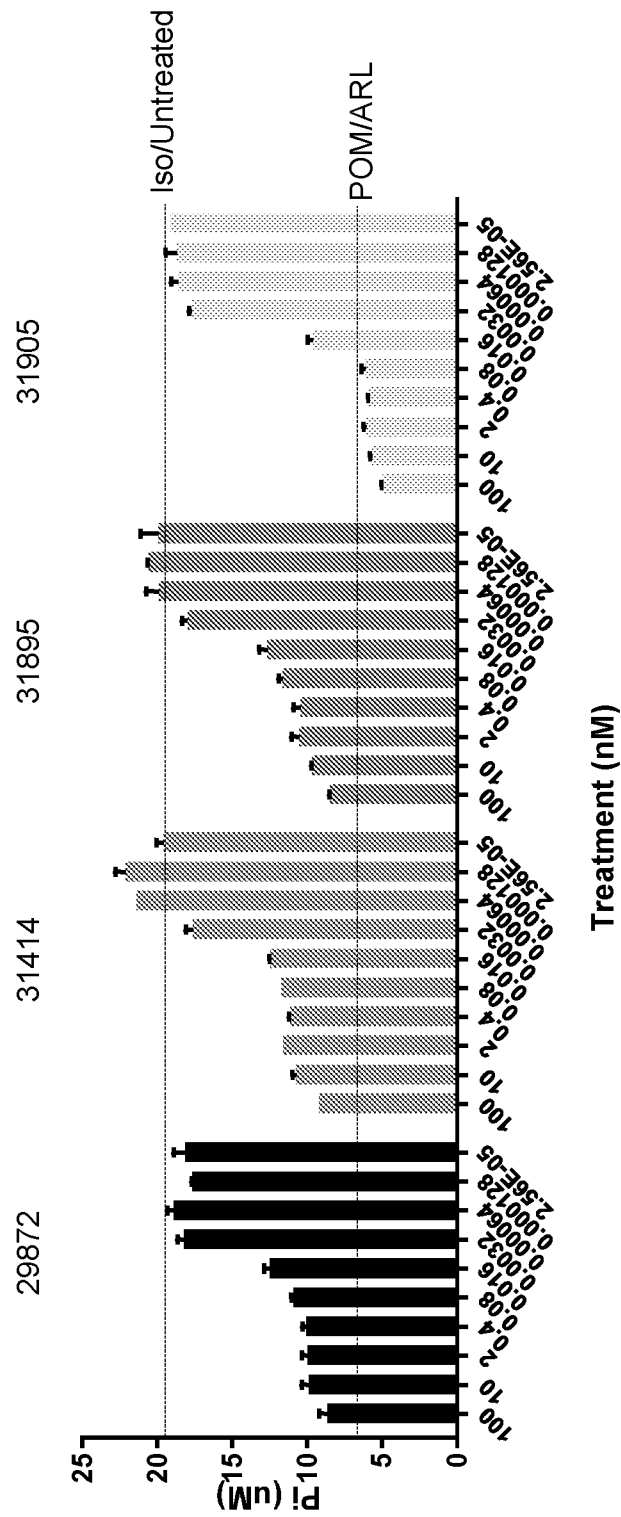


FIG. 9

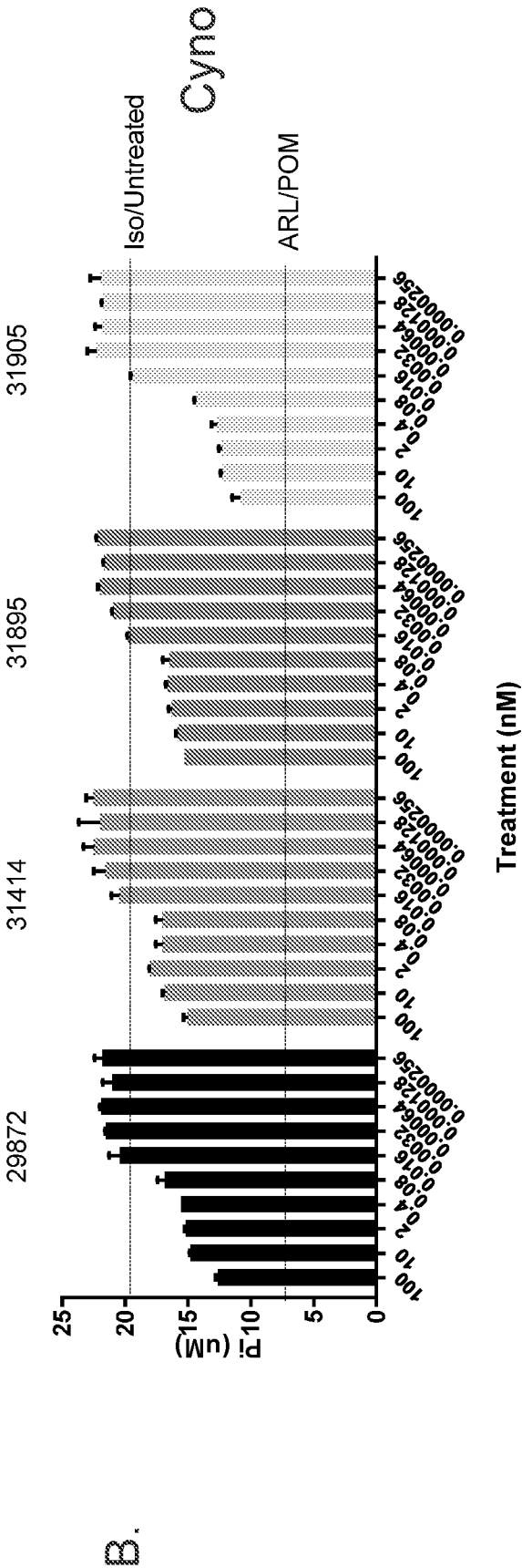
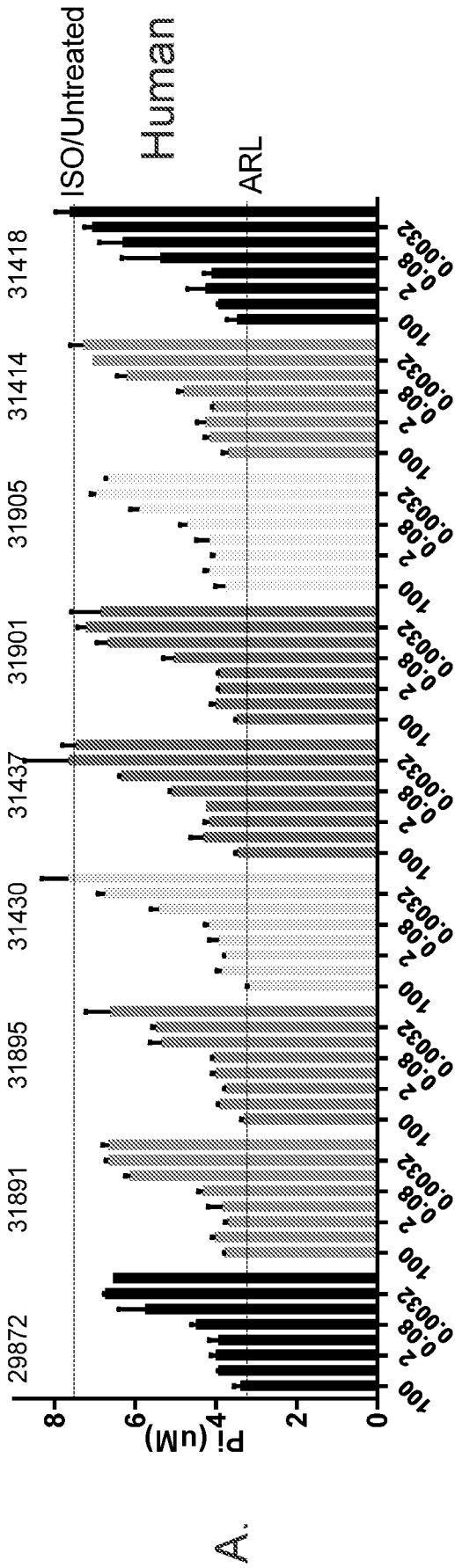


