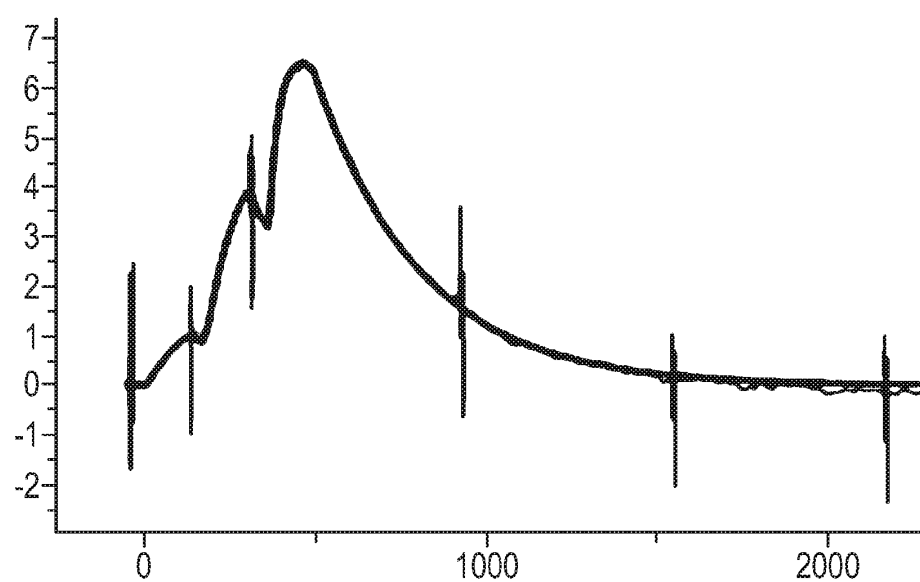


1/51

FIG. 1

Ligand CL002405648
Analyte CD33-hu-domain
Sensogram Ch 1, Fc 2-1
Temperature 25

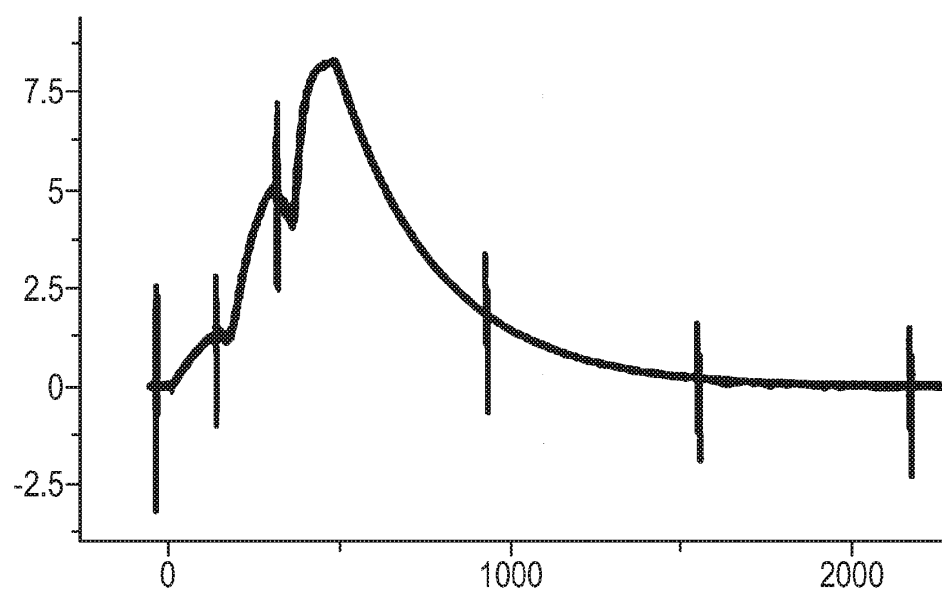


Model	Group 1		
	1:1 binding		
$k_a\{1/Ms\}$	$9.62e+05$	$k_d\{1/s\}$	$3.25e+03$
$R_{max}\{RU\}$	7.1	$KD\{M\}$	$3.38e-09$

2/51

FIG. 1(contd)

Ligand CL002405784
Analyte CD33-hu-domain
Sensogram Ch 6, Fc 2-1
Temperature 25



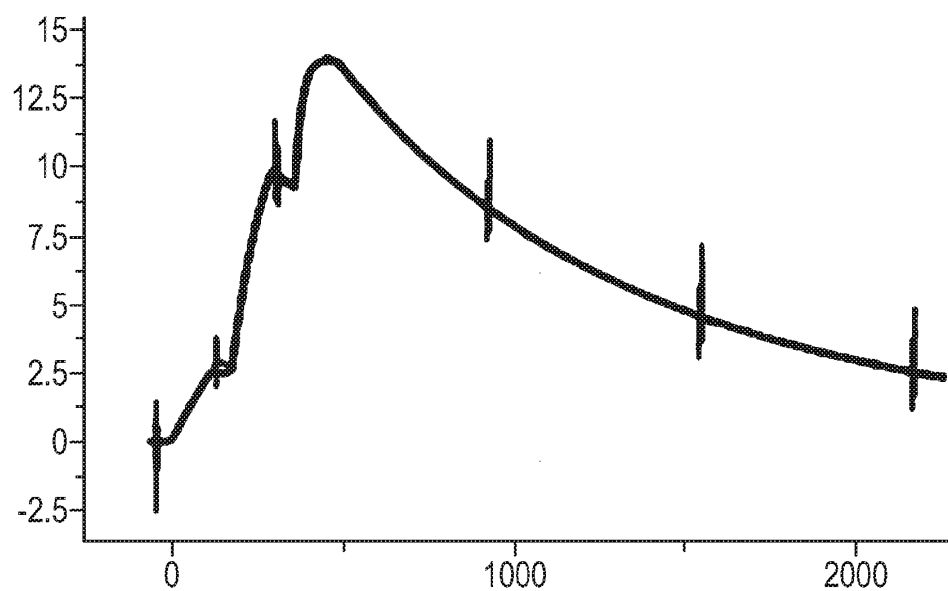
Model Group 6
1:1 binding

$k_a\{1/Ms\}$	$1.03e+06$	$k_d\{1/s\}$	$3.40e-03$
$R_{max}\{RU\}$	9.0	$KD\{M\}$	$3.31e-09$

3/51

FIG. 1(contd)

Ligand CL002405648
Analyte CD33-hu-FL
Sensogram Ch 1, Fc 2-1
Temperature 25



Model Group 9
1:1 binding

$k_a\{1/Ms\}$ 1.38e+06

$k_d\{1/s\}$ 1.17e-03

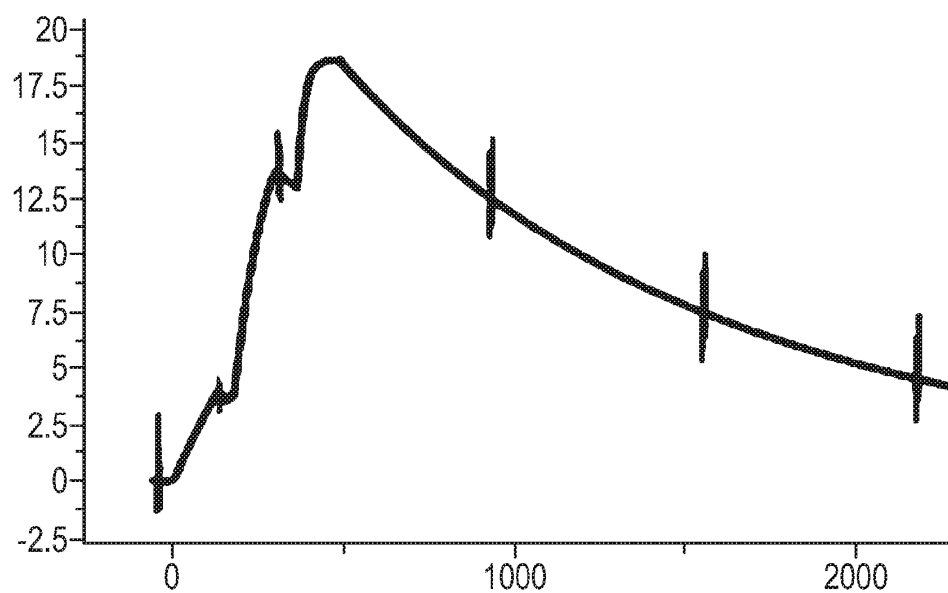
$R_{max}\{RU\}$ 14.2

$KD\{M\}$ 8.47e-10

4/51

FIG. 1(contd)

Ligand CL002405784
Analyte CD33-hu-FL
Sensogram Ch 6, Fc 2-1
Temperature 25



Model Group 19
1:1 binding

$k_a\{1/MS\}$ 1.40e+06

$k_d\{1/s\}$ 9.28e-04

$R_{max}\{RU\}$ 18.9

$KD\{M\}$ 6.61e-10

5/51

FIG. 2
MOLM-13
(high)

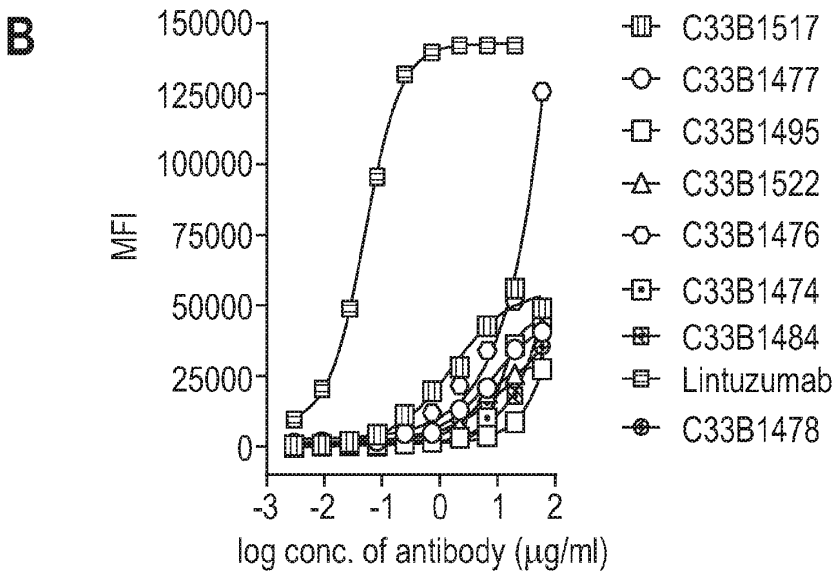
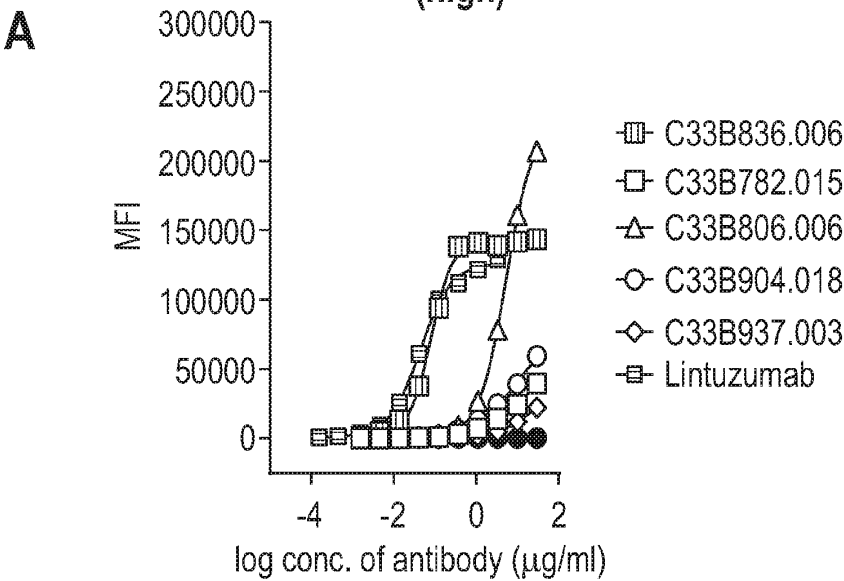
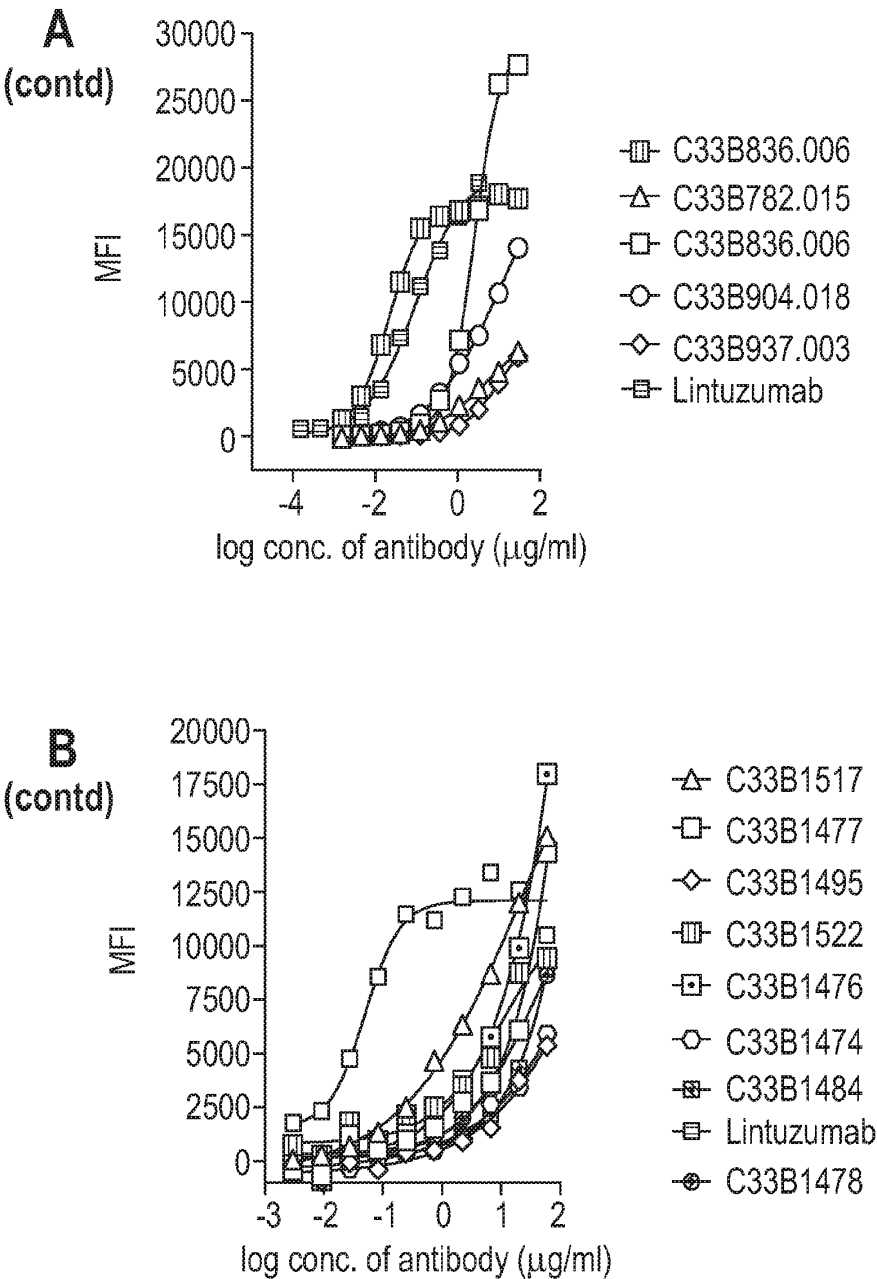


FIG. 2(contd)
Kasumi-1
(medium)



7/51

FIG. 2(contd)
OCI-AML-3
(low)

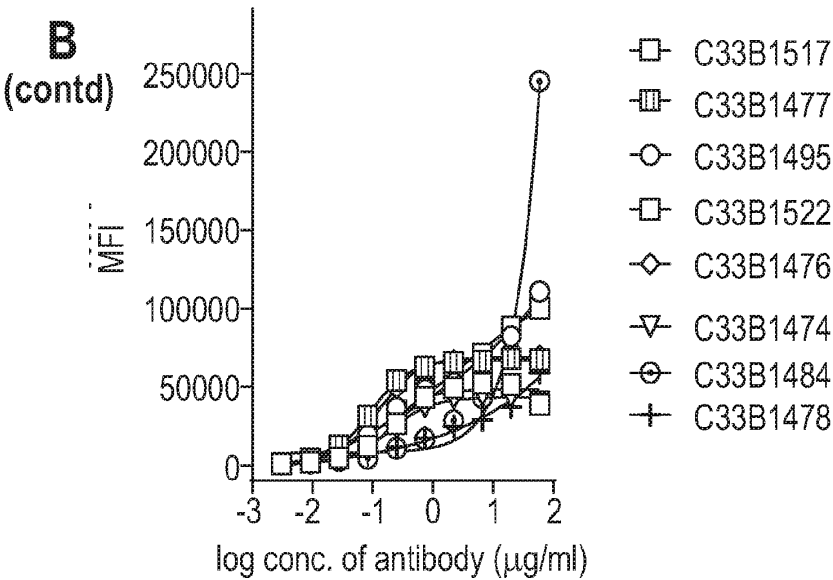
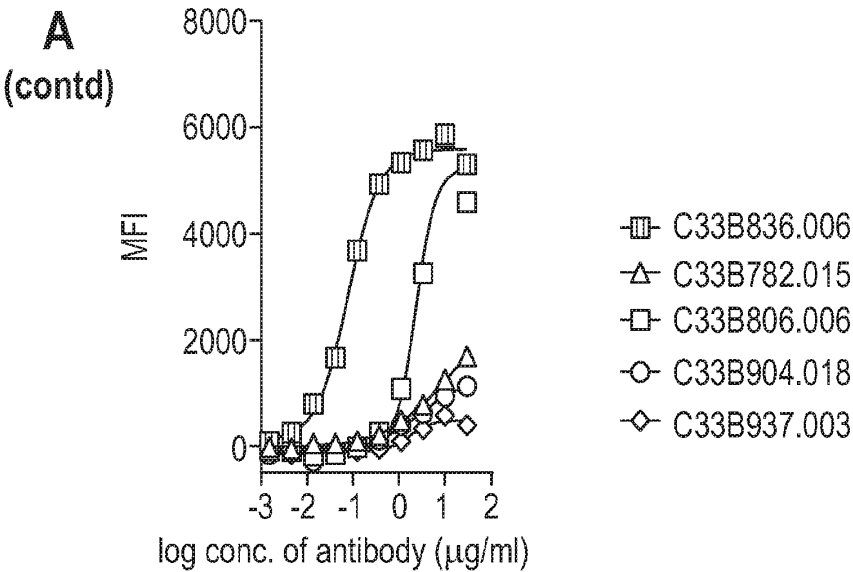