FIG. 10

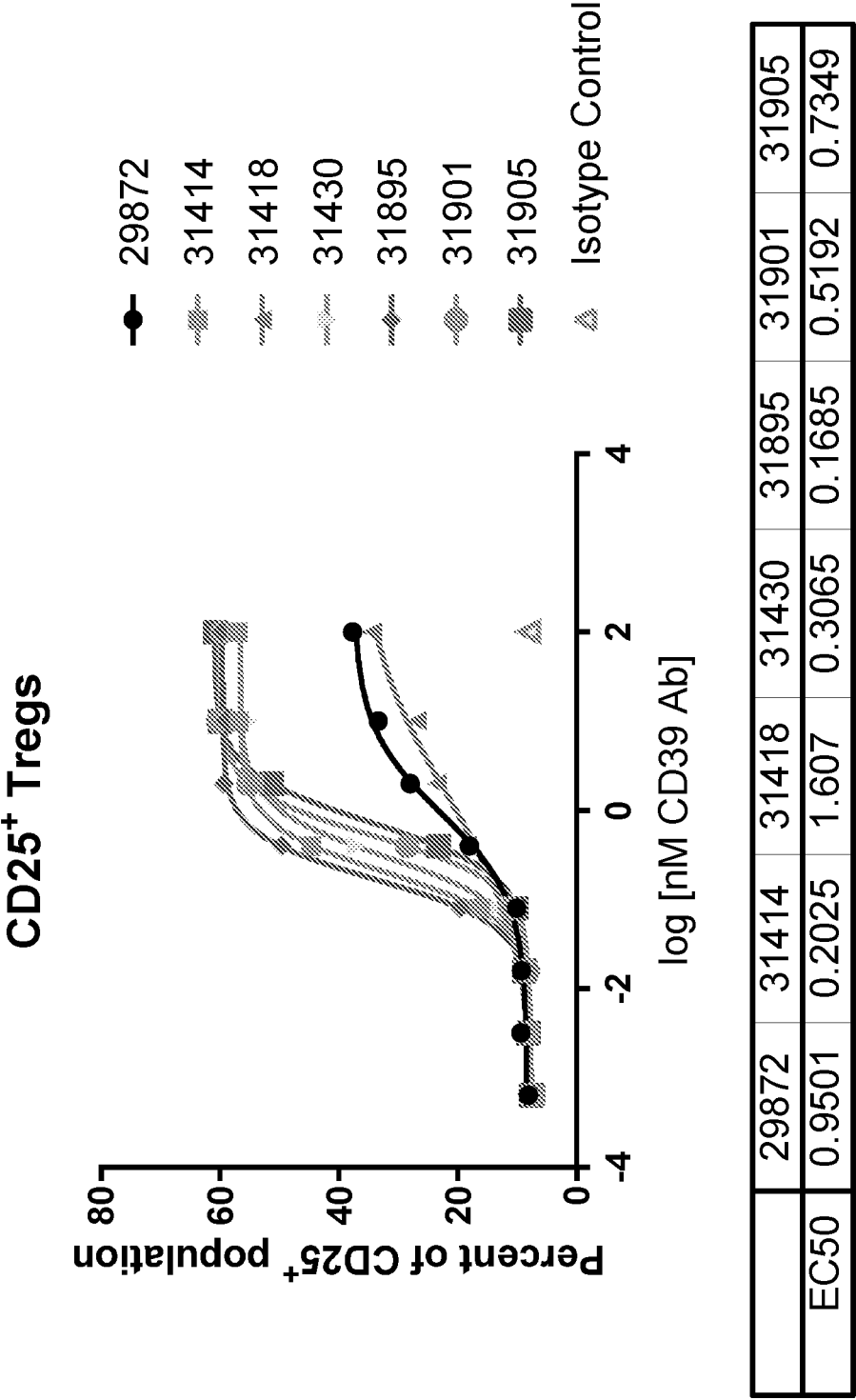


FIG. 11

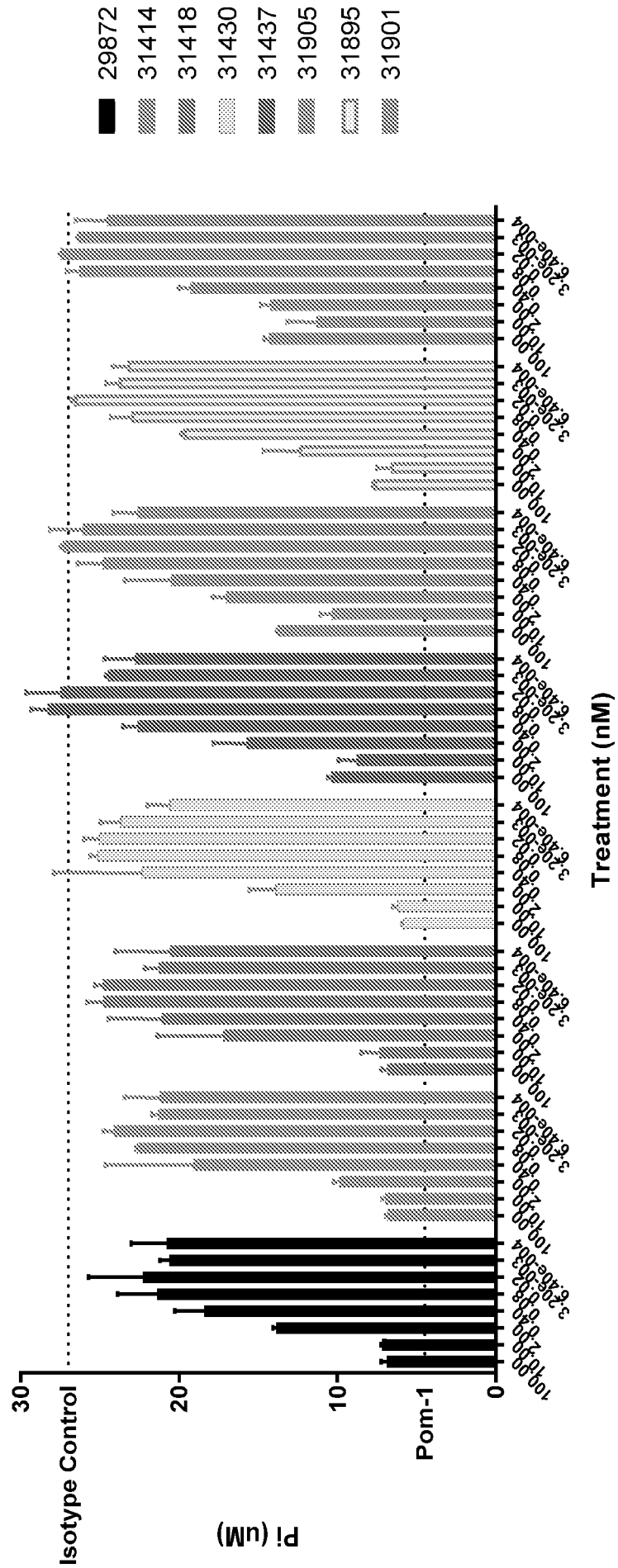


FIG. 12

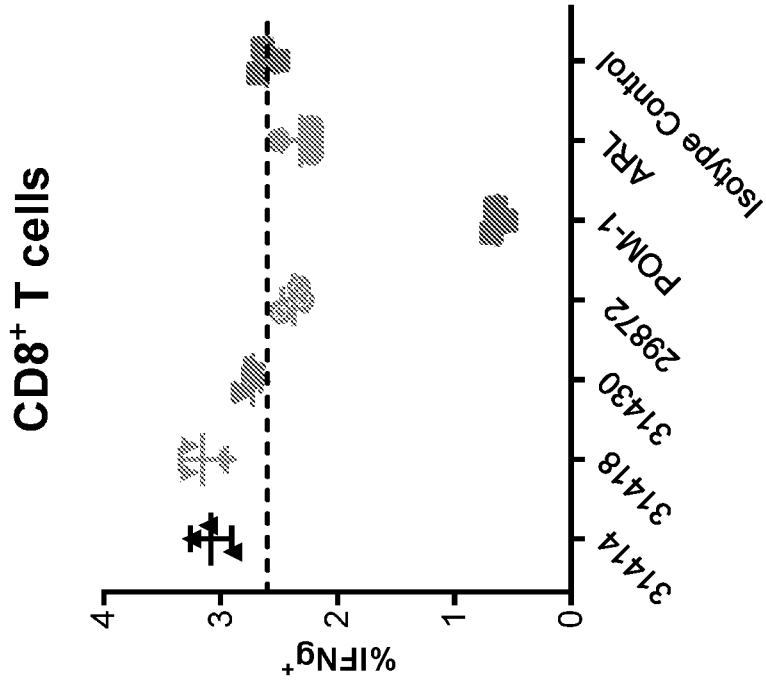


FIG. 13