FIG. 2(contd)

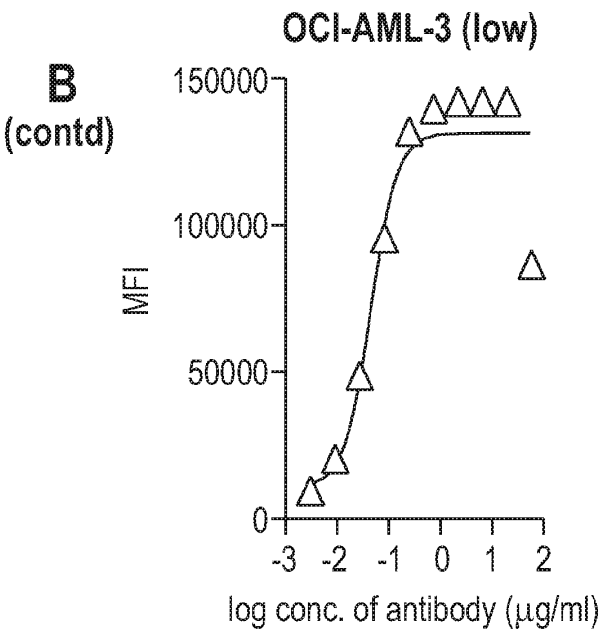
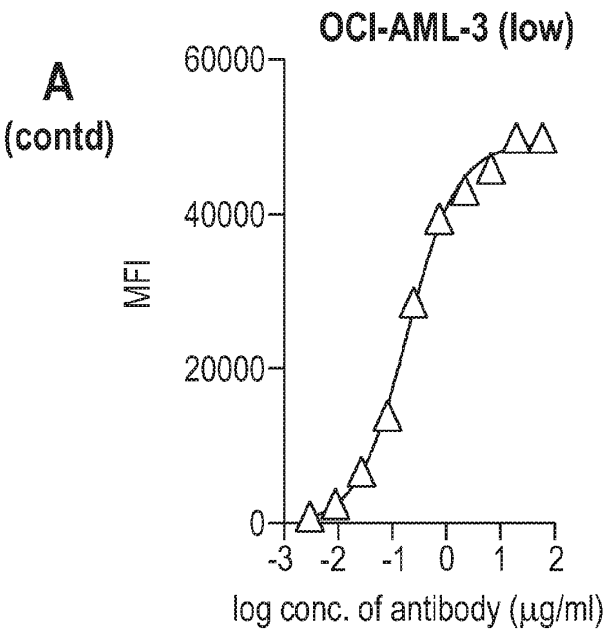


FIG. 3
C33B806.006

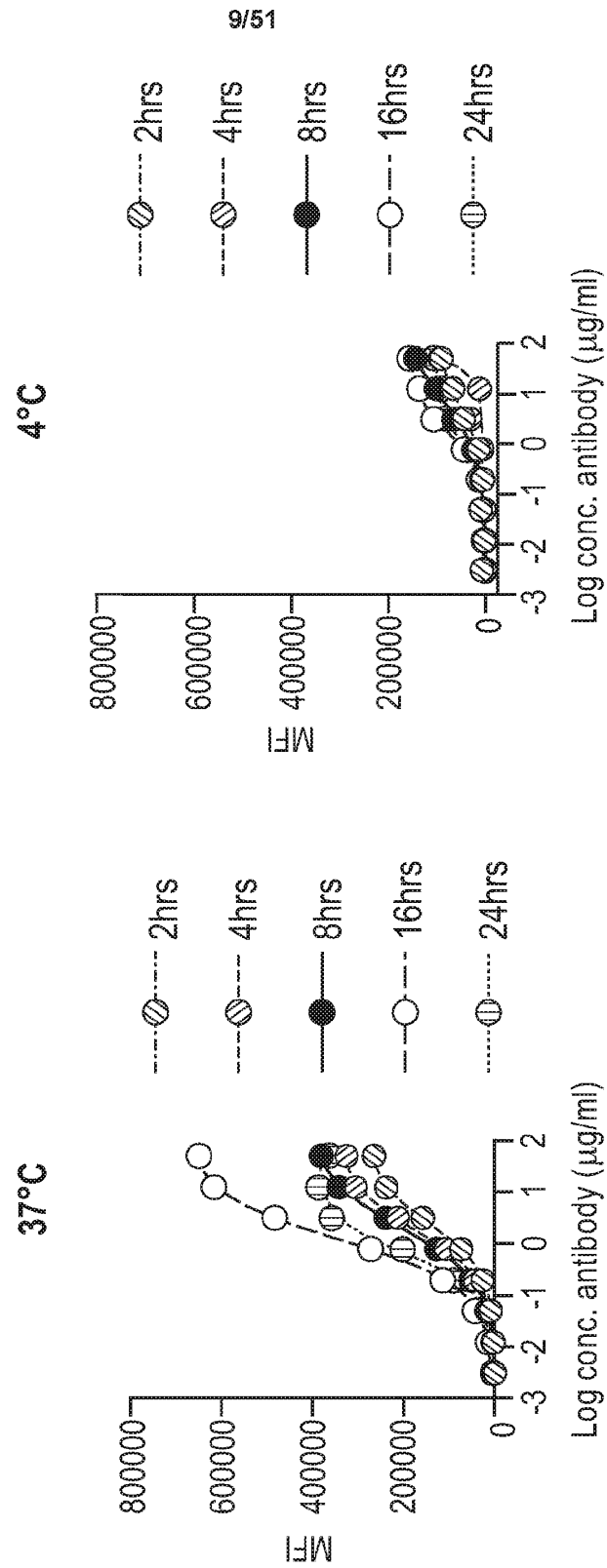


FIG. 3(contd)
C33B782.015

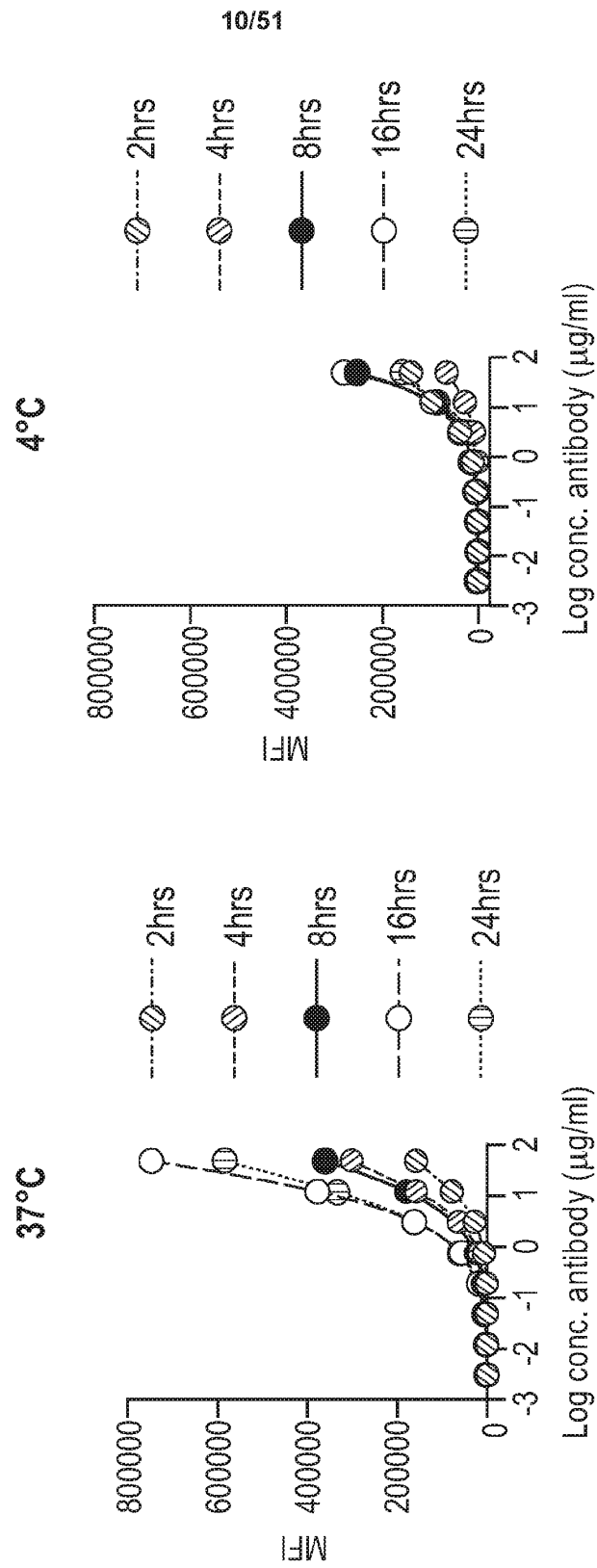


FIG. 3(contd)
C33B904.01

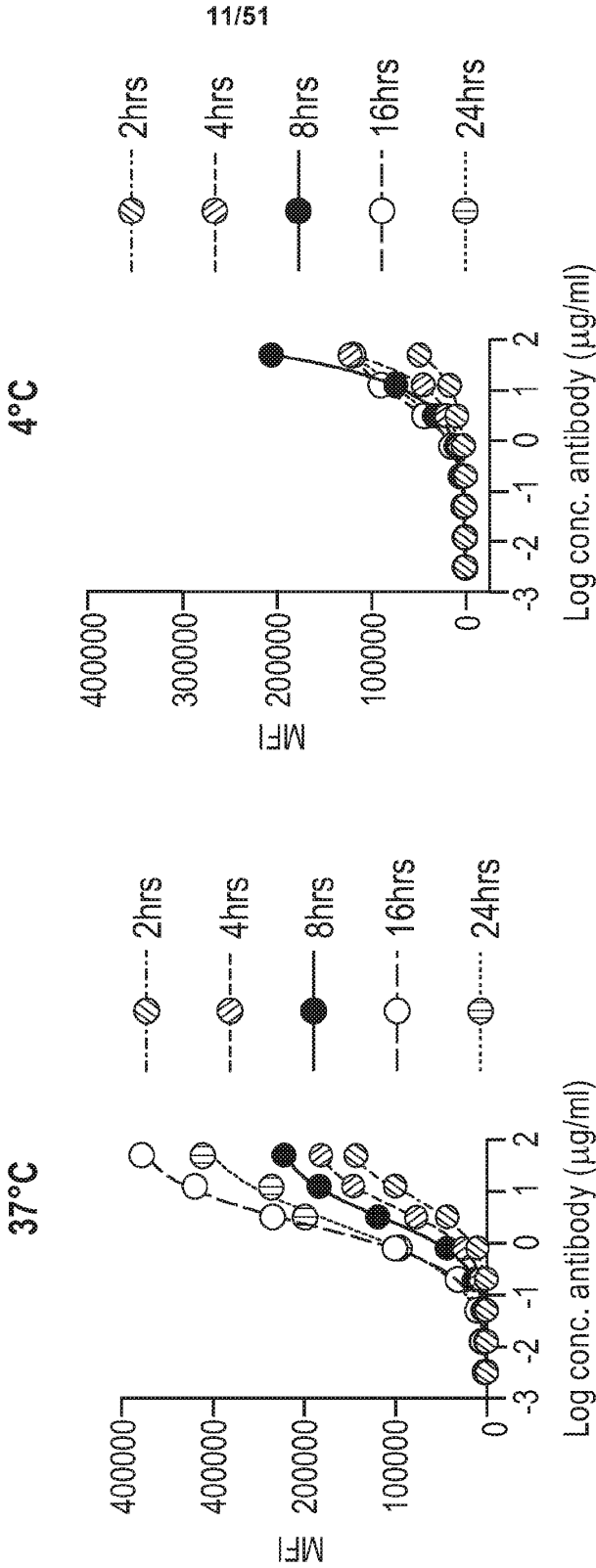


FIG. 3(contd)
C33B937.003

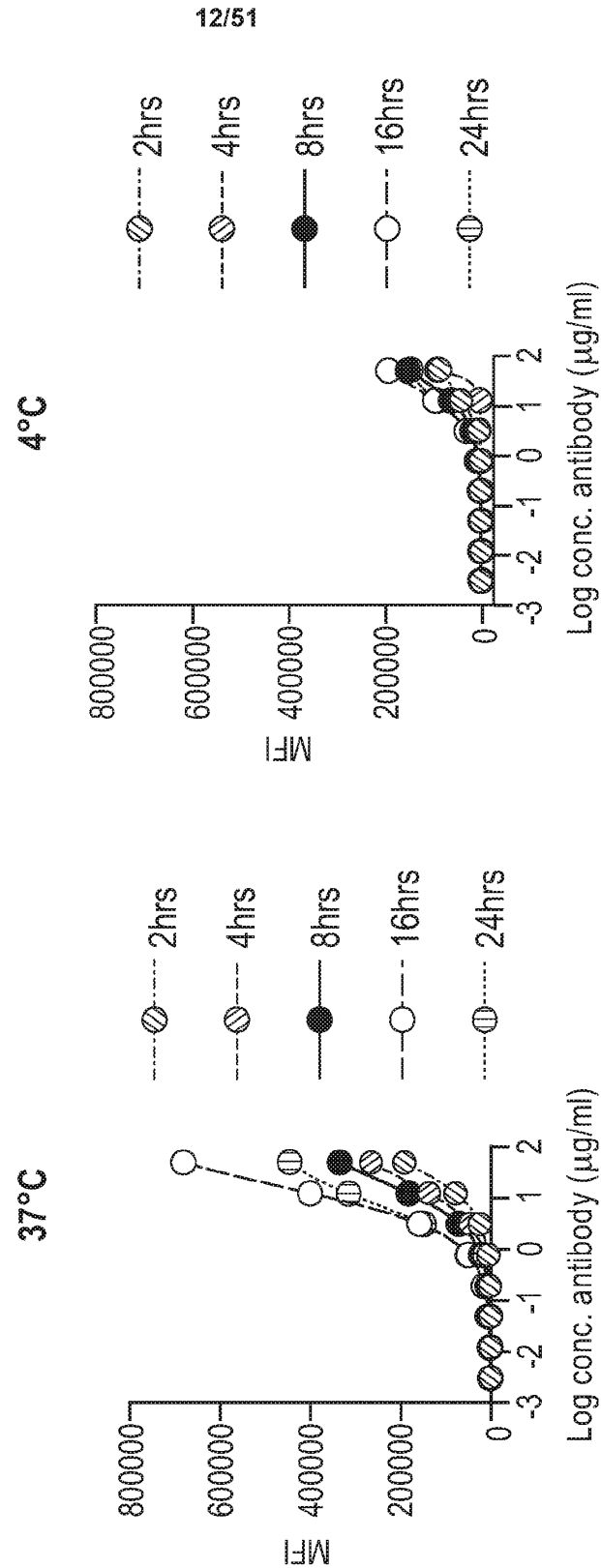


FIG. 3(contd)
C33B836.006

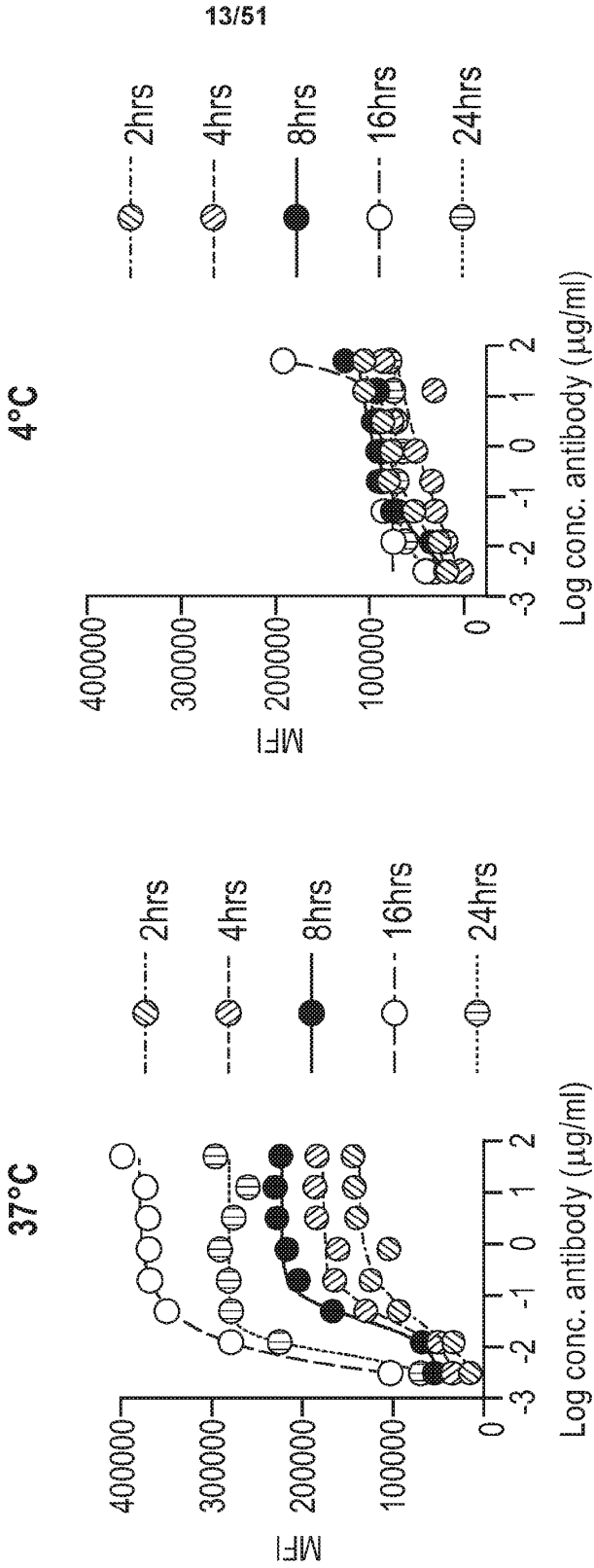


FIG. 3(contd)

isotype

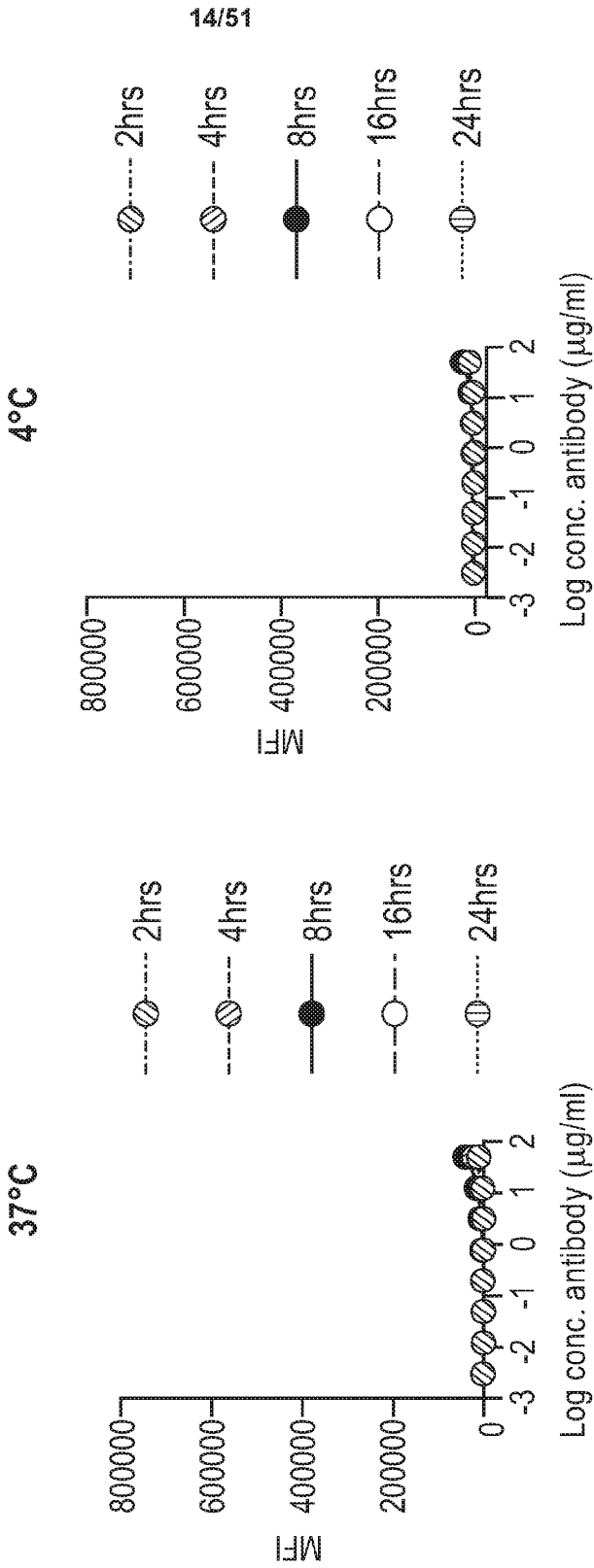


FIG. 3(contd)
sCD33B1474

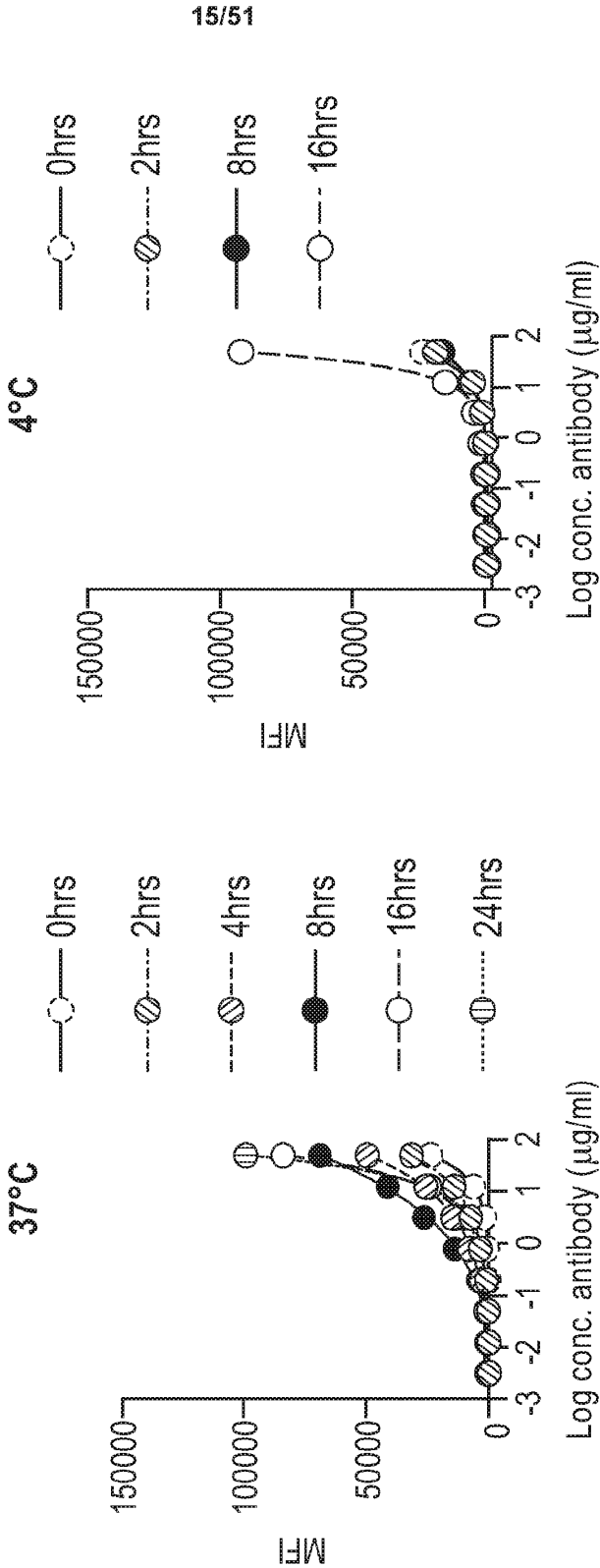
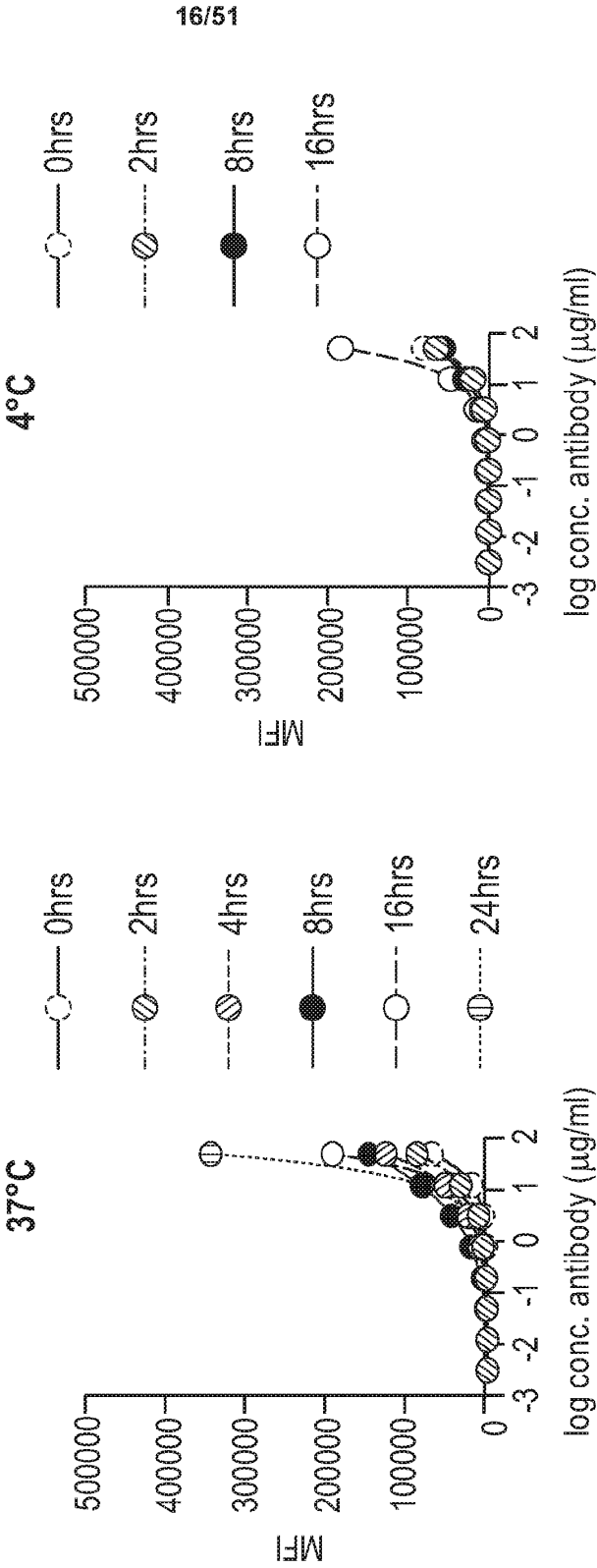