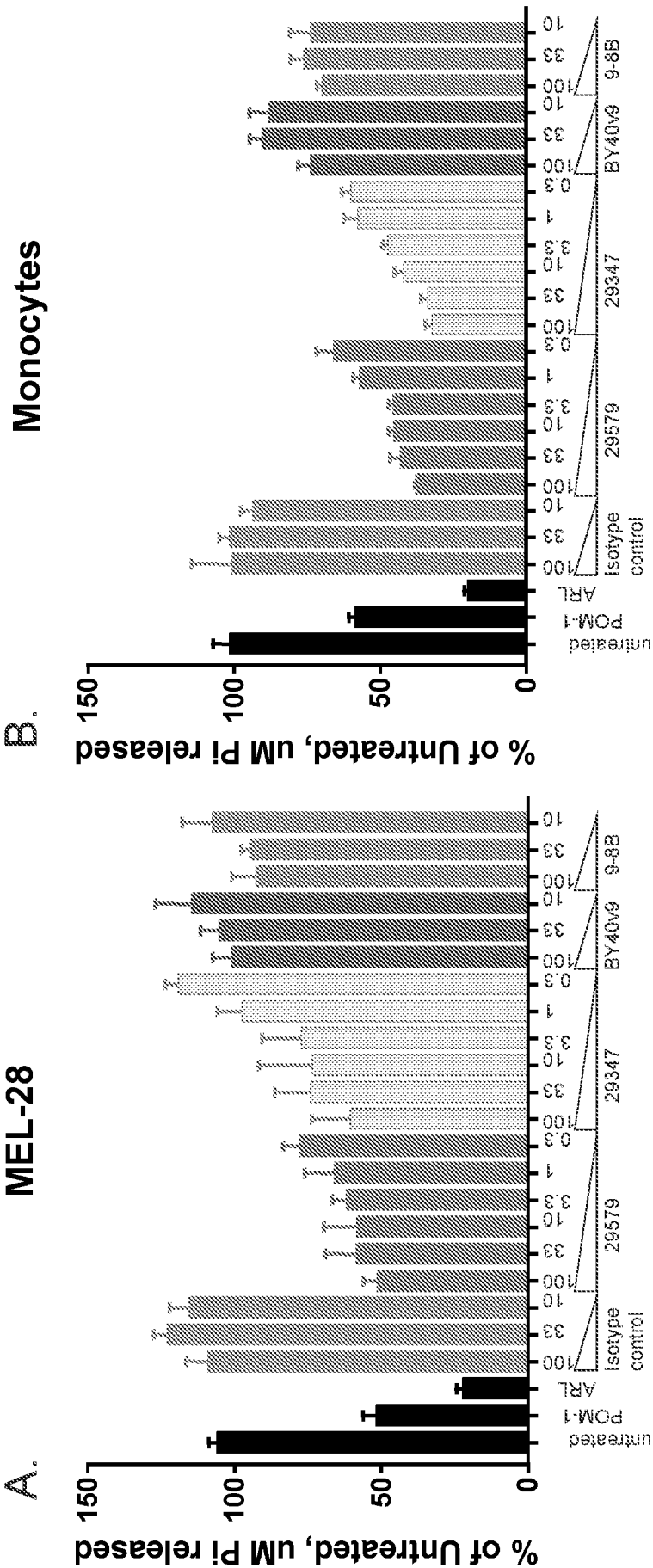


FIG. 14A

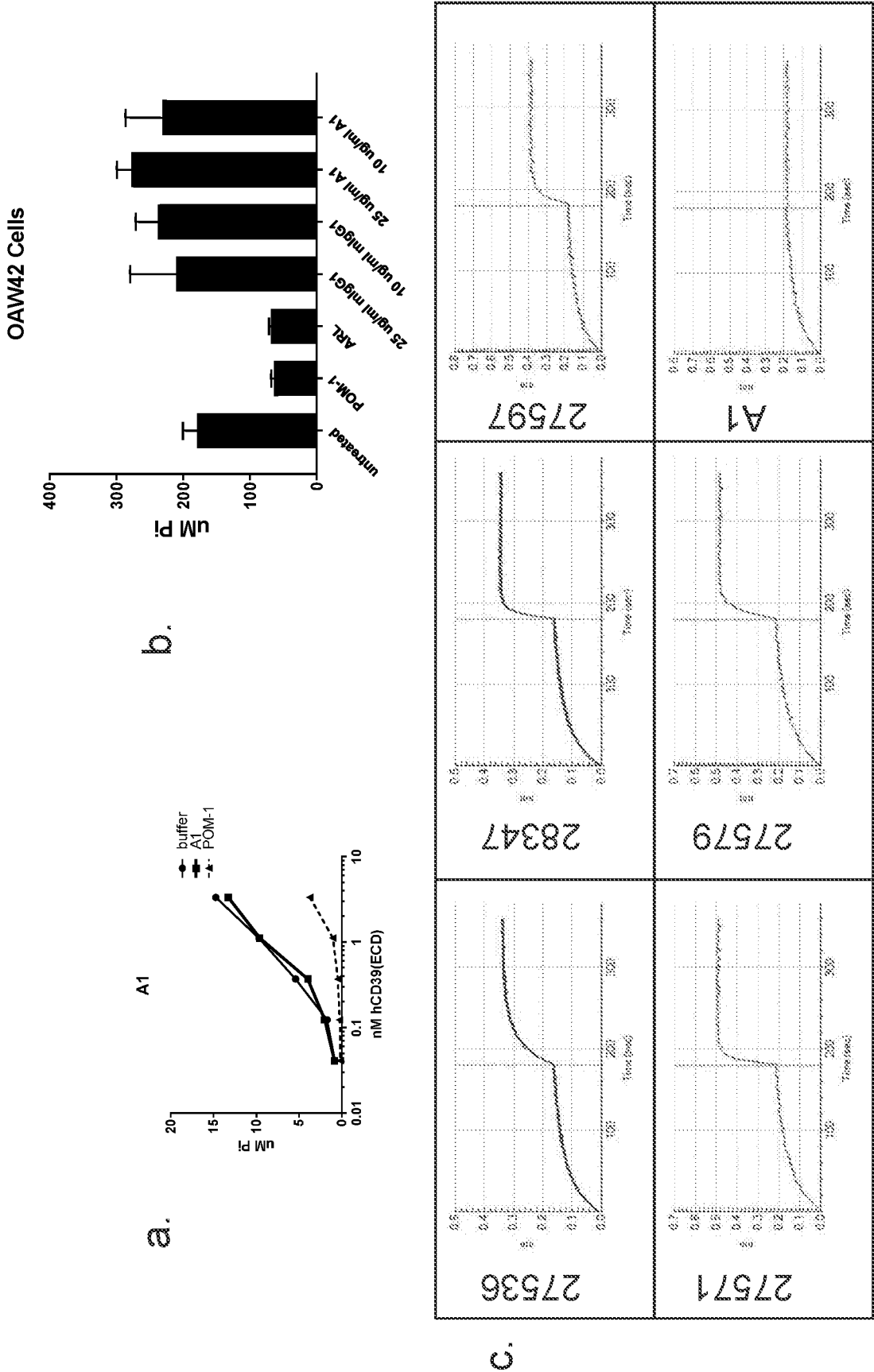


FIG. 14B

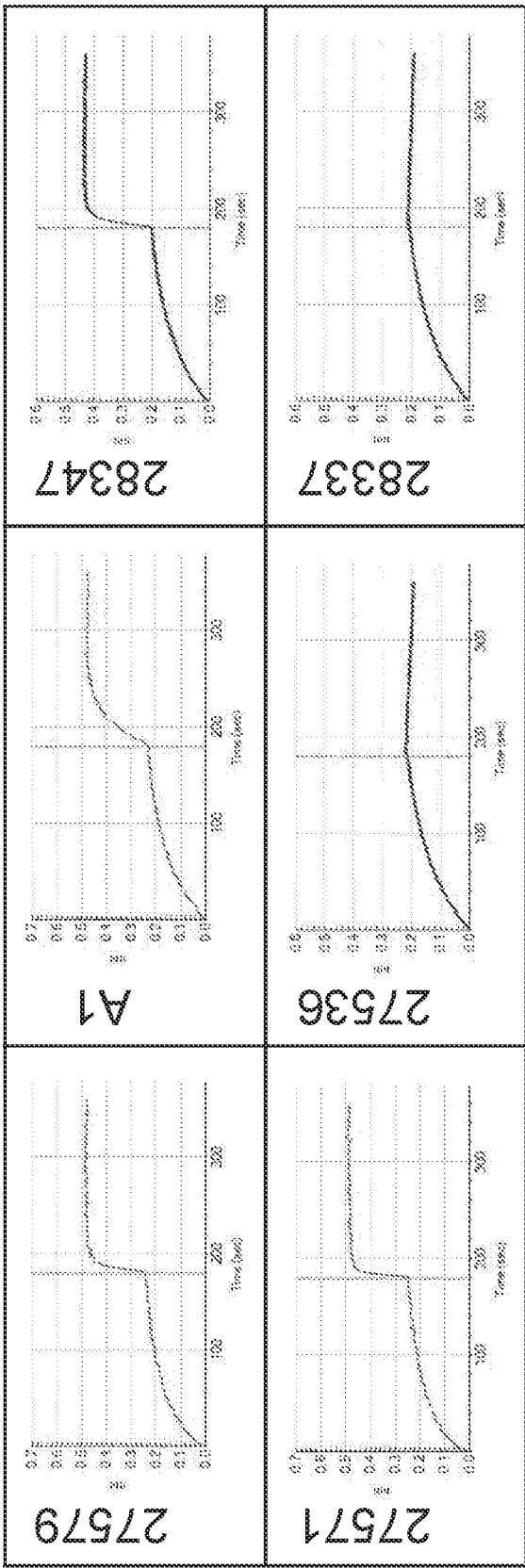
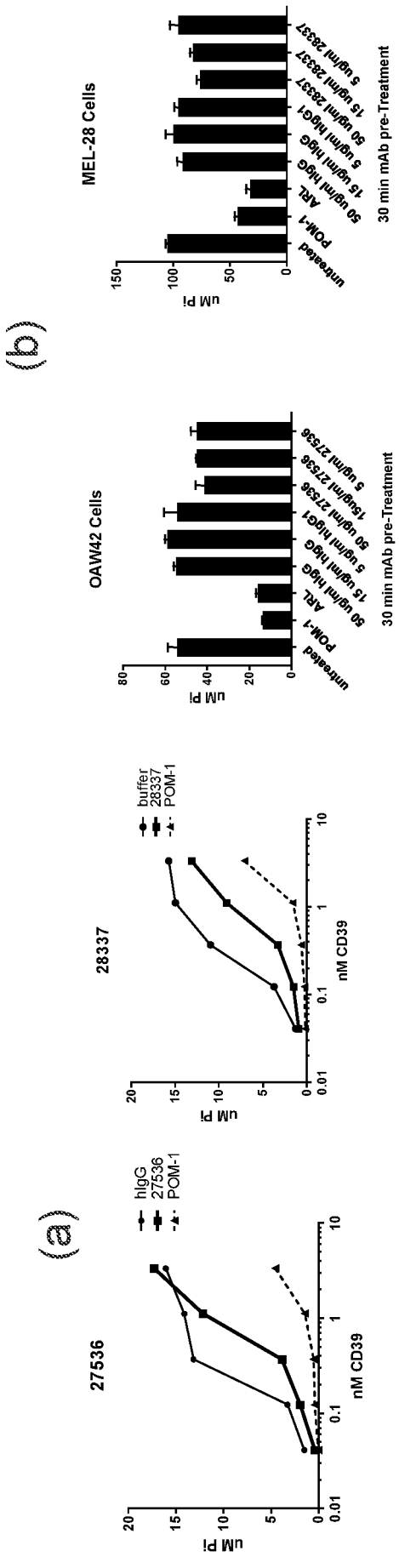