FIG. 3(contd)
sCD33B1478



17/51

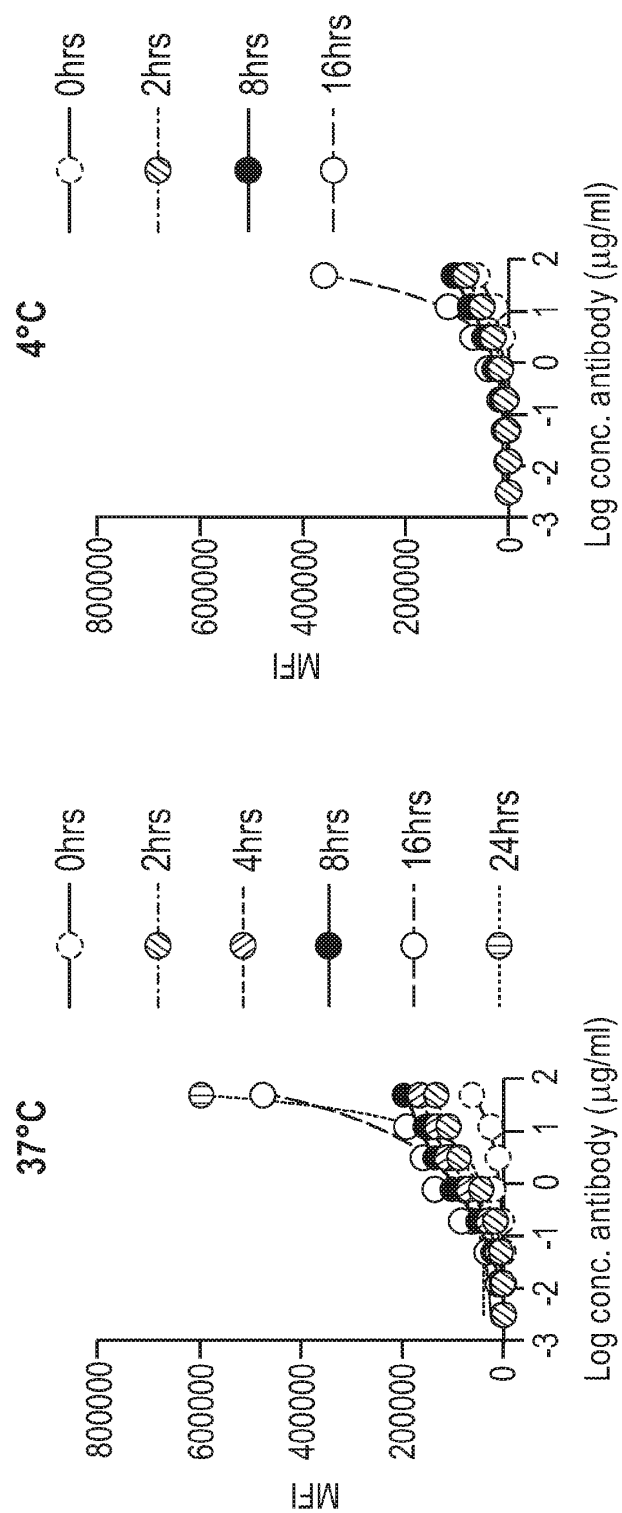


FIG. 3(contd)
sCD33B1476

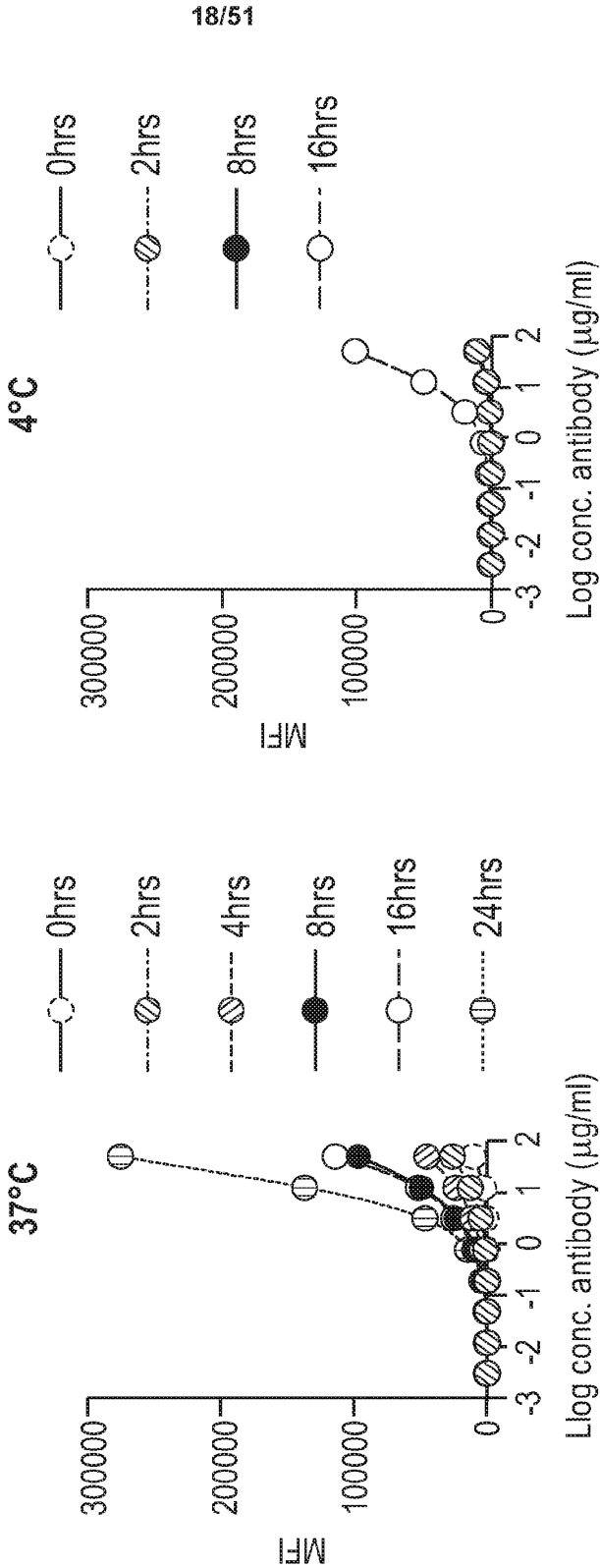


FIG. 3(contd)
sCD33B1484

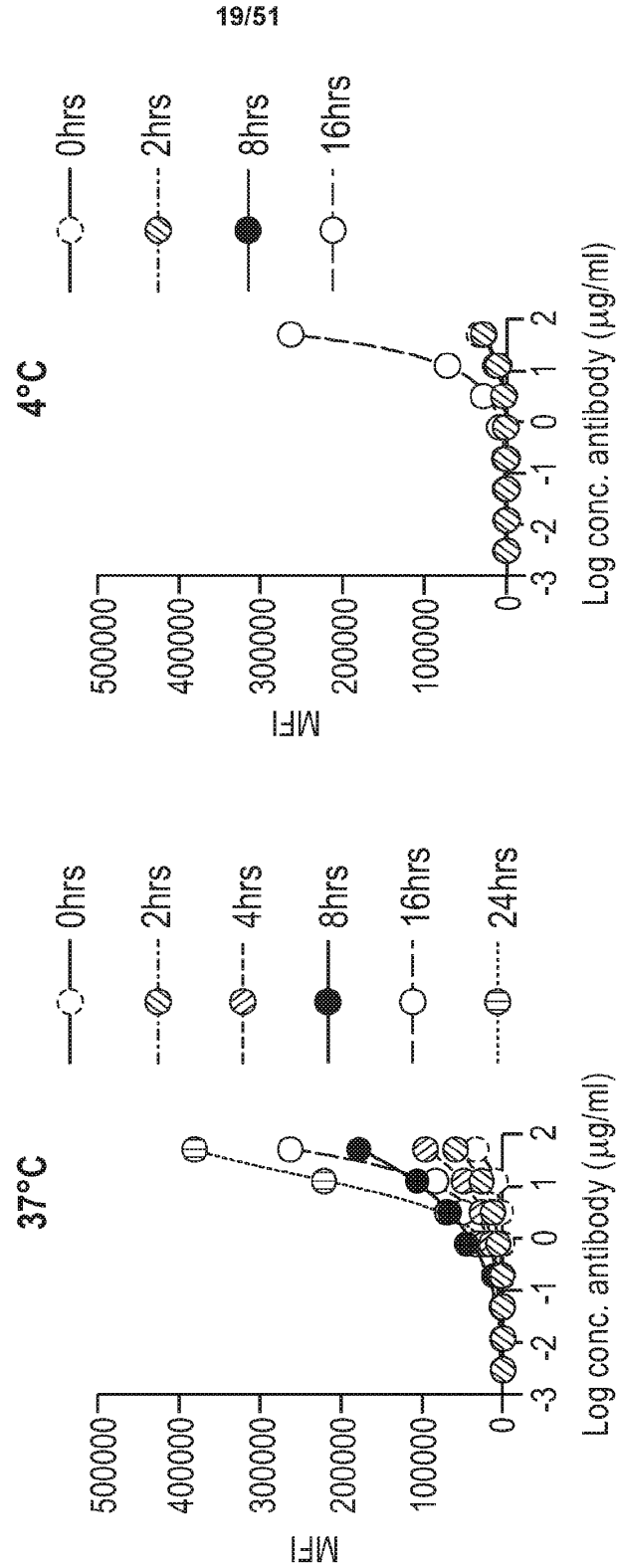


FIG. 3(contd)
sCD33B1522

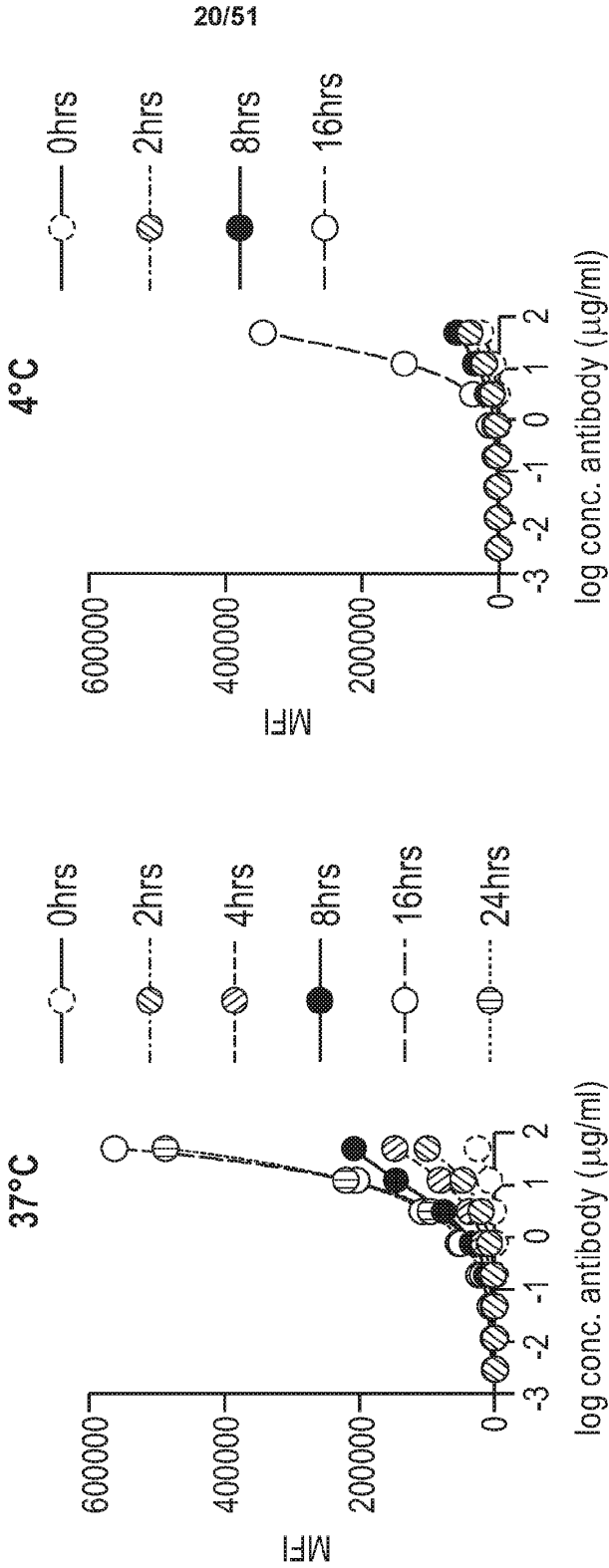
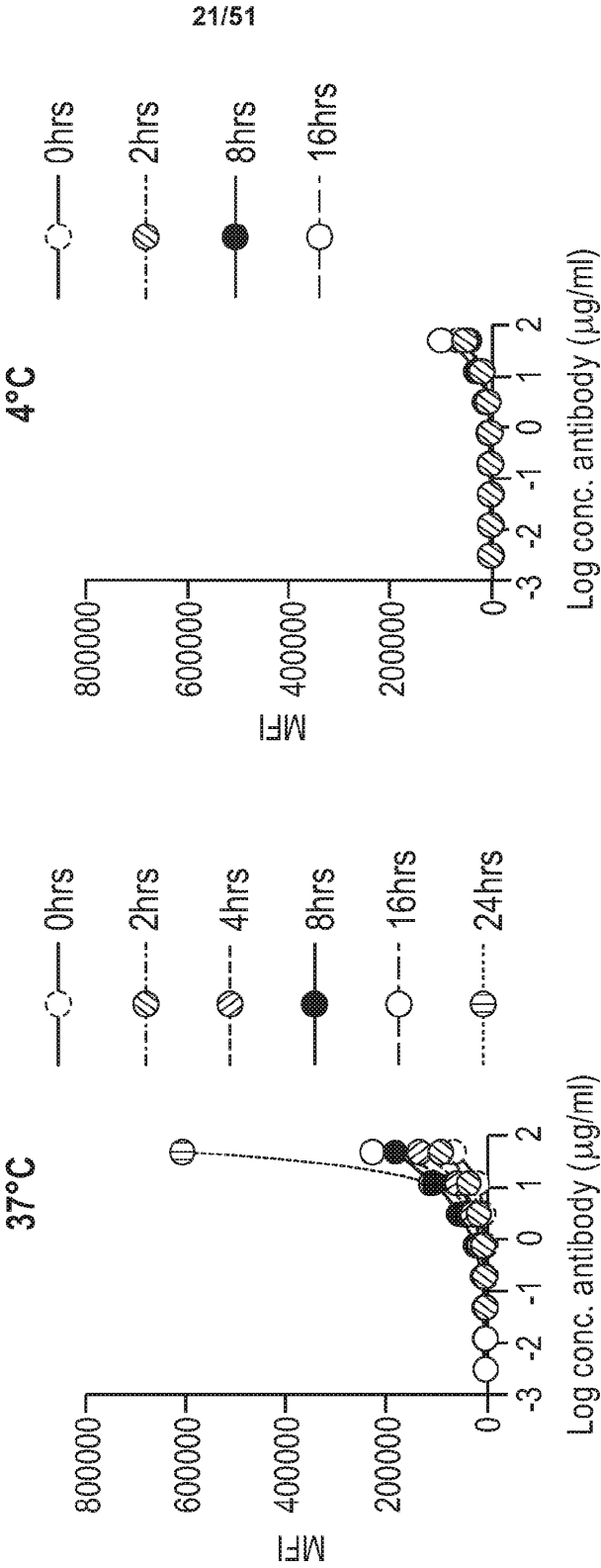


FIG. 3(contd)
sCD33B1477



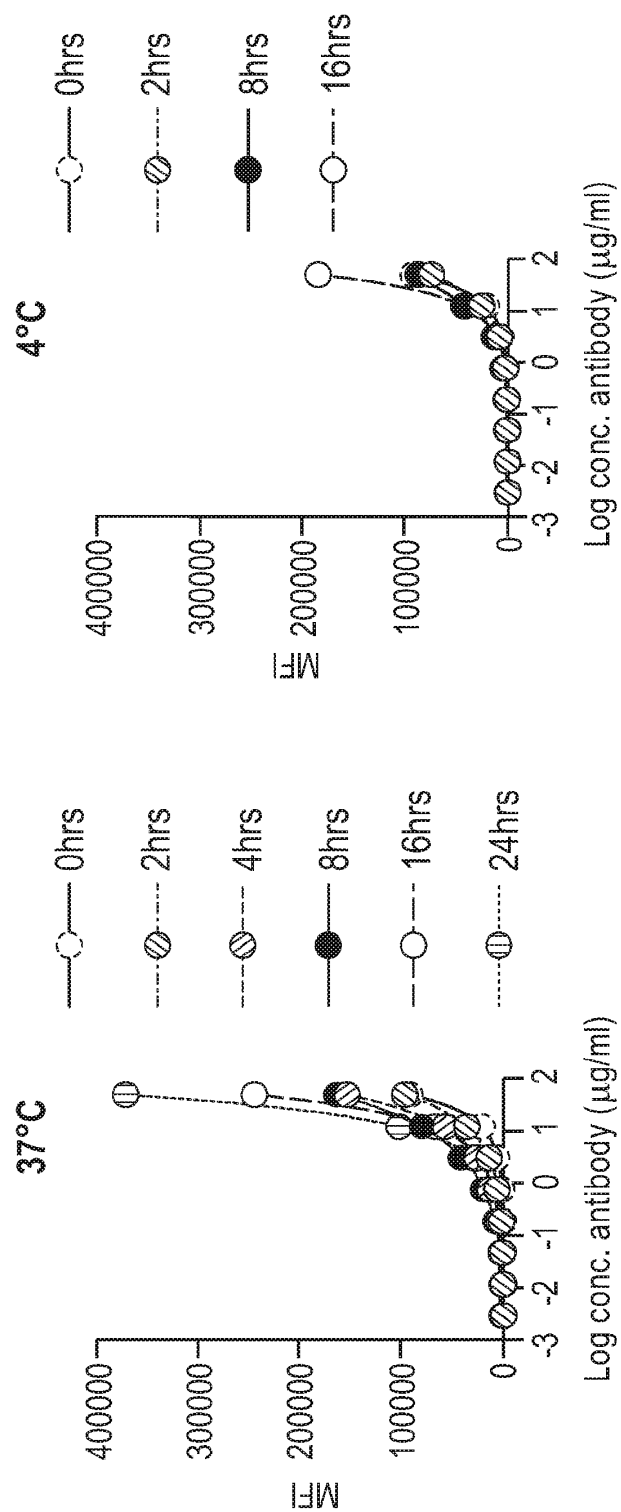
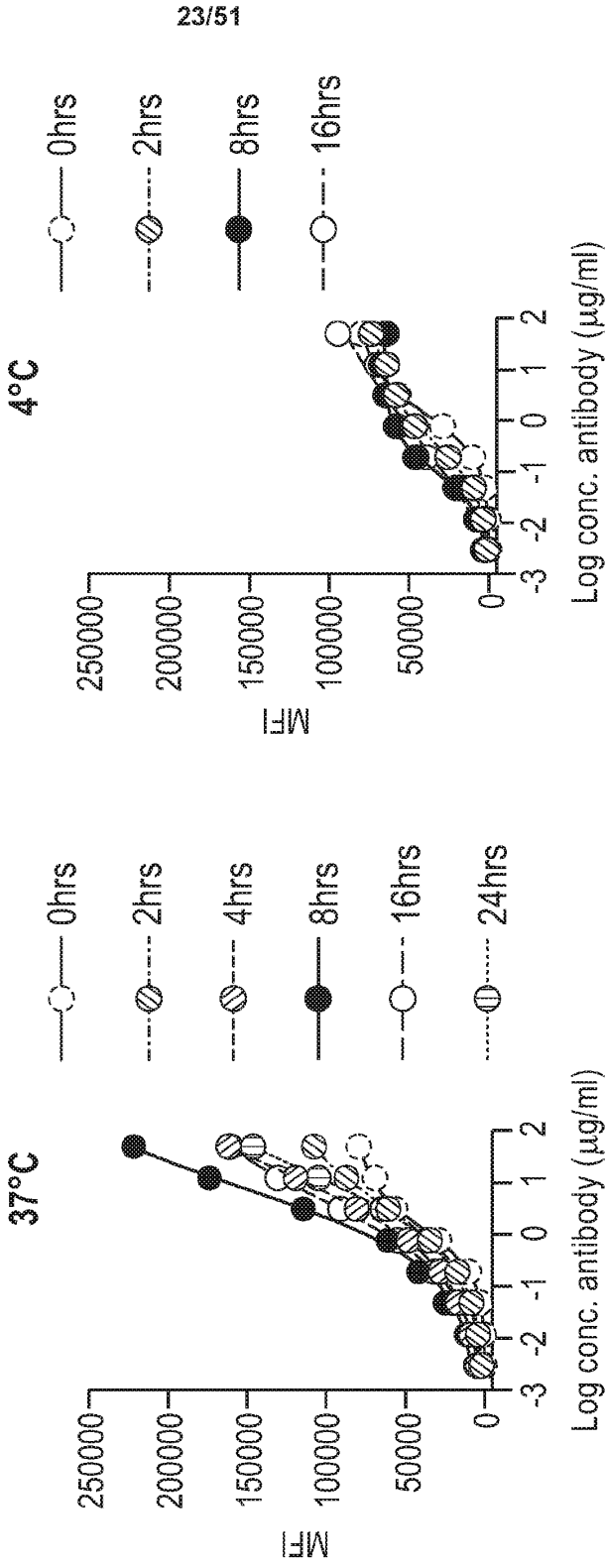
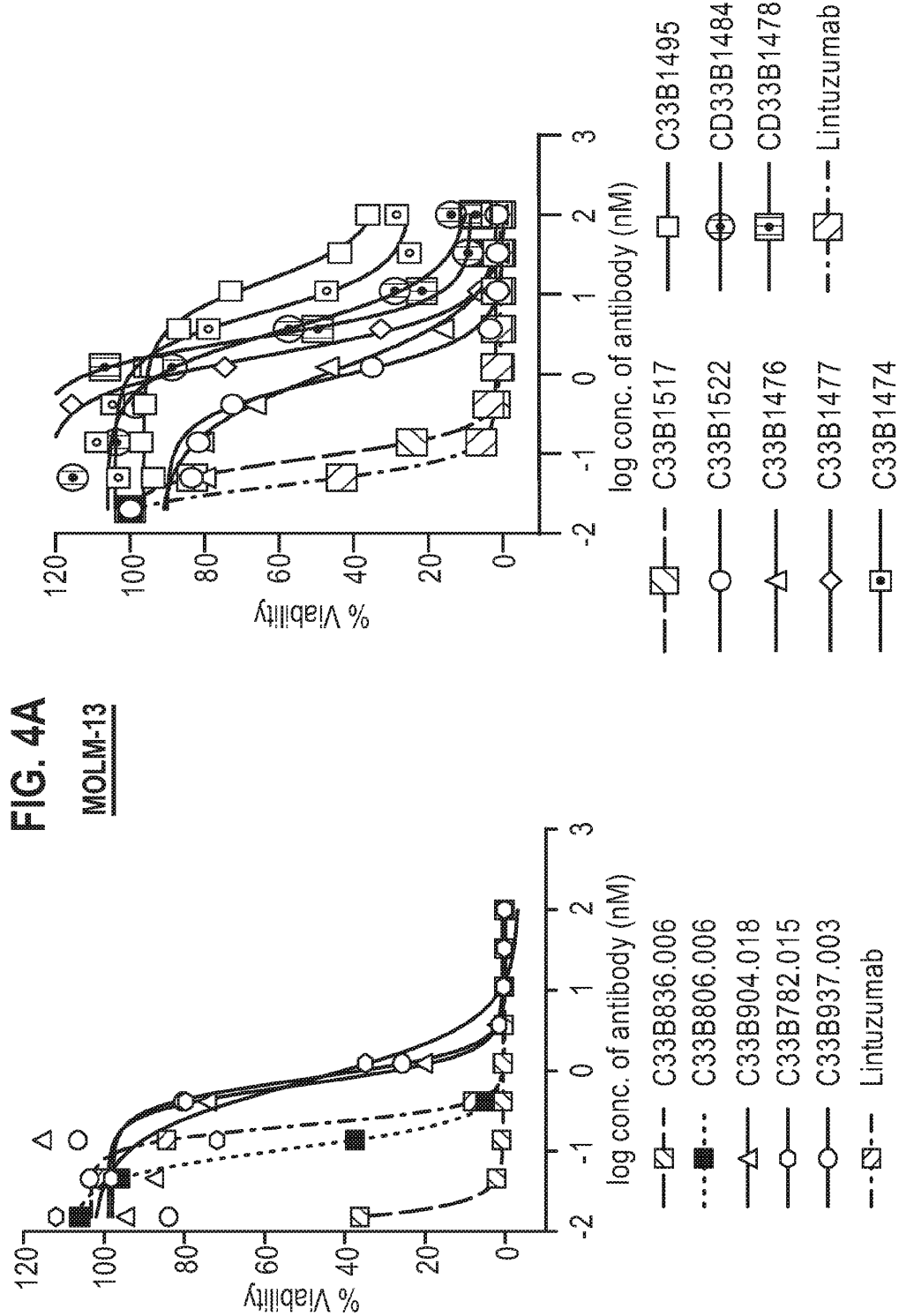