FIG. 14C

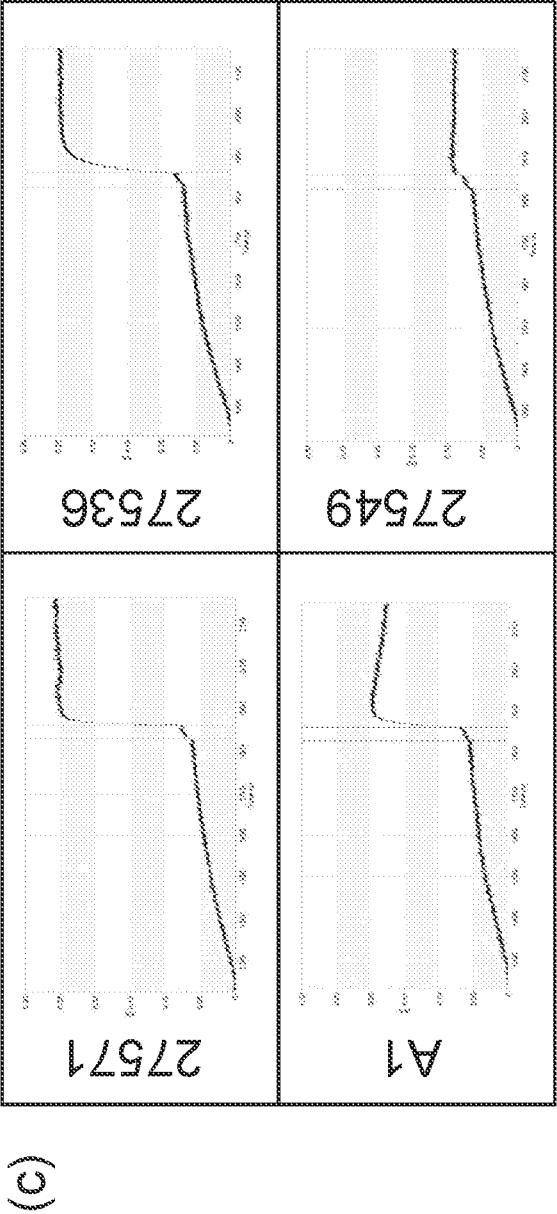
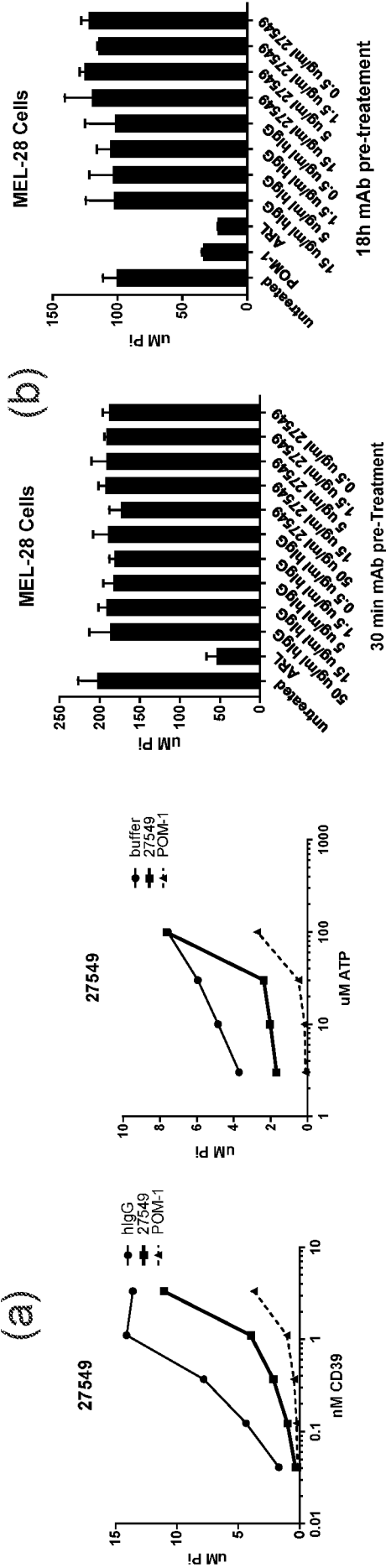


FIG.14E

Table 1.

Chimera #	FASTA Residue Number from Species of Origin in Chimera			Mouse amino acid sequence ⁴	mAb binding to human-mouse CD39 chimeras					
	Human ¹	Mouse ²	Human ³		31895 31414 31418	31873	31901 31905	BY40v9	9-8B	A1 498403#
1	M1-E110	L111-Q123	T124-V510	L ₁₁₁ STELIPTSKHHQ	yes	yes	yes	yes	yes	yes
2	M1-E142	Q143-S158	Y159-V510	Q ₁₄₃ SADEVLAADVSTSLKS	NO	NO	NO	yes	yes	yes
3	M1-G187	R188-K204	Q206-V510	R ₁₈₈ FTQEQSWLSLSDSQK	yes	yes	yes	yes	yes	yes
4	M1-S274	G274-V277	L278-V510	G ₂₇₆ GV	yes	yes	yes	yes	yes	NO
5	M1-E305	K306-E322	Q324-V510	K ₃₀₆ KLPFDQFRIQGTGDYE	yes	yes	yes	yes	yes	yes
6	M1-M367	D367-I378	S378-V510	D ₃₆₇ FFKKVAKNSVI	yes	yes	yes	yes	yes	yes
7	M1-C390	S392-S404	V404-V510	S ₃₉₂ KSWEEKTSYPS	yes	yes	yes	yes	yes	yes
8	M1-H428	N428-N447	A448-V510	N ₄₂₈ FTDSSWEQIHFMGKIK DSN	yes	yes	yes	yes	yes	yes

FIG. 14E

Table 2.