FIG. 3(contd)
Lintuzumab





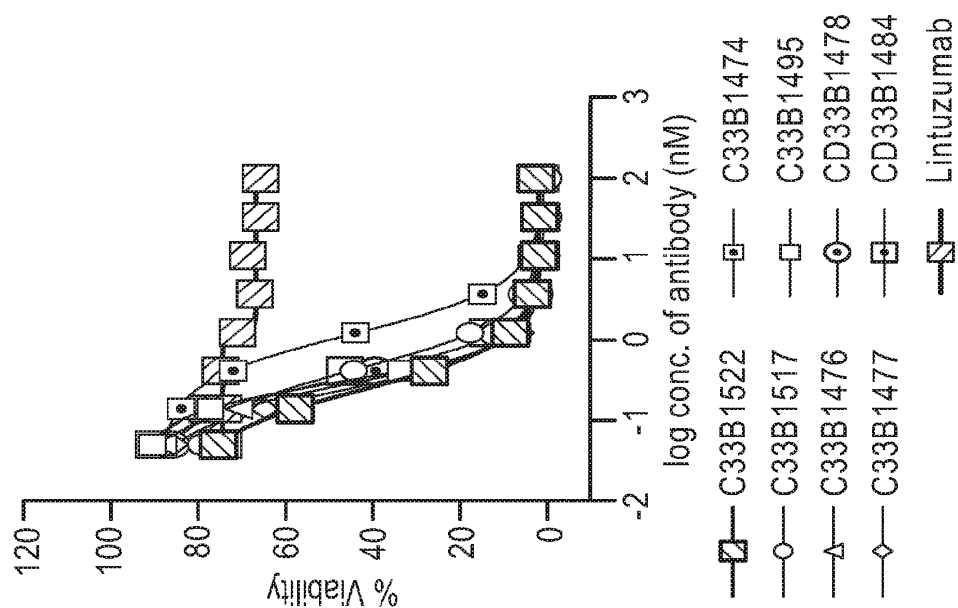


FIG. 4B Kasumi-1

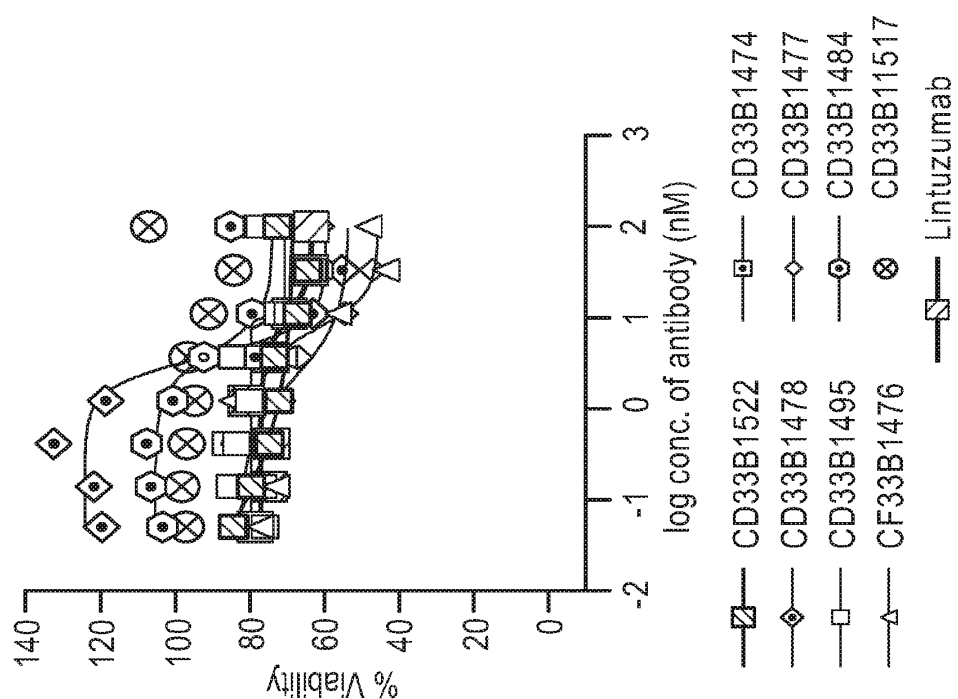
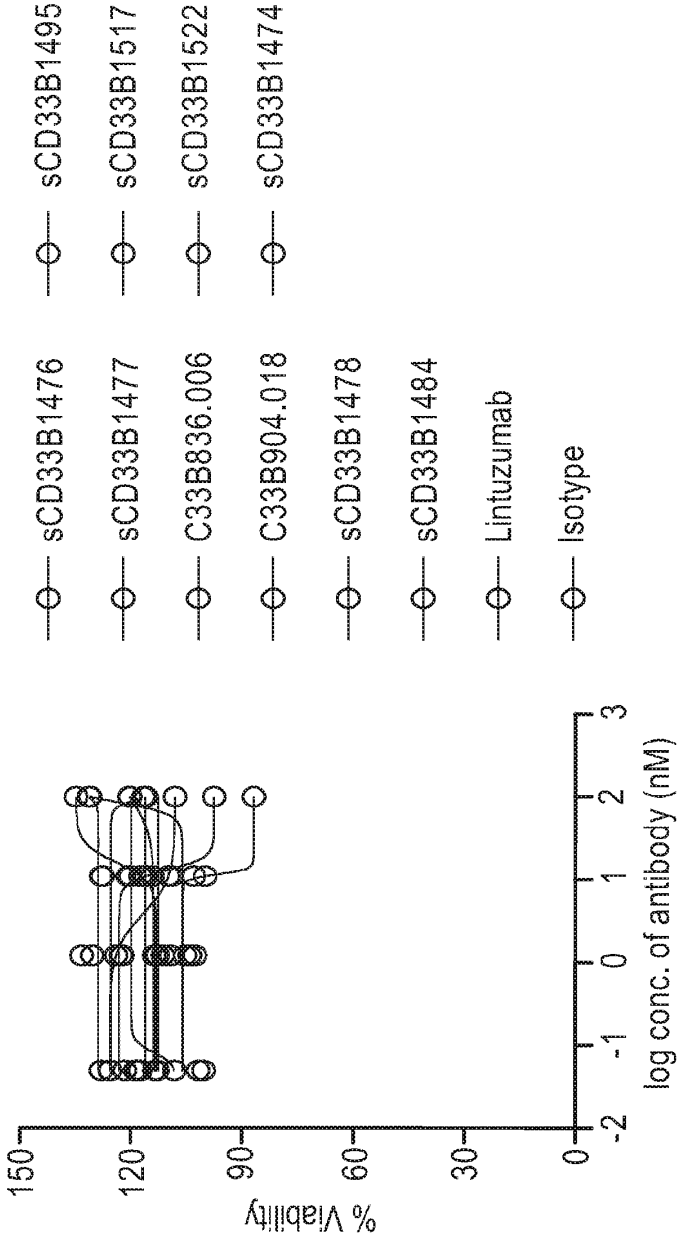


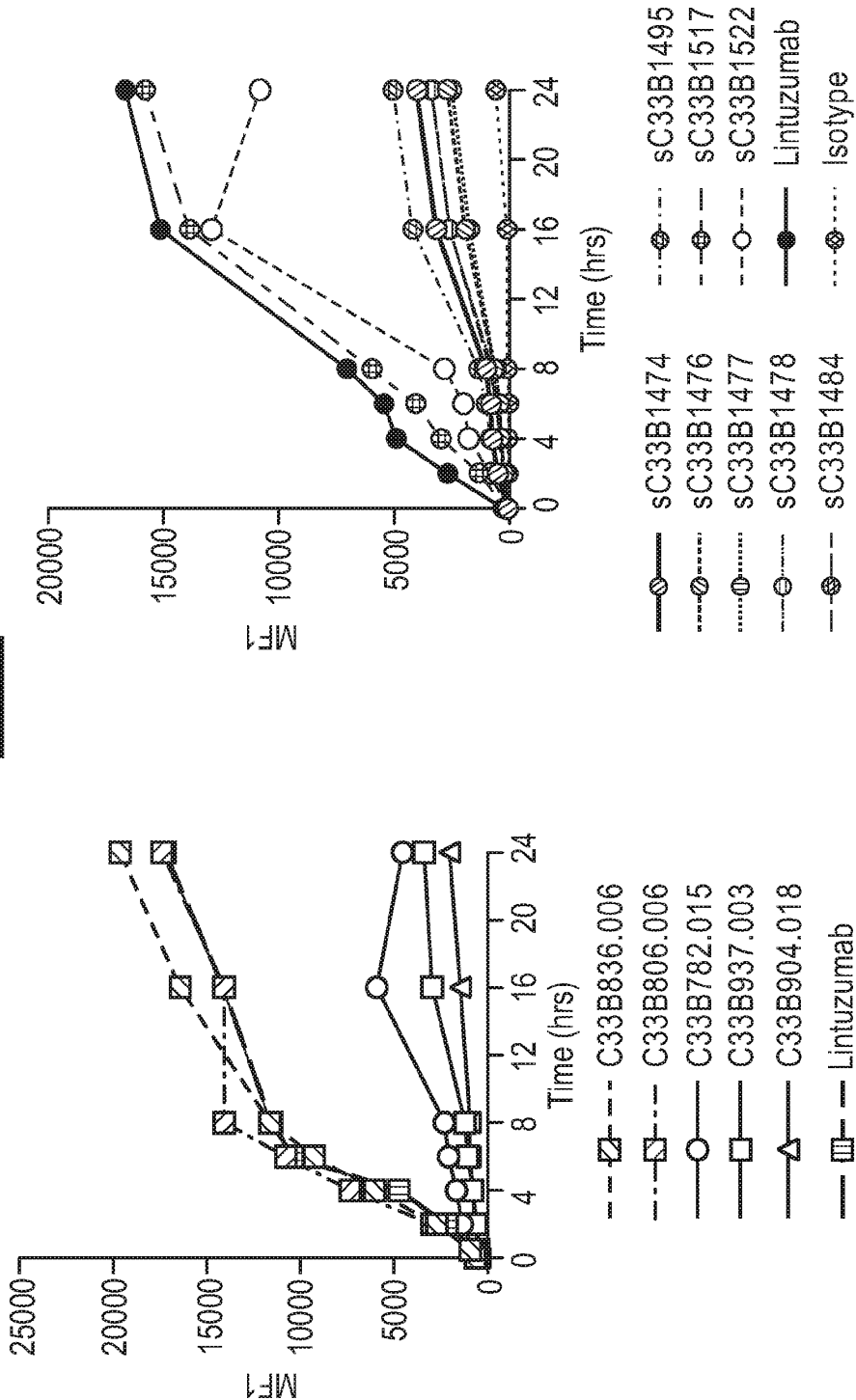
FIG. 4D
HDLM-2



27/51

FIG. 5

MOLM-13



Left Graph: Cell death induced by 100 ng/ml of anti-CD133 antibody

Time (hrs)	sC33B1474	sC33B1476	sC33B1477	sC33B1478	sC33B1484	Lintuzumab	Isotype
0	0	0	0	0	0	0	0
4	1000	1000	1000	1000	1000	1000	1000
8	2000	2000	2000	2000	2000	2000	2000
16	15000	15000	15000	15000	15000	15000	15000
24	15000	15000	15000	15000	15000	15000	15000

Right Graph: Cell death induced by 100 ng/ml of anti-CD133 antibody in the presence of 100 ng/ml of anti-CD133 antibody

Time (hrs)	Lintuzumab	Isotype	sC33B836.006	sC33B904.018
0	0	0	0	0
4	1000	1000	1000	1000
8	2000	2000	2000	2000
16	15000	15000	15000	15000
24	15000	15000	15000	15000

FIG. 5(contd)

OCI-AML-3

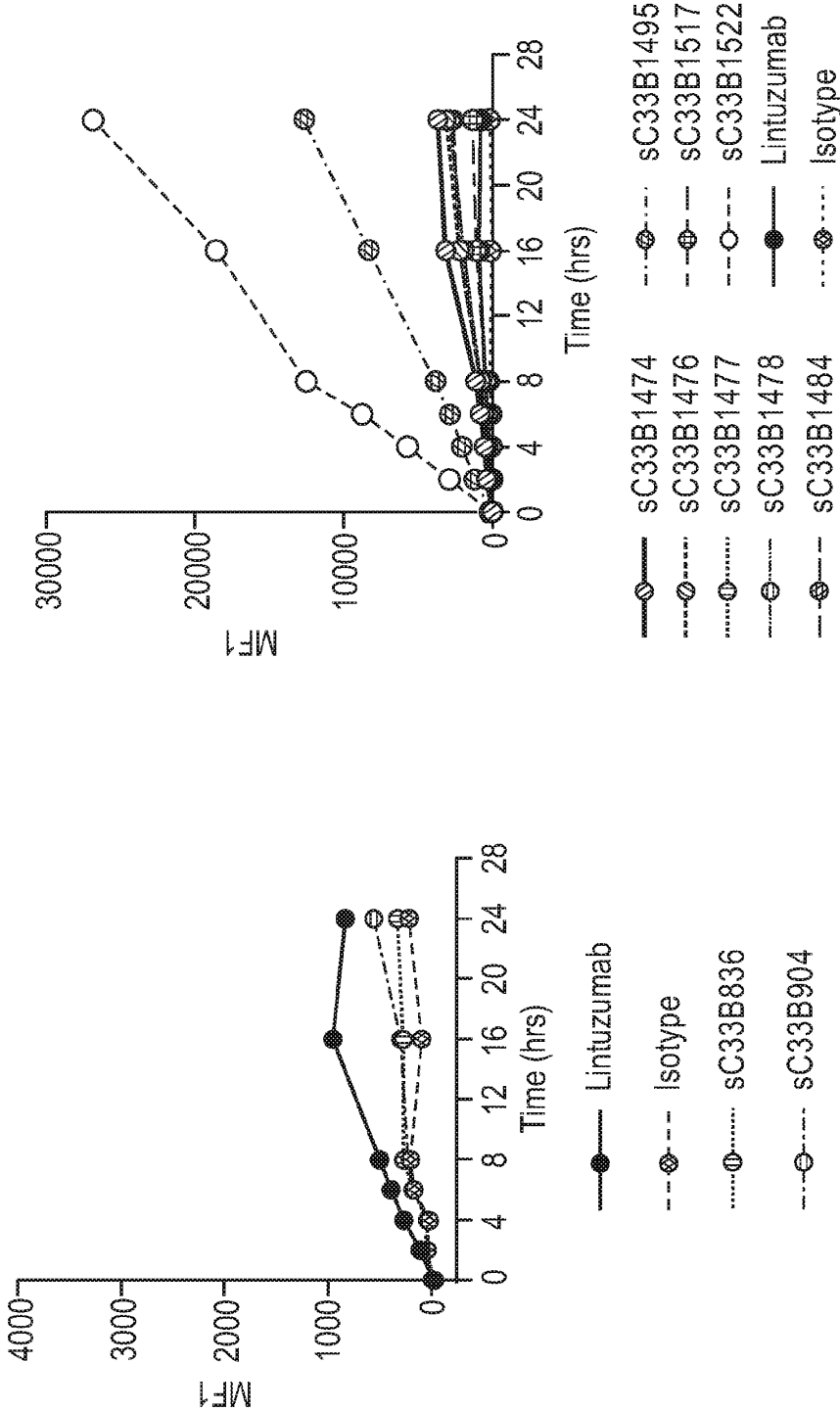
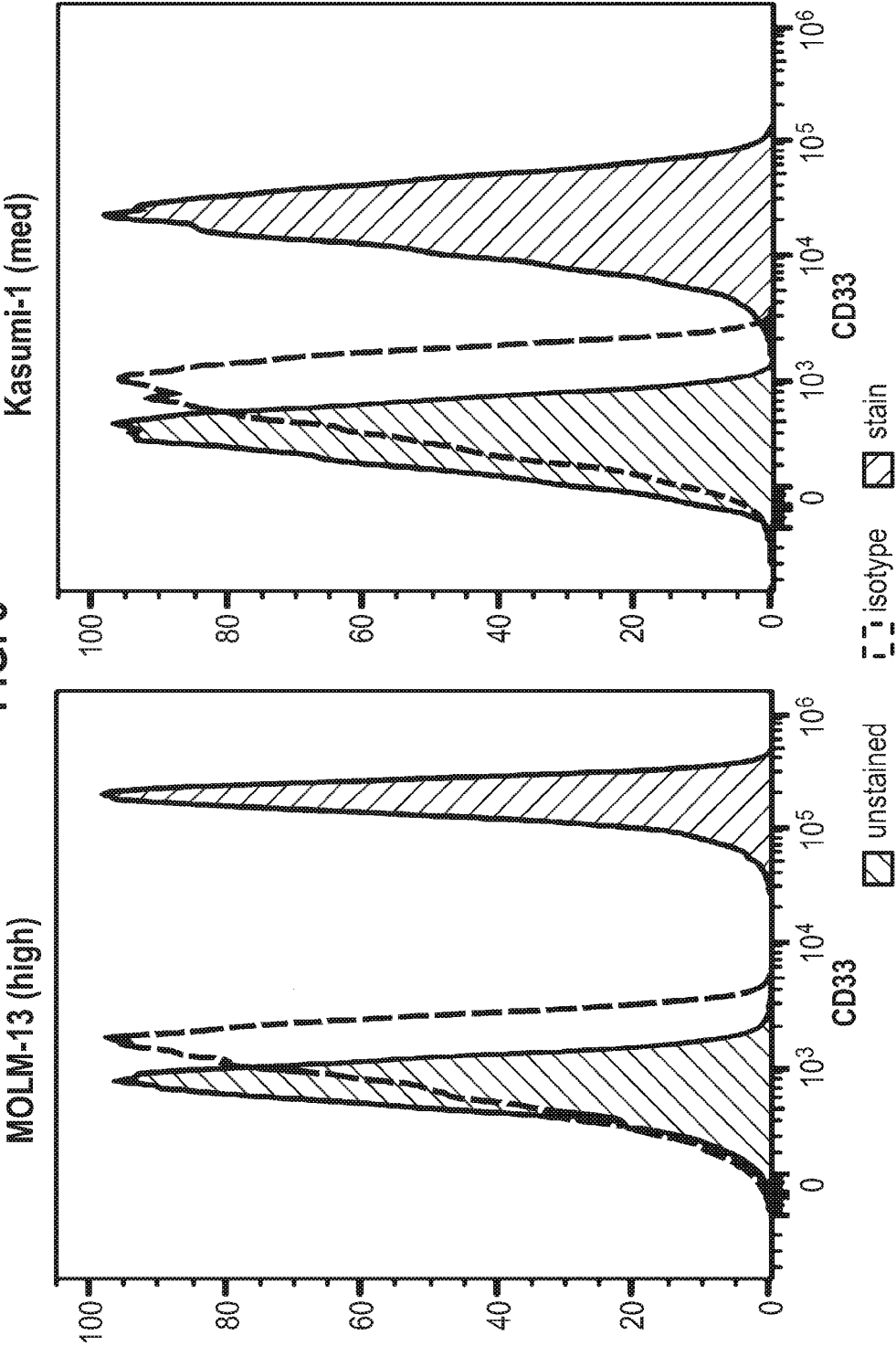