# Chimera	FASTA Residue Number from Species of Origin in Chimera			Mouse and Human amino acid sequences*	mAb binding to human-mouse CD39 chimeras				
	Human	Mouse	Human		31895 31414 31418	3187 3	3190 1 3190 5	BY40v9	9-8B
2	M1-E142	Q143-S158	Y159-V510	Q ₁₄₃ SADEVLA ^{AAV} STSLKS	NO	NO	NO	yes	yes
9	M1-E142 Y159-V510	Q143-L149 A151-S158	D150	Q ₁₄₃ SADEVLD ^{AV} STSLKS	YES	NO	NO	yes	yes
10	M1-E142 Y159-V510	Q143-V152 R154-S158	E153	Q ₁₄₃ SADEVLA ^{AAV} E ^T STSLKS	YES	NO	NO	yes	yes
WT	M1-V510			V ₉₆ QKVNEIGI E ₁₄₃ LADRVLDV ^{VERS} SKSN	yes	yes	yes	yes	yes
11	M1-V98 E100-V510	D99		V ₉₆ QKV ^{DE} IGI	yes	yes	yes	yes	yes
12	M1-E153 S155-V510	T154		E ₁₄₃ LADRVLDV ^{VE} T ^S SKSN	yes	yes	yes	yes	yes
13	M1-V98 E100-E153 S155-V510	D99 T154		V ₉₆ QKV ^{DE} IGI E ₁₄₃ LADRVLDV ^{VE} T ^S SKSN	yes	NO	NO	yes	yes
14	M1-V152 S155-V510	S153 T154		E ₁₄₃ LADRVLDW ST SKSN	yes	NO	NO	yes	yes

FIG. 14F

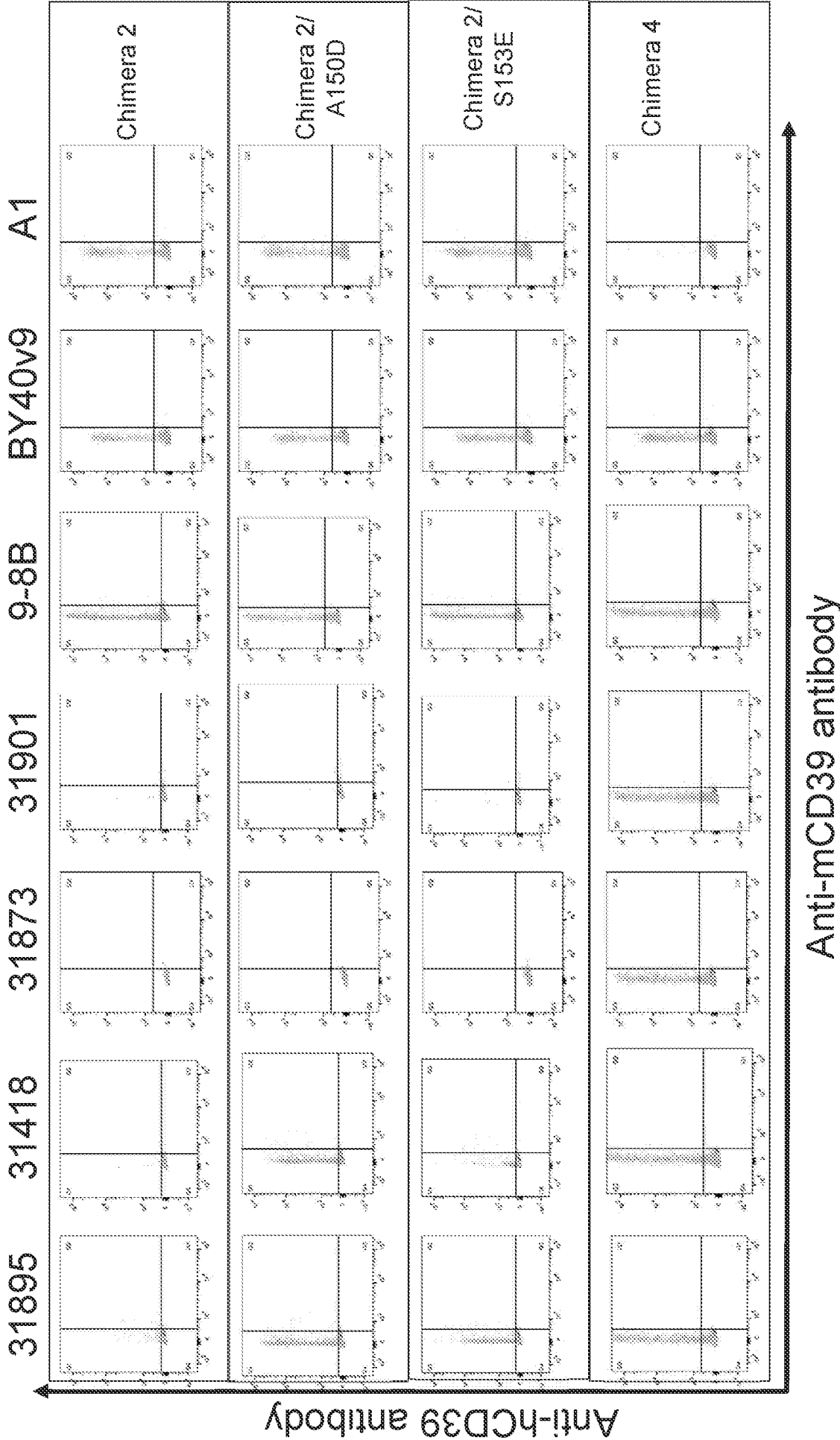
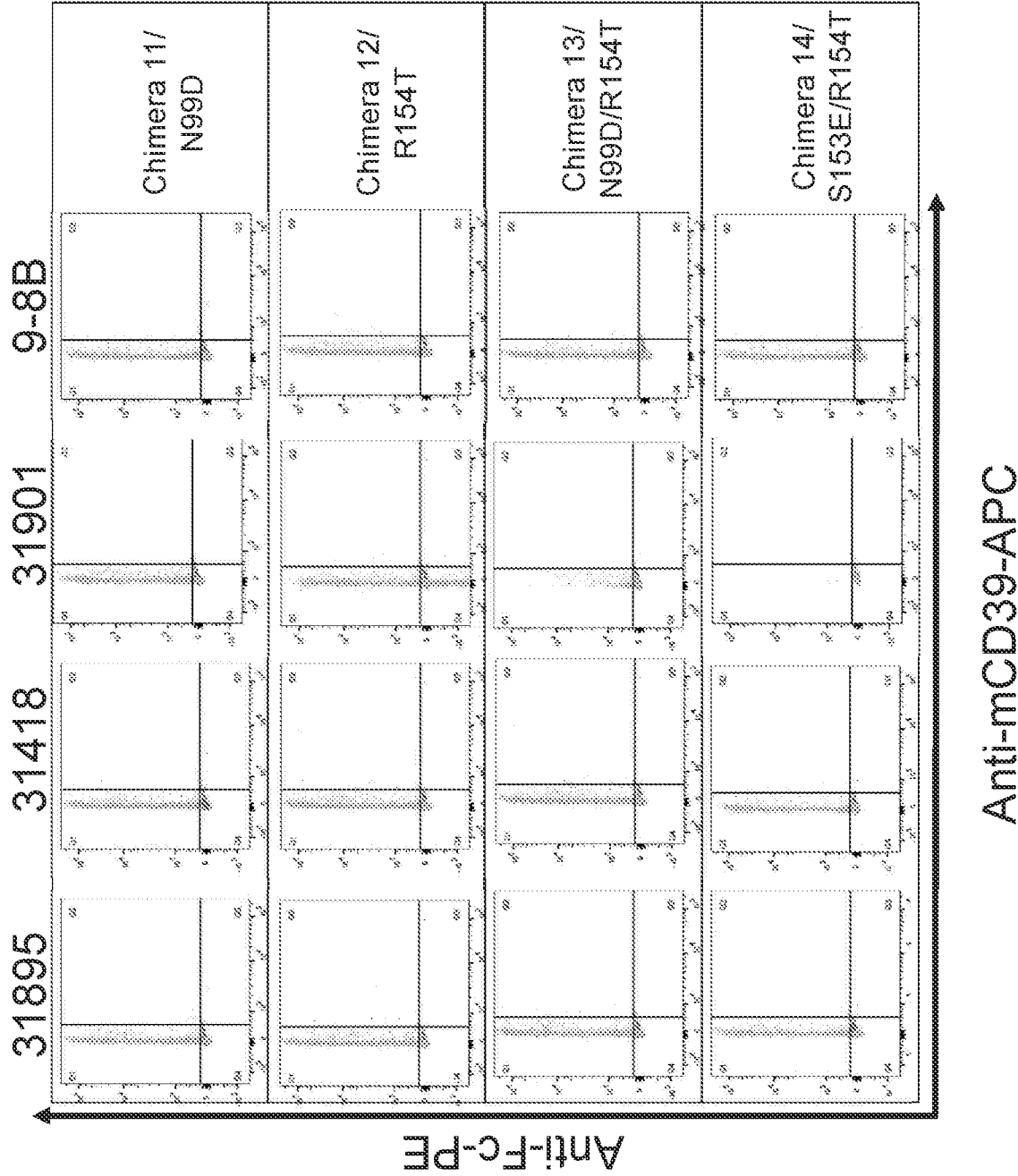


FIG. 14G



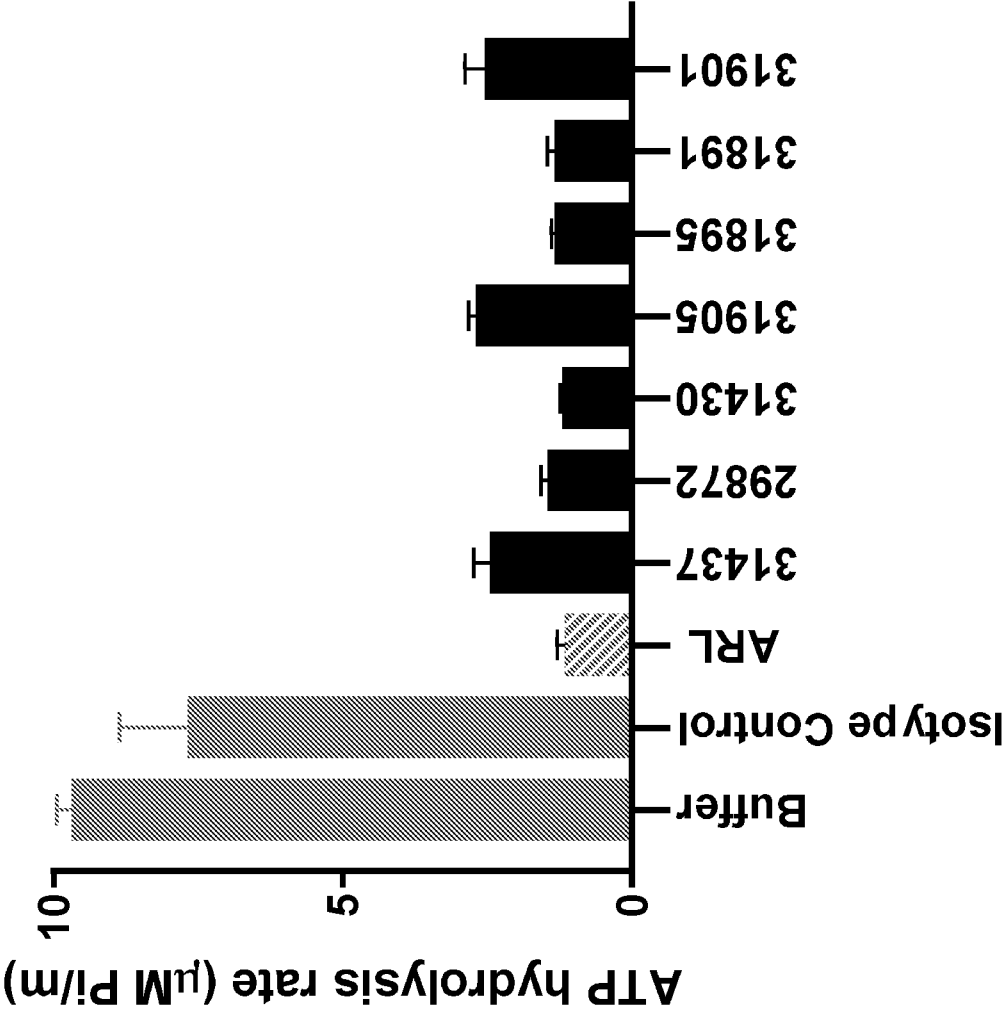


FIG. 15

FIG. 16A

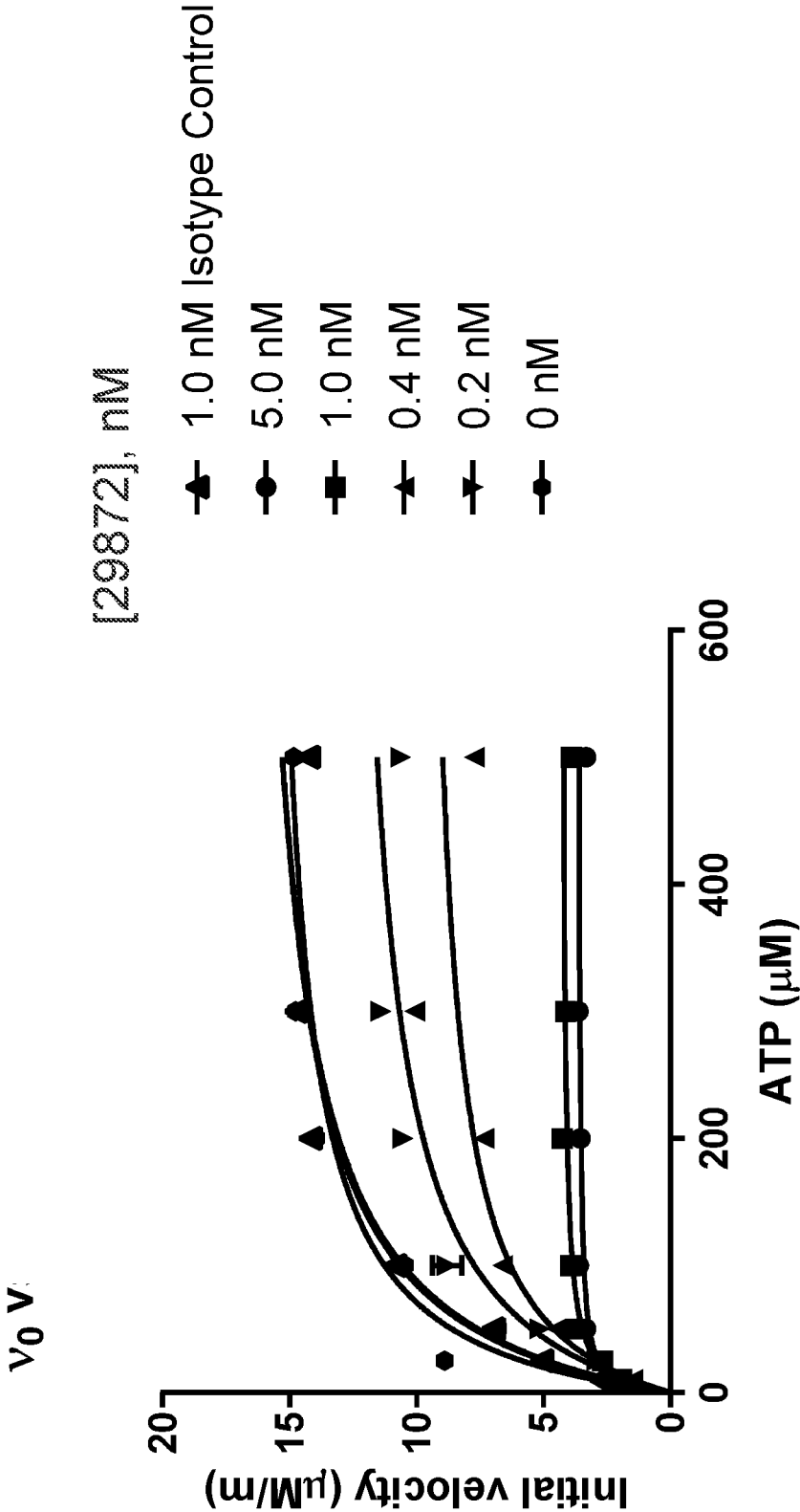


FIG. 16B

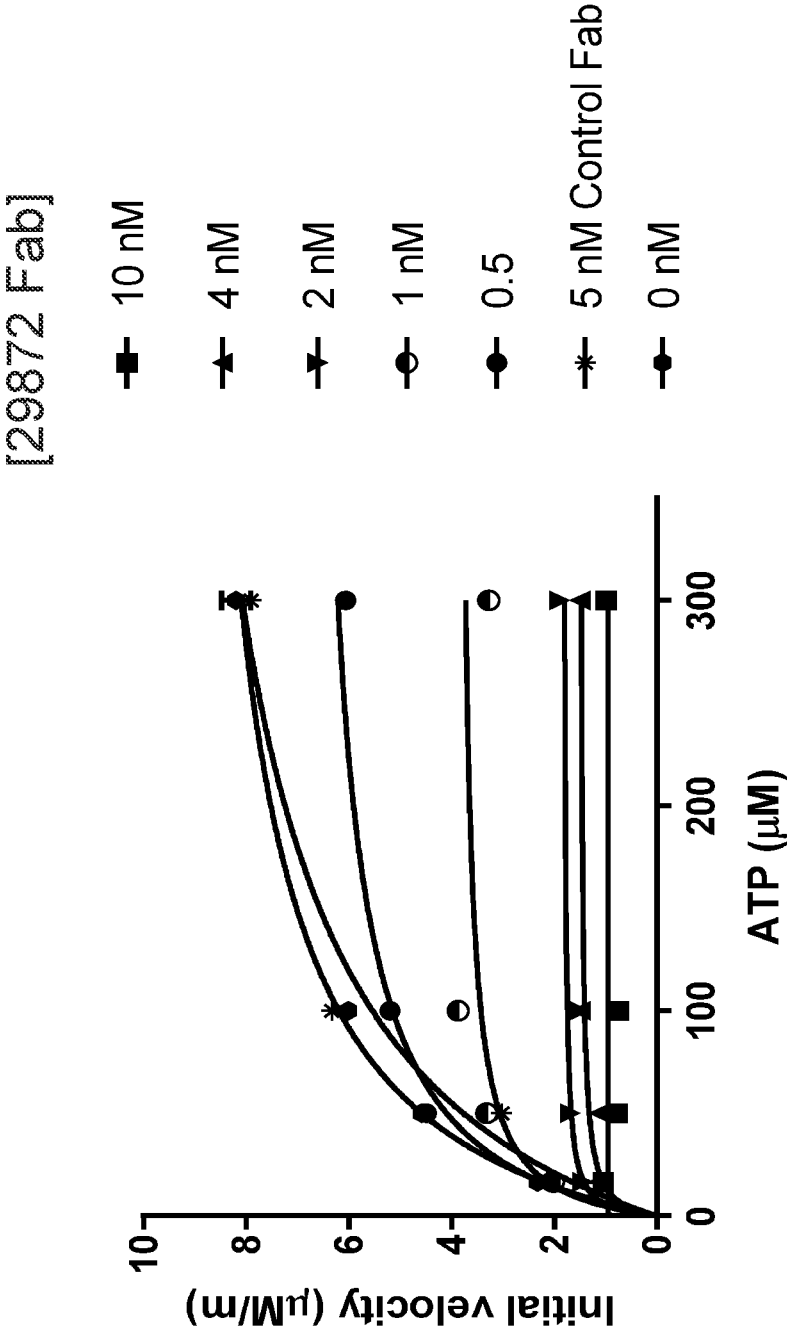


FIG. 17