FIG. 6



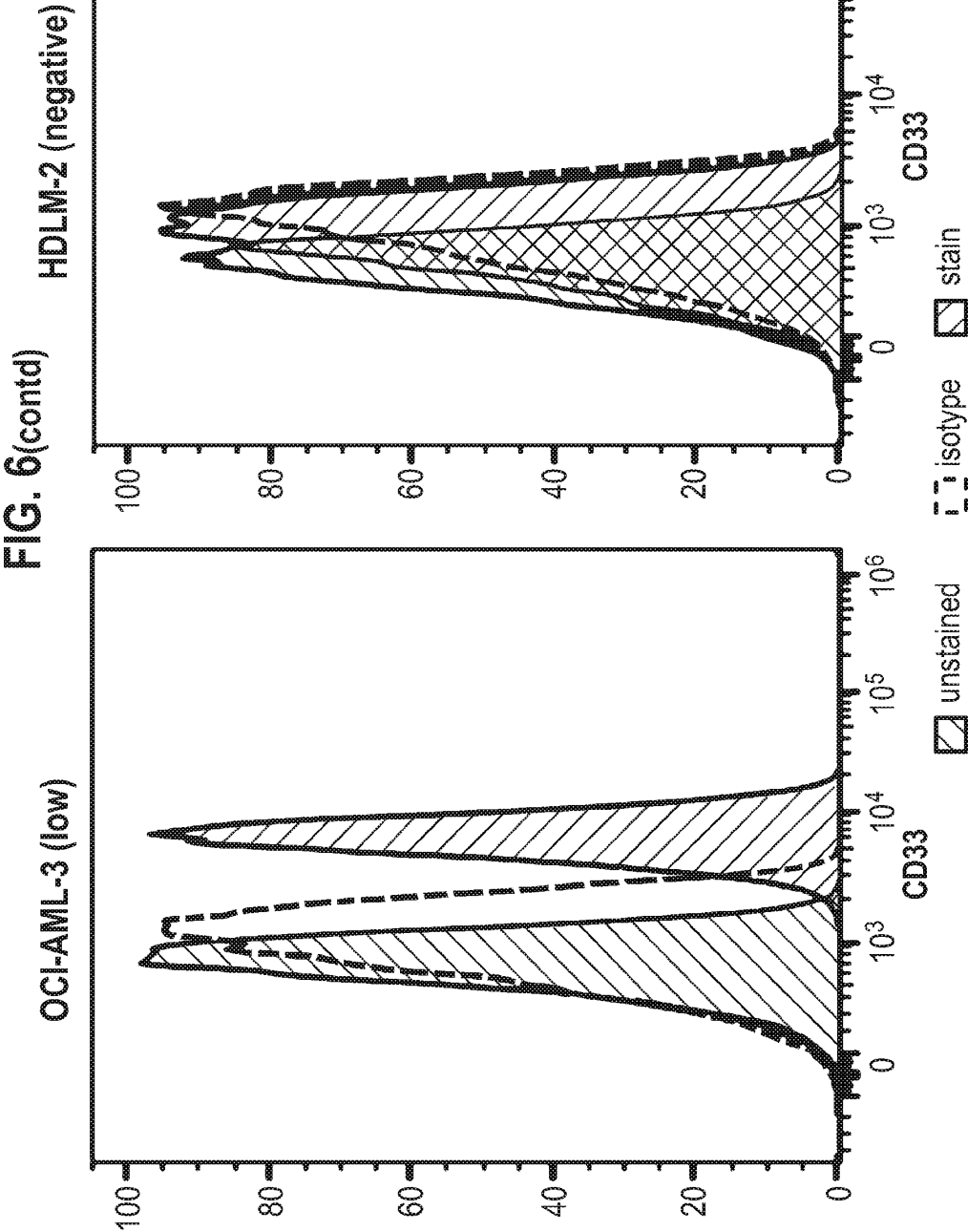
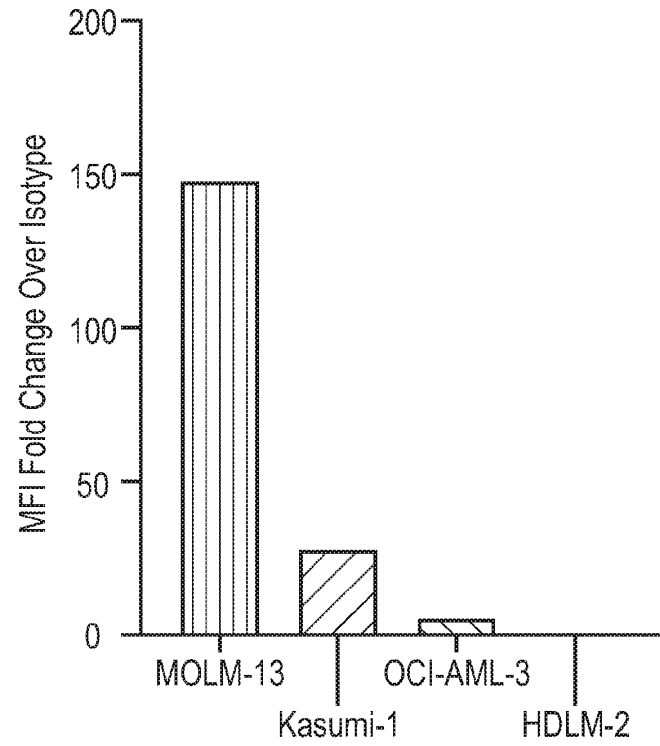


FIG. 6(contd)



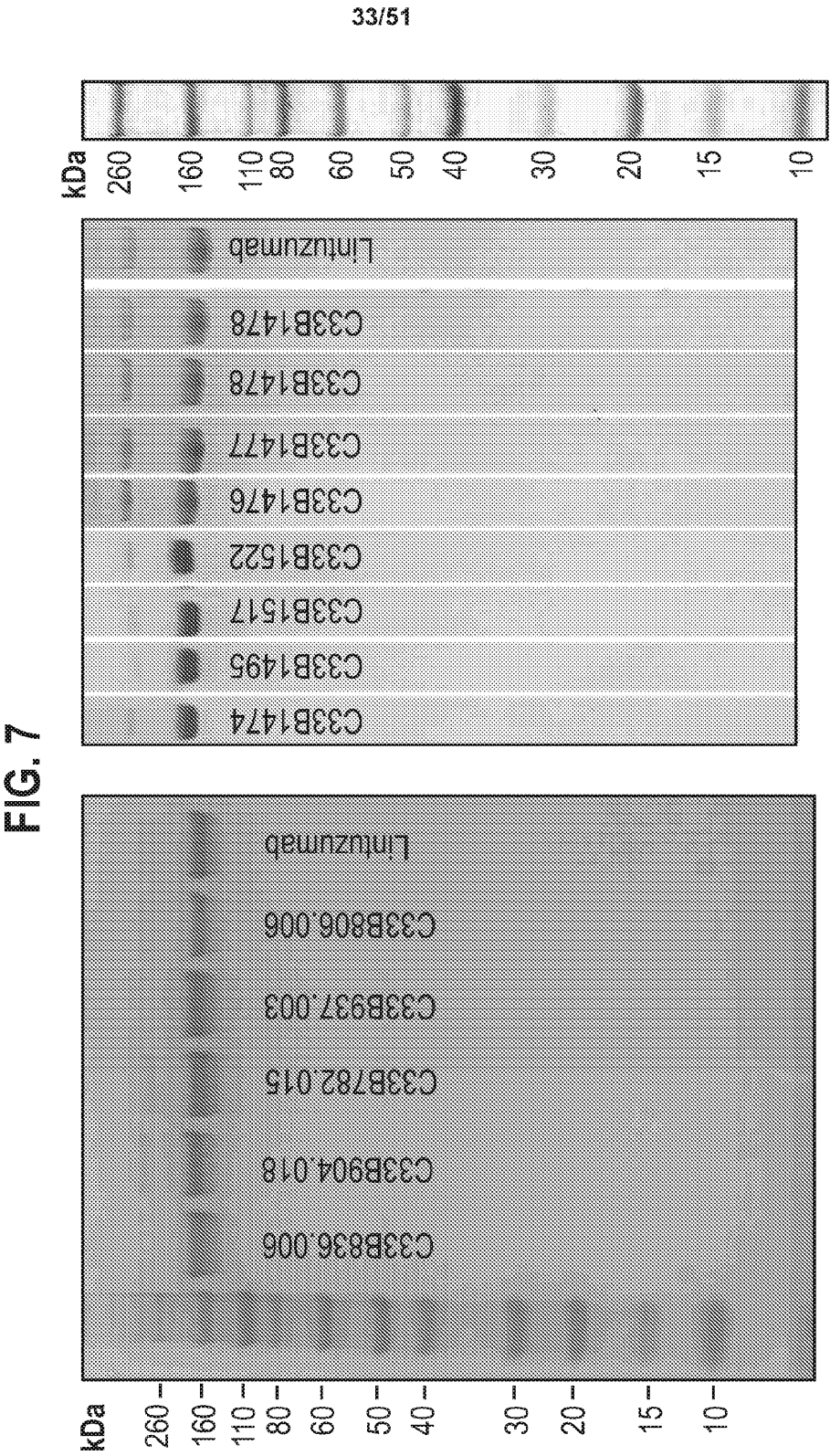
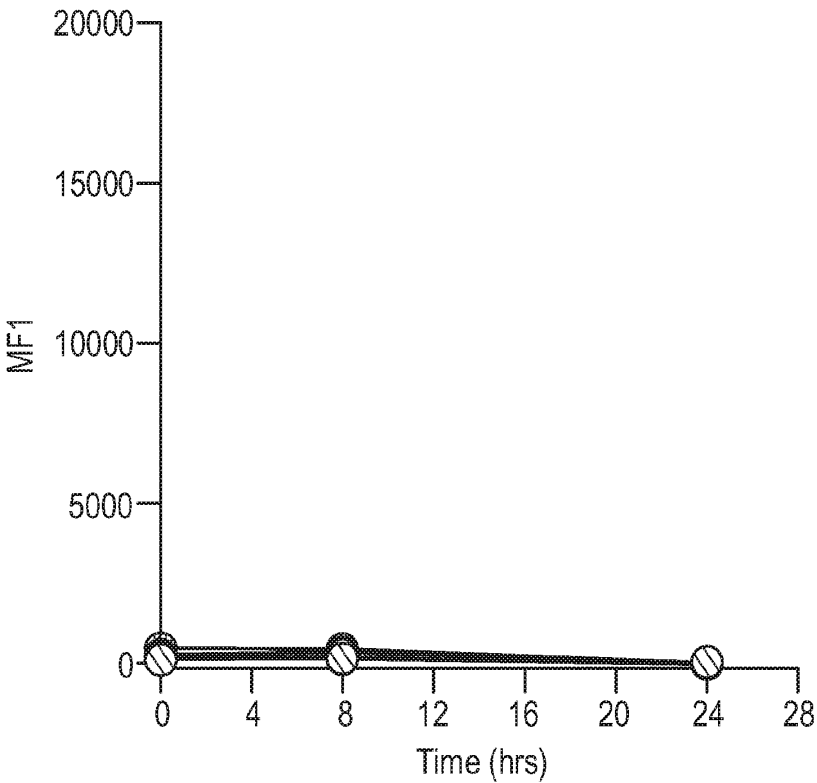


FIG. 7(contd)

Antibody	DAR
sC331474	4.5
sC331476	2.7
sC331477	2.6
sC331478	3.7
sC331484	5.2
sC331495	4.3
sC331517	2.1
sC331522	2.1
C33B836.006	3.2
C33B782.015	2.8
C33B904.018	3.5
C33B806.006	2.4
C33B937.003	3.2
Lintuzumab	3.6

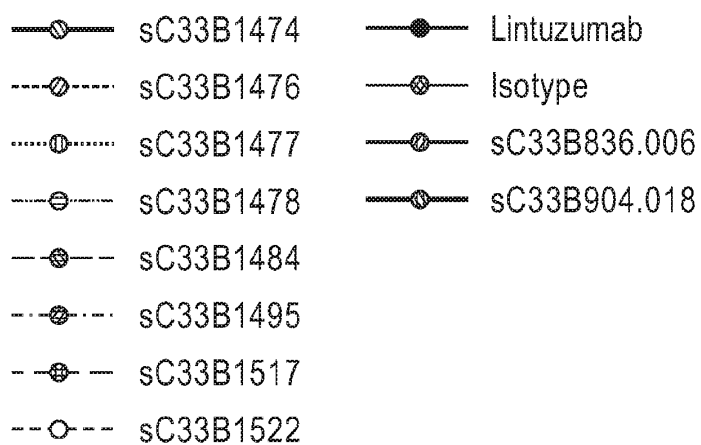
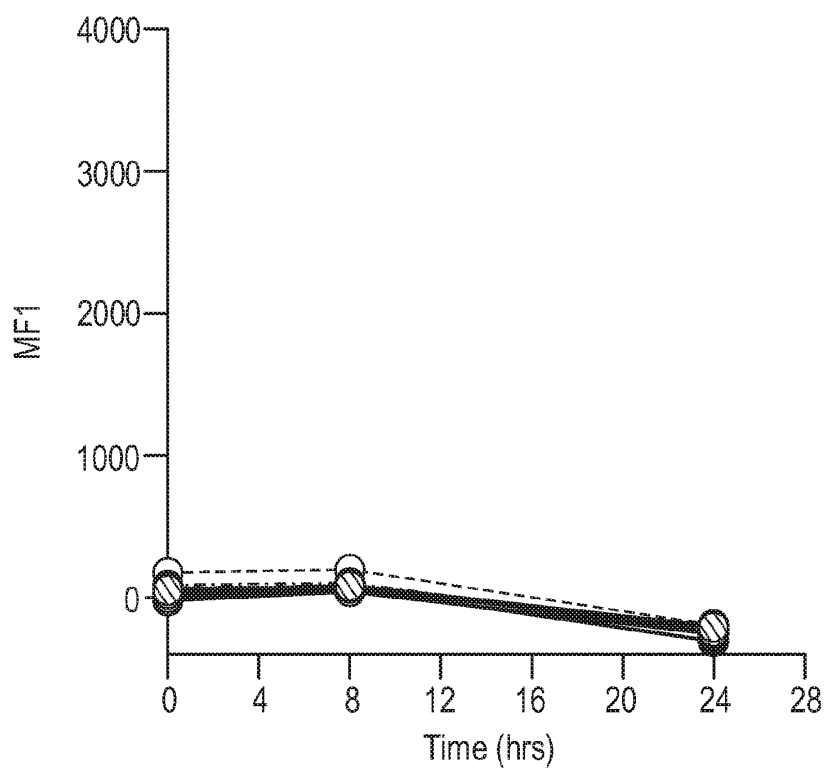
FIG. 8A

Kasumi-1

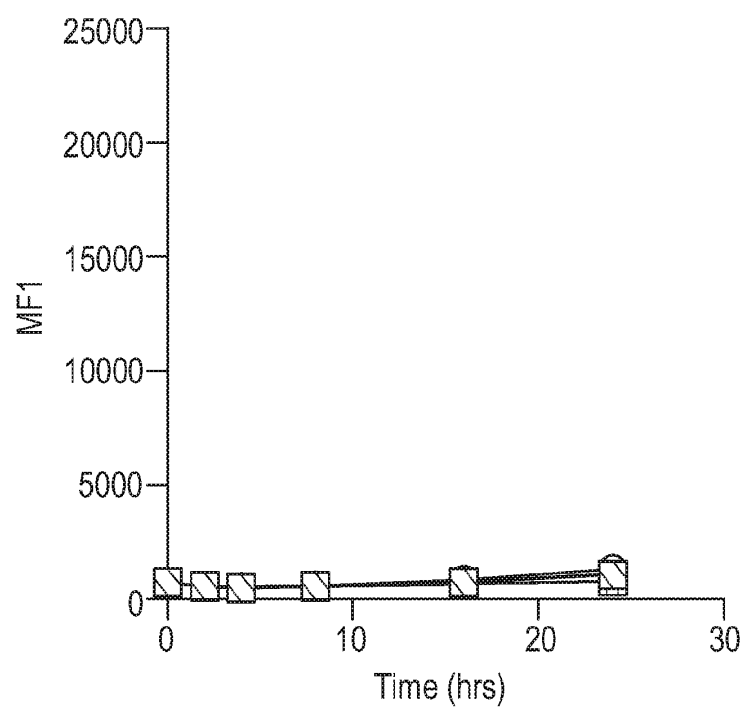


- | | |
|-----------------------|------------------|
| —○— sC33B1474 | —●— Lintuzumab |
| ---○--- sC33B1476 | —○— Isotype |
|○..... sC33B1477 | —○— sC33B836.006 |
| ---○--- sC33B1478 | —○— sC33B904.018 |
| —○— sC33B1484 | |
| ---○--- sC33B1495 | |
| —○— sC33B1517 | |
| ---○--- sC33B1522 | |