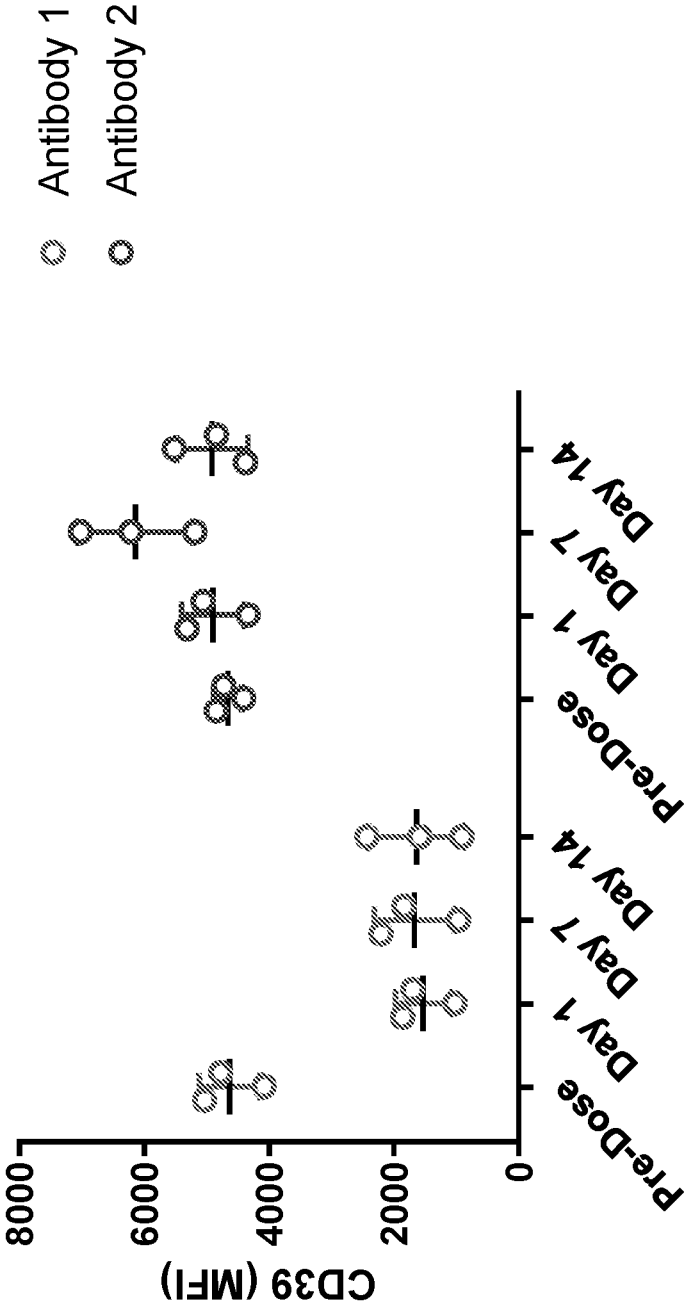


FIG. 18

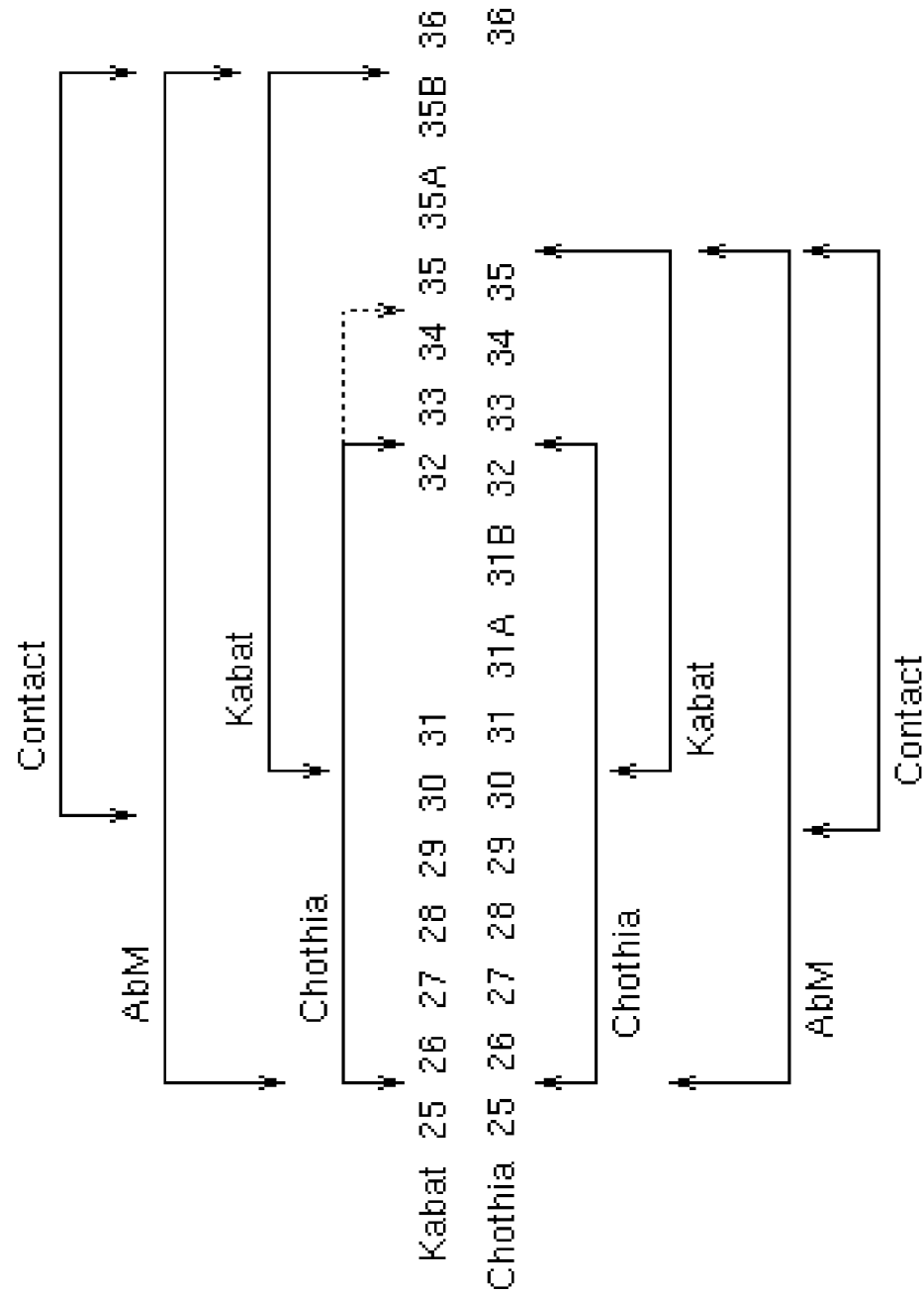


FIG. 19

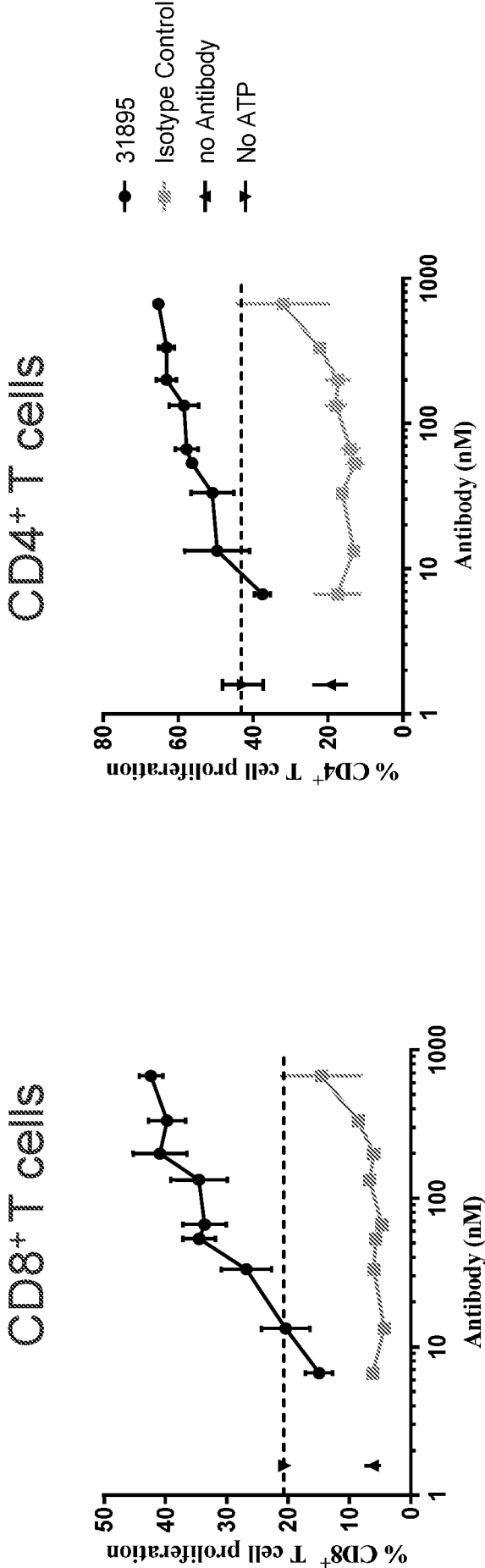
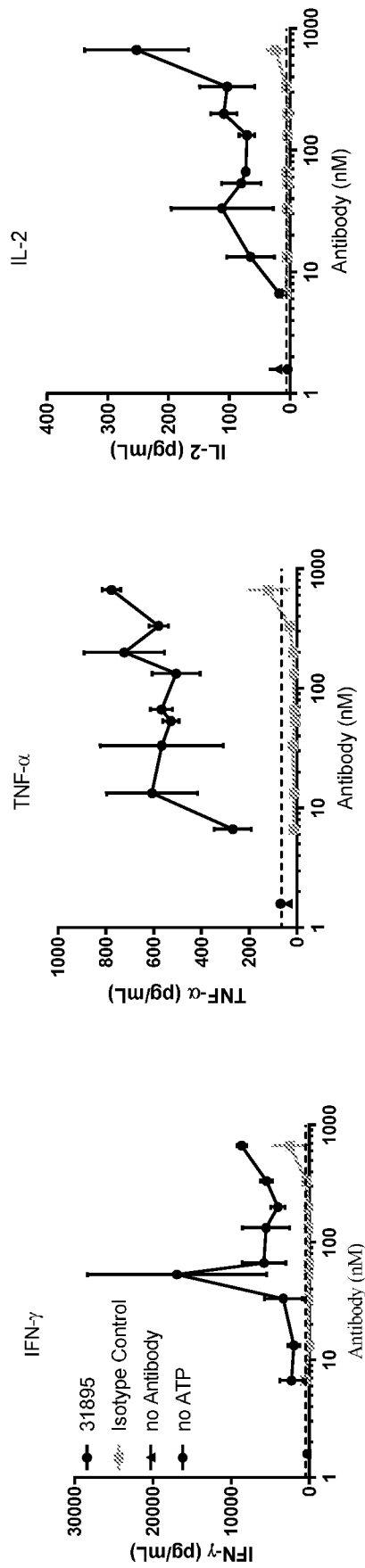