36/51

FIG. 8A(contd)OCI-AML-3

37/51

FIG. 8BHDLM-2

—□— C33B836.006

—▣— C33B806.006

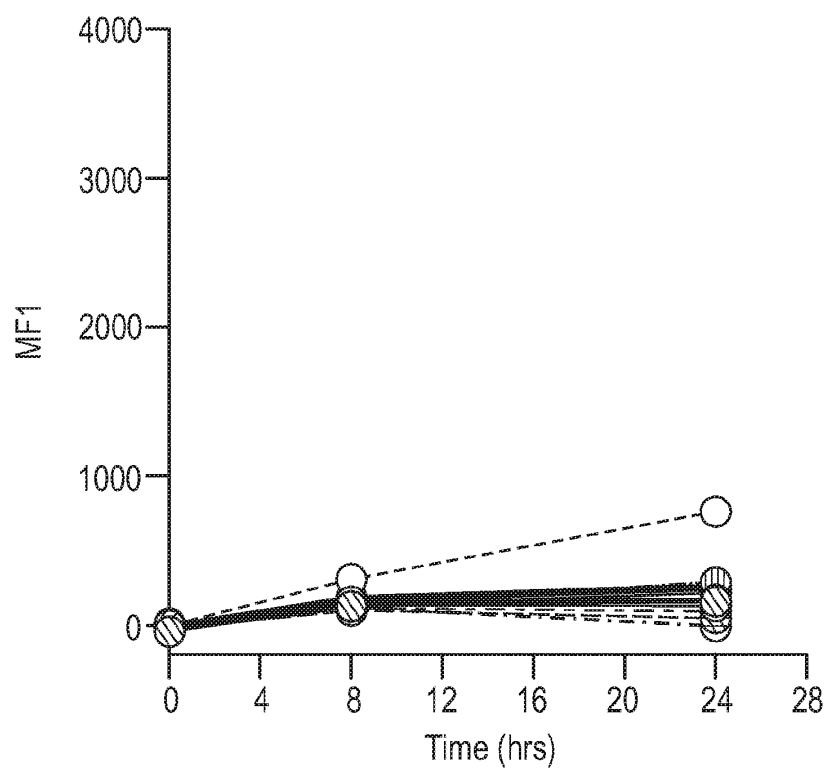
—○— C33B782.015

—□— C33B937.003

—△— C33B904.018

—▢— Lintuzumab

38/51

FIG. 8B(contd)HDLM-2

—○—	sC33B1474	—●—	Lintuzumab
---○---	sC33B1476	—⊗—	Isotype
.....○.....	sC33B1477	—⊗—	sC33B836
---○---	sC33B1478	—⊗—	sC33B904
—⊗—	sC33B1484		
---⊗---	sC33B1495		
---⊗---	sC33B1517		
---○---	sC33B1522		

39/51

Antibody	MOLM-13 (high) EC ₅₀ (nM)	Kasumi-1 (med) EC ₅₀ (nM)	OCI-AML-3 (low) EC ₅₀ (nM)
C33B836.006	0.5	17.06	0.46
C33B806.006	35.6	0.13	15.3
C33B904.018	ND	ND	ND
C33B937.003	ND	ND	ND
C33B782.015	ND	ND	ND
C33B1517	10.6	ND	1.4
C33B1522	32.66	73.4	ND
C33B1477	56	ND	0.6
C33B1474	78.4	ND	1.26
C33B1478	ND	ND	ND
C33B1476	ND	ND	0.8
C33B1495	ND	ND	ND
C33B1484	ND	ND	ND
Lintuzumab	0.31	0.34	0.9

FIG. 9

40/51

Antibody	MOLM-13 (high)		Kasumi-1 (med)		OCI-AML-3 (low)	
	EC ₅₀ (nM)		% viability		EC ₅₀ (nM)	
C33B836.006	~0.002		Not tested		Not tested	
C33B806.006	0.106		Not tested		Not tested	
C33B904.018	0.744		Not tested		Not tested	
C33B937.003	0.840		Not tested		Not tested	
C33B782.015	1.062		Not tested		Not tested	
C33B1517	0.09		106		0.45	
C33B1522	0.9		73.4		0.24	
C33B1476	1.09		48.1		0.27	
C33B1477	1.76		60.9		0.24	
C33B1478	2.5		64.6		0.34	
C33B1484	3.5		85.01		0.39	
C33B1474	5.93		78.1		1.18	
C33B1495	14.44		77.4		0.30	
Lintuzumab	0.04		63.5		0.9	

FIG. 10

FIG. 11

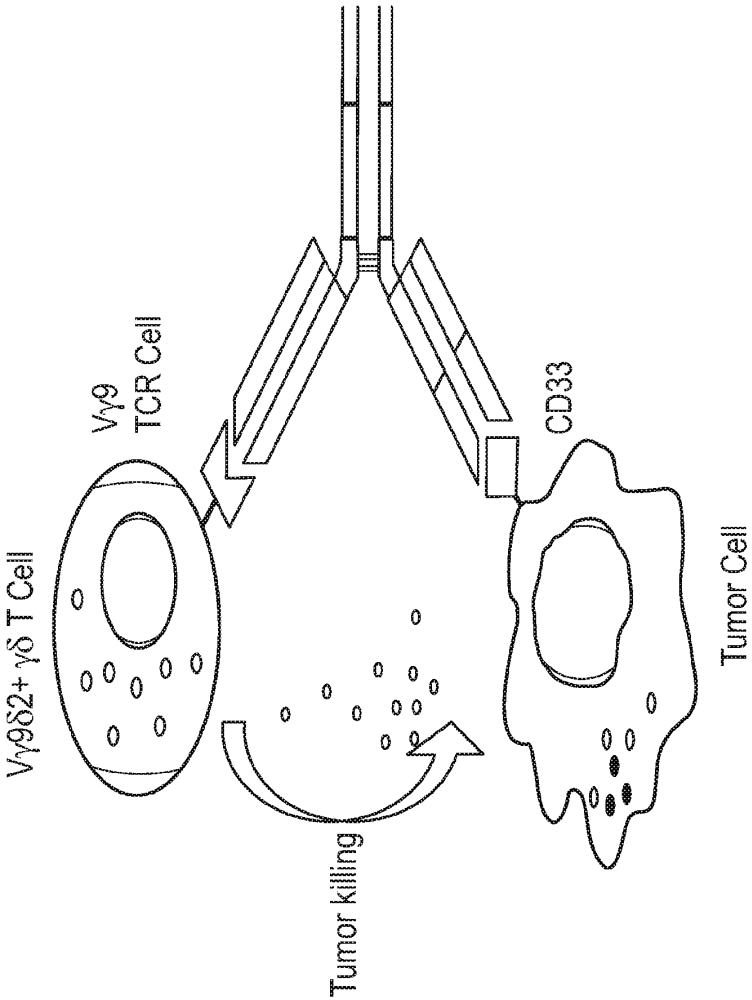
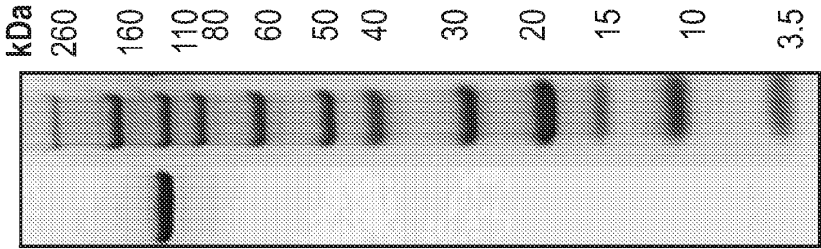
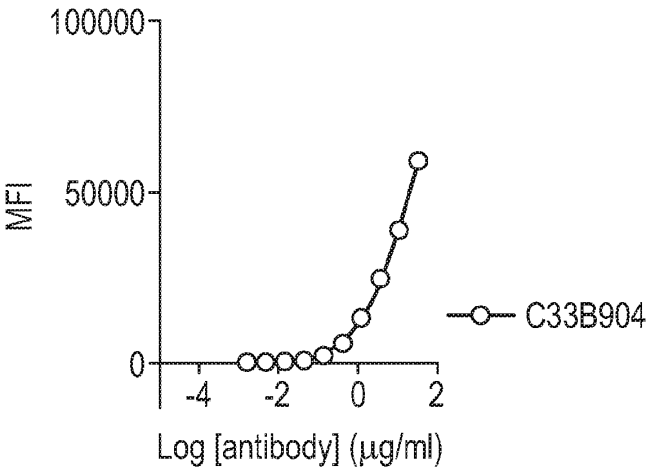


FIG. 12



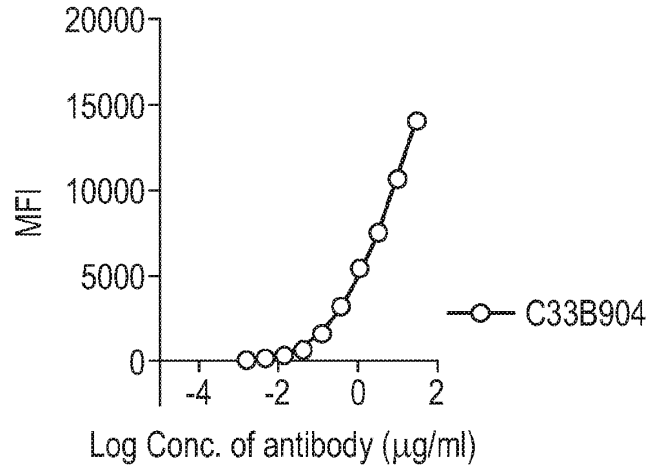
42/51

FIG. 13
MOLM-13
(high)



Antibody	EC ₅₀ (nM)	EC ₉₀ (nM)
C33B904	~134.33	3748

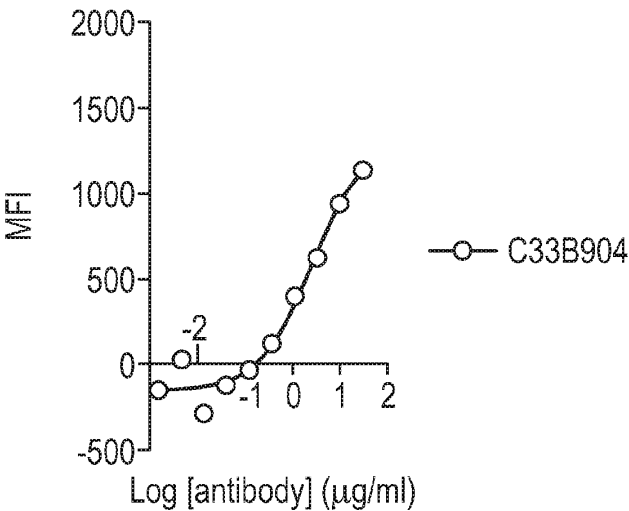
FIG. 14
Kasumi-1
(med)



Antibody	EC ₅₀ (nM)	EC ₉₀ (nM)
C33B904	82.2	6660

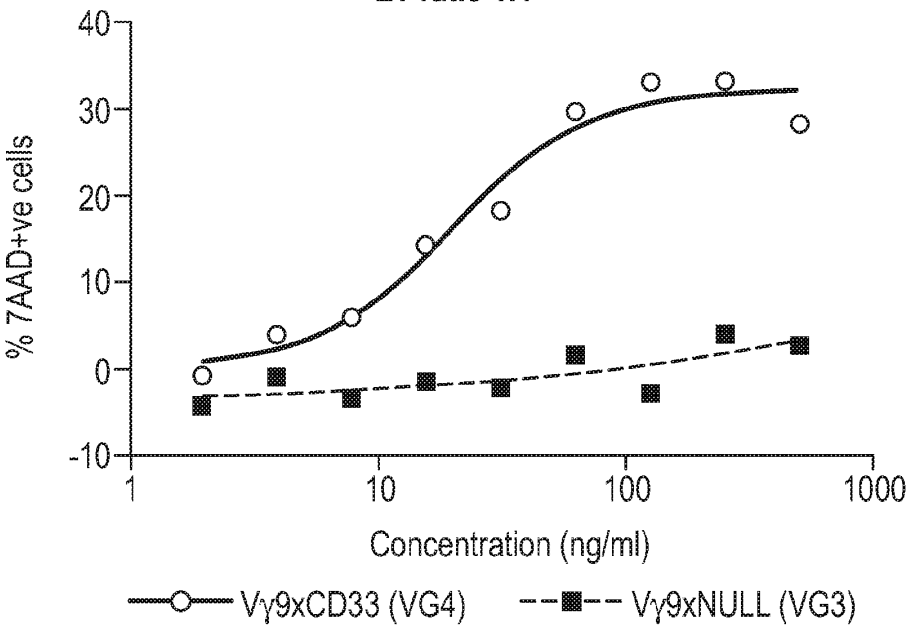
43/51

FIG. 15
OCI-AML-3
(low)



Antibody	EC ₅₀ (nM)	EC ₉₀ (nM)
C33B904	16.4	274

FIG. 16
ET ratio 1:1



44/51

FIG. 17

ET ratio 5:1

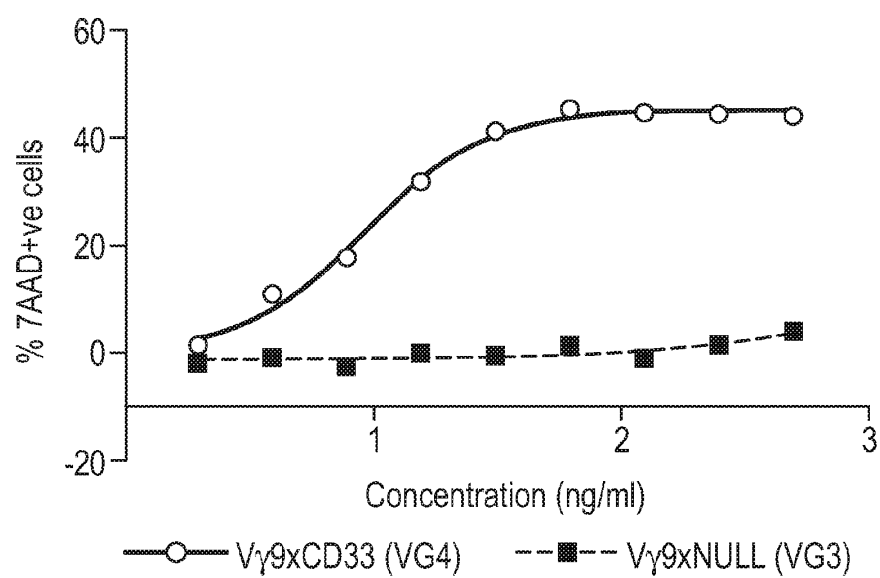
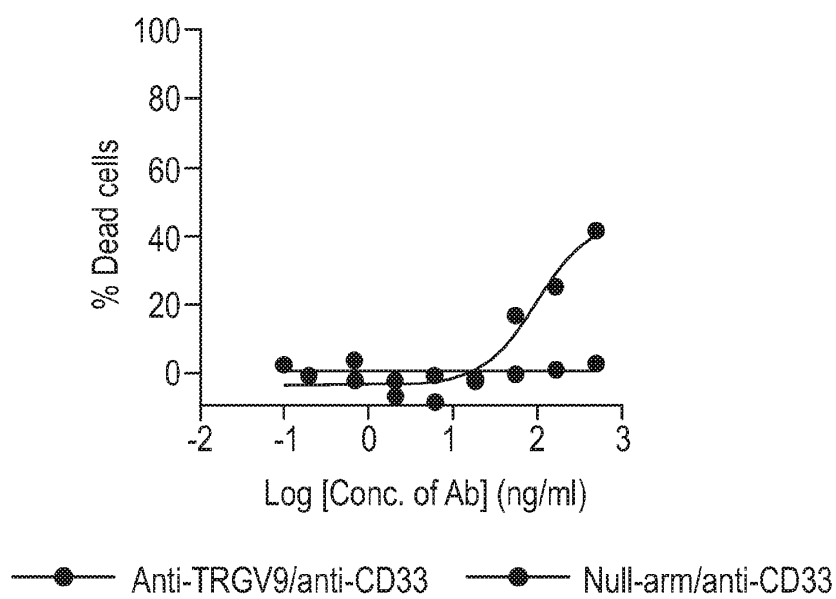
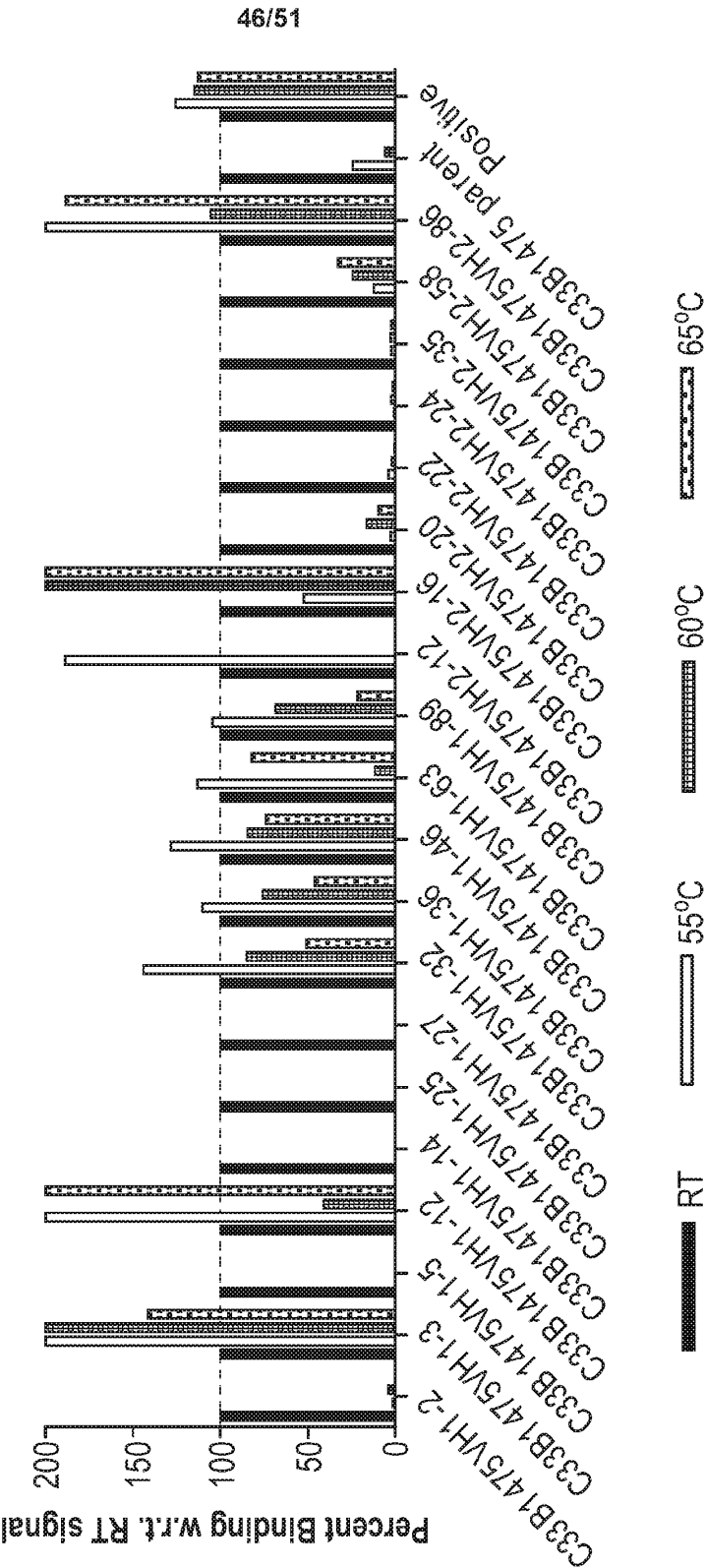
**FIG. 18**