FIG. 20

A.

Exogenous ATP Added



B.

No Exogenous ATP Added

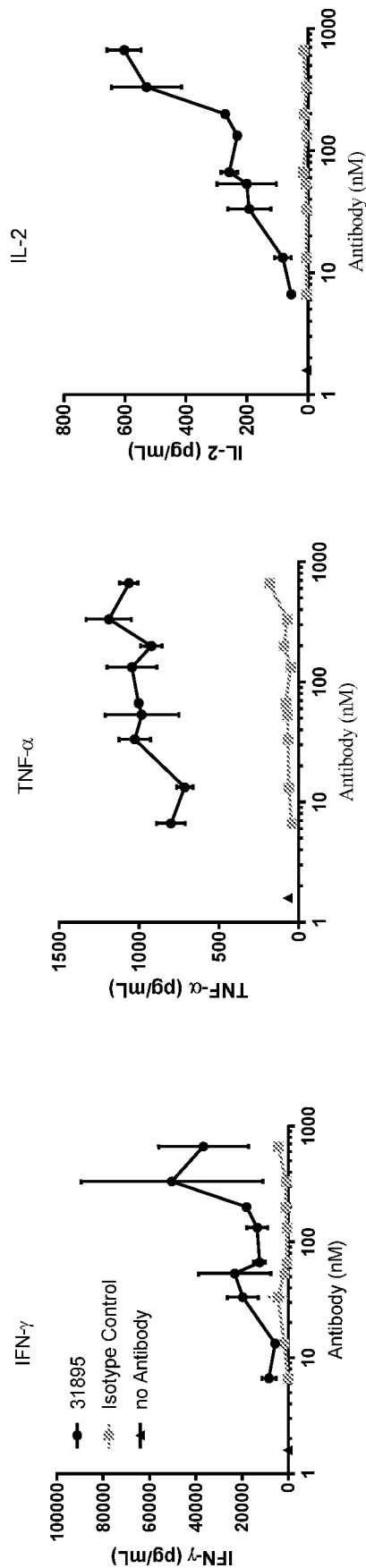


FIG. 21

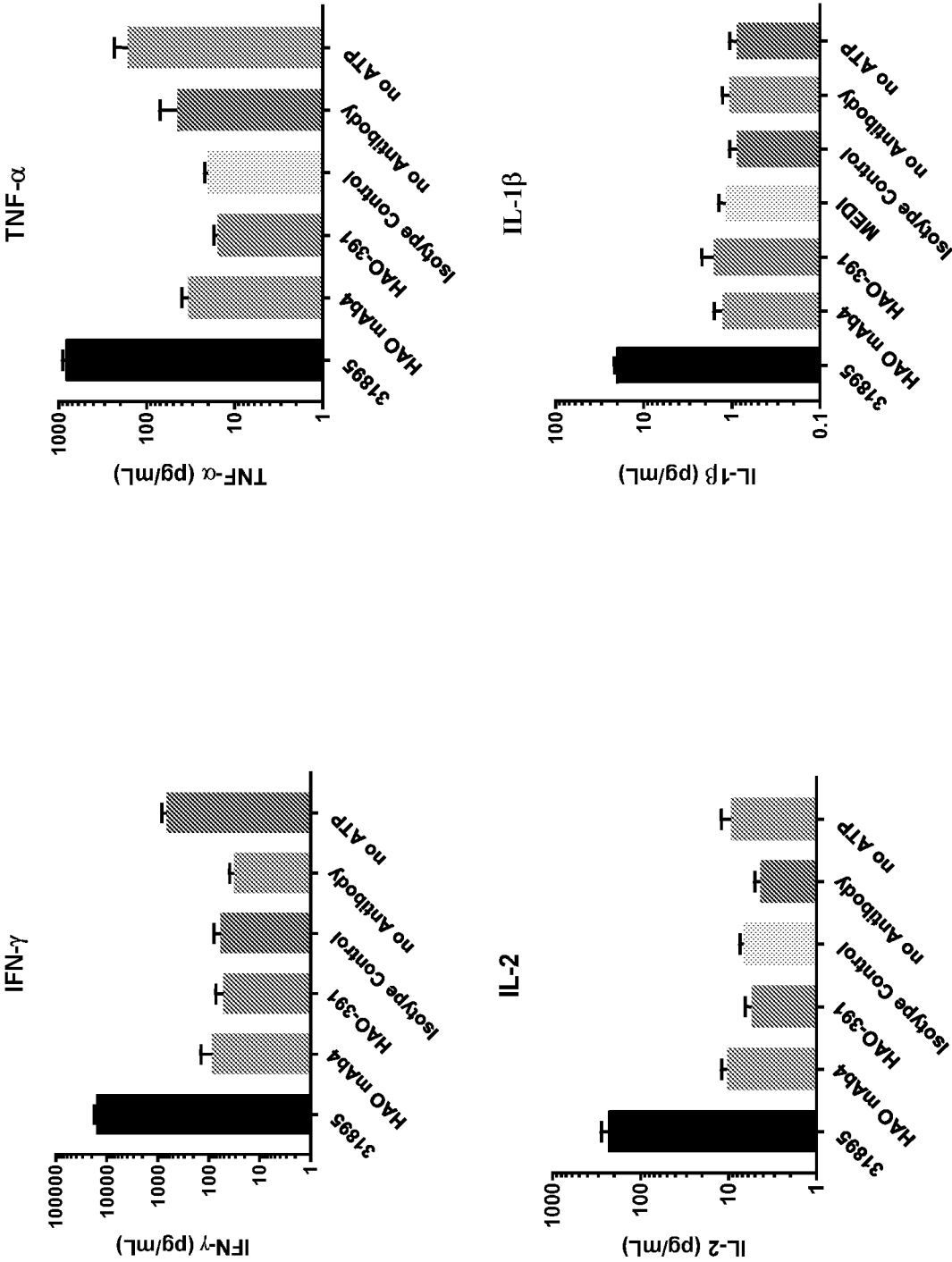


FIG. 22