FIG. 19

Significant HC Liabilities										Significant LC Liabilities						
	HCFW1	HCDR1	HCFW2	HCDR2	HCFW3	HCDR3	HCFW4	LCFW1	LCDR1	LCFW2	LCDR2	LCFW3	LCDR3	LCFW4		
	HCFW1	HCDR1	HCFW2	HCDR2	HCFW3	HCDR3	HCFW4	LCFW1	LCDR1	LCFW2	LCDR2	LCFW3	LCDR3	LCFW4		
JL2 FR1	CDR1	CDR1	FR2	DG	NSDTDT	CDR3	FR4	FR1	DG	FR2	CDR1	FR3	CDR3	FR4		
JL3 FR1	CDR1	CDR1	FR2	CDR2	NNDTDT	NG	FR4	FR1	CDR1	FR2	CDR1	FR3	NGDS	FR4		
JL5 FR1	CDR1	CDR1	FR2	CDR2	NNDT	NG	FR4	FR1	CDR1	FR2	NN	FR3	NGDS	FR4		
JL6 FR1	CDR1	CDR1	FR2	CDR2	DT	DP	FR4	FR1	CDR1	FR2	NN	FR3	DPDS	FR4		

FIG. 20



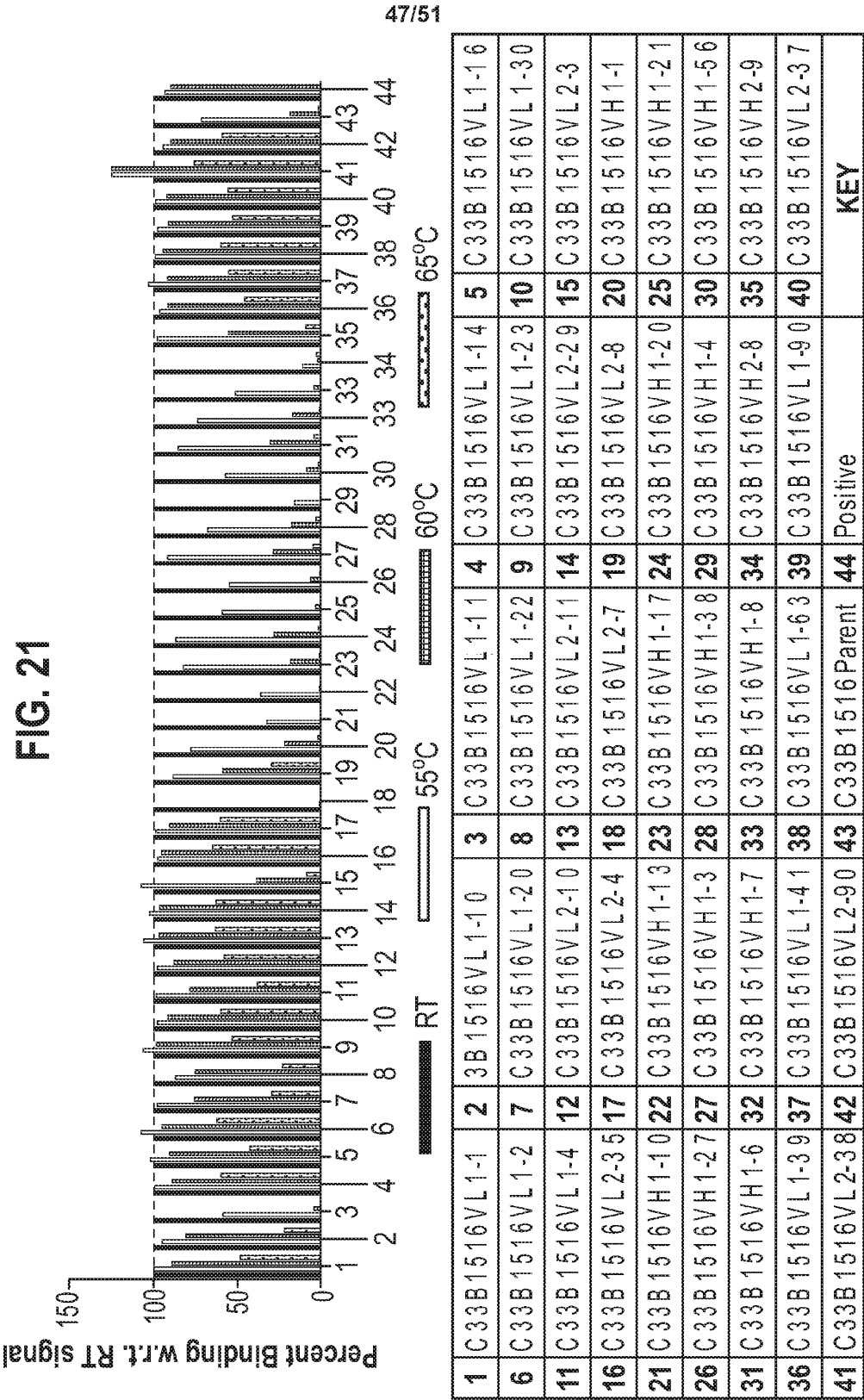
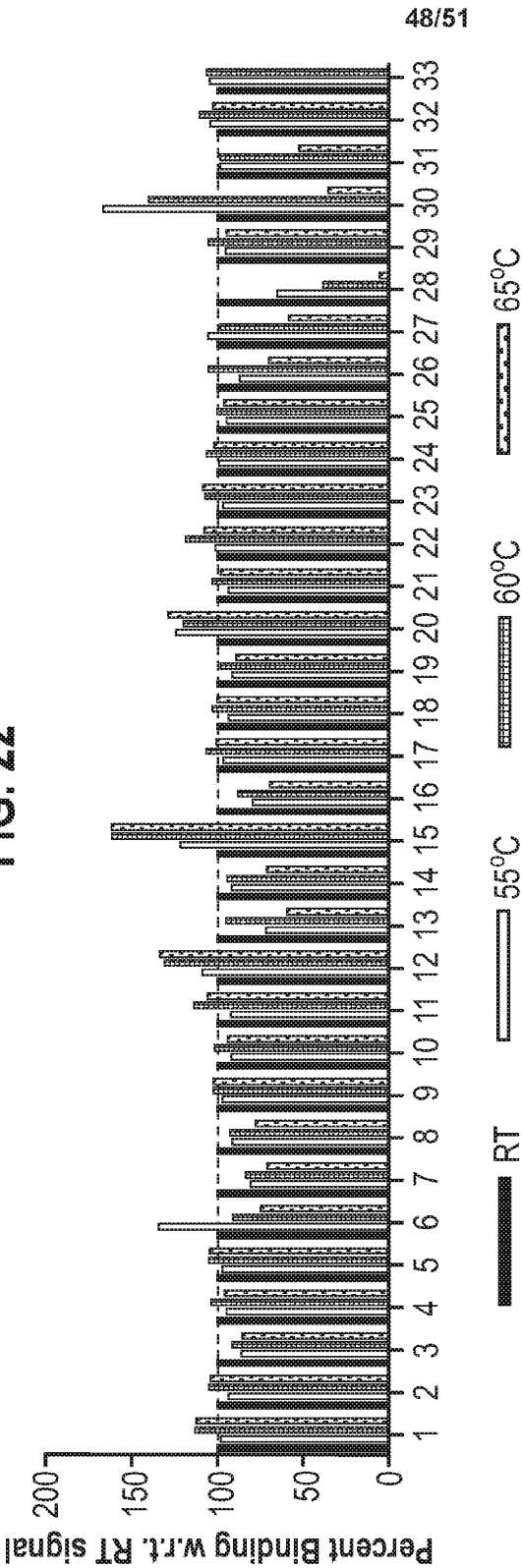
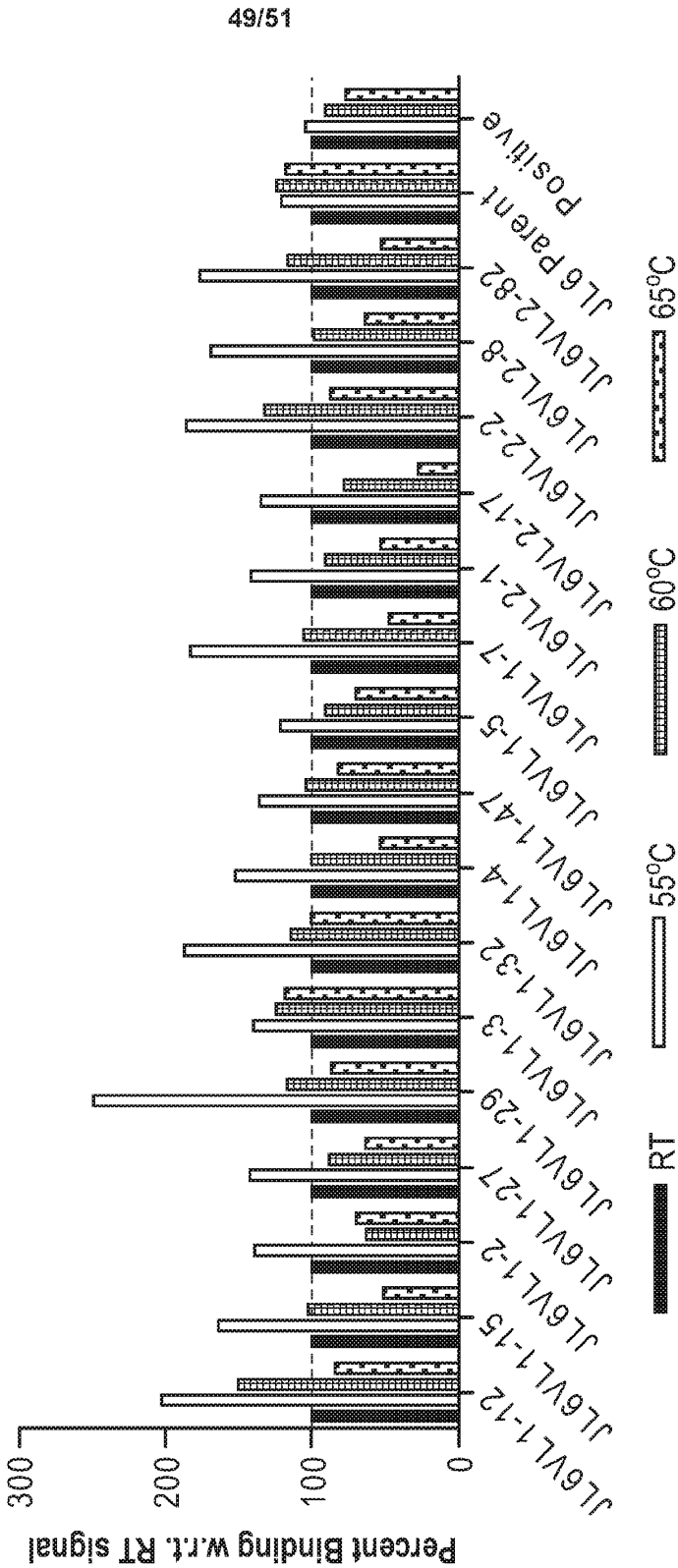


FIG. 22



1	C33B1517VL1-1	2	C33B1517VL1-7	3	C33B1517VL1-12	4	C33B1517VL1-8	5	C33B1517VL1-13
6	C33B1517VL1-16	7	C33B1517VL1-22	8	C33B1517VL1-35	9	C33B1517VL1-24	10	C33B1517VL1-27
11	C33B1517VL1-49	12	C33B1517VL1-66	13	C33B1517VL1-69	14	C33B1517VL1-71	15	C33B1517VH1-1
16	C33B1517VH1-3	17	C33B1517VH1-6	18	C33B1517VH1-4	19	C33B1517VH1-8	20	C33B1517VH1-11
21	C33B1517VH1-17	22	C33B1517VH1-27	23	C33B1517VH1-33	24	C33B1517VH1-60	25	C33B1517VH1-71
26	C33B1517VH2-7	27	C33B1517VH2-30	28	C33B1517VH2-31	29	C33B1517VH2-60	30	C33B1517VH2-68
31	C33B1517VH2-76	32	Positive	33	C33B1517 Parent	KEY			

FIG. 23



50/51

FIG. 24

JL2

Clone ID	AA
C33B1475VH1-2	G
C33B1475VH1-3	A
C33B1475VH1-5	Y
C33B1475VH1-12	P
C33B1475VH1-14	N
C33B1475VH1-22	S
C33B1475VH1-27	R
C33B1475VH1-32	L
C33B1475VH1-36	V
C33B1475VH1-46	T
C33B1475VH1-63	F
C33B1475VH1-89	W
C33B1475VH2-12	V
C33B1475VH2-16	P
C33B1475VH2-20	R
C33B1475VH2-22	A
C33B1475VH2-24	L
C33B1475VH2-35	Q
C33B1475VH2-58	T
C33B1475VH2-86	H

JL3

Clone ID	AA	Clone ID	AA
C33B1516 VL1-1	V	C33B1516VH1-1	V
C33B1516 VL1-2	R	C33B1516VH1-3	S
C33B1516 VL1-4	P	C33B1516VH1-4	E
C33B1516 VL1-10	T	C33B1516VH1-6	H
C33B1516 VL1-11	G	C33B1516VH1-7	A
C33B1516 VL1-14	Q	C33B1516VH1-8	G
C33B1516 VL1-16	S	C33B1516VH1-10	K
C33B1516 VL1-20	A	C33B1516VH1-13	T
C33B1516 VL1-22	L	C33B1516VH1-17	F
C33B1516 VL1-23	Y	C33B1516VH1-20	V
C33B1516 VL1-30	E	C33B1516VH1-21	R
C33B1516VL1-39	F	C33B1516VH1-27	L
C33B1516VL1-41	D	C33B1516VH1-38	H
C33B1516VL1-63	I	C33B1516VH1-56	I
C33B1516VL1-90	H	C33B1516VH2-8	S
C33B1516 VL2-3	V	C33B1516VH2-9	A
C33B1516 VL2-4	P		
C33B1516 VL2-7	R		
C33B1516 VL2-8	D		
C33B1516 VL2-10	E		
C33B1516 VL2-11	W		
C33B1516 VL2-29	Y		
C33B1516 VL2-35	A		
C33B1516VL2-37	N		
C33B1516VL2-38	K		
C33B1516VL2-90	L		

FIG. 24(contd)**JL5**

Clone ID	AA	Clone ID	AA
C33B1517VL1-1	G	C33B1517VH1-1	R
C33B1517VL1-7	D	C33B1517VH1-3	P
C33B1517VL1-8	P	C33B1517VH1-4	G
C33B1517VL1-12	K	C33B1517VH1-6	V
C33B1517VL1-13	E	C33B1517VH1-8	L
C33B1517VL1-16	A	C33B1517VH1-11	D
C33B1517VL1-22	R	C33B1517VH1-17	E
C33B1517VL1-24	Q	C33B1517VH1-33	A
C33B1517VL1-27	I	C33B1517VH1-60	Q
C33B1517VL1-35	V	C33B1517VH1-71	T
C33B1517VL1-49	H	C33B1517VH2-7	S
C33B1517VL1-66	K	C33B1517VH2-30	A
C33B1517VL1-69	W	C33B1517VH2-31	L
C33B1517VL1-71	S	C33B1517VH2-60	P
		C33B1517VH2-68	T
		C33B1517VH2-76	Q

JL6

Clone ID	AA
C33B1522VL1-2	S
C33B1522VL1-3	Q
C33B1522VL1-4	V
C33B1522VL1-5	G
C33B1522VL1-7	W
C33B1522VL1-12	T
C33B1522VL1-15	I
C33B1522VL1-27	E
C33B1522VL1-29	A
C33B1522VL1-32	R
C33B1522VL1-47	L
C33B1522VL2-82	V
C33B1522VL2-1	A
C33B1522VL2-2	P
C33B1522VL2-8	L
C33B1522VL2-17	T