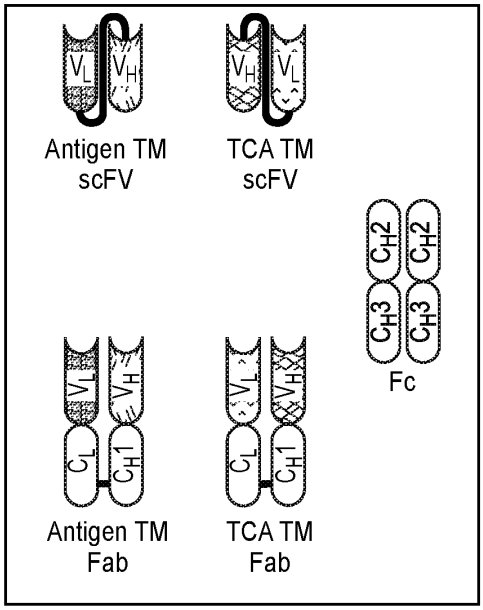


FIG. 1A

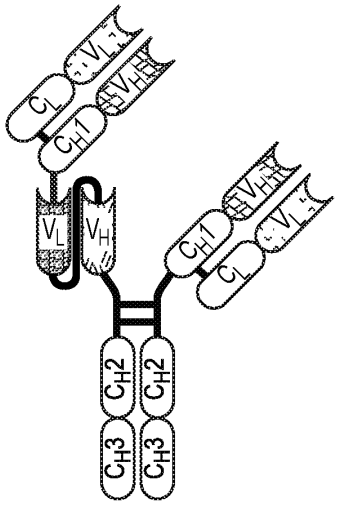


FIG. 1B

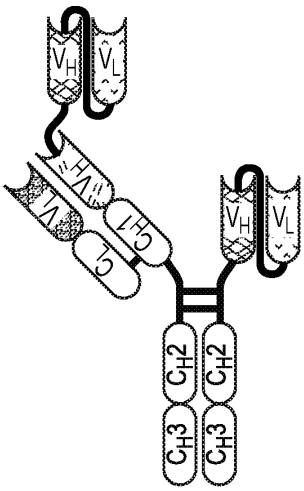


FIG. 1C

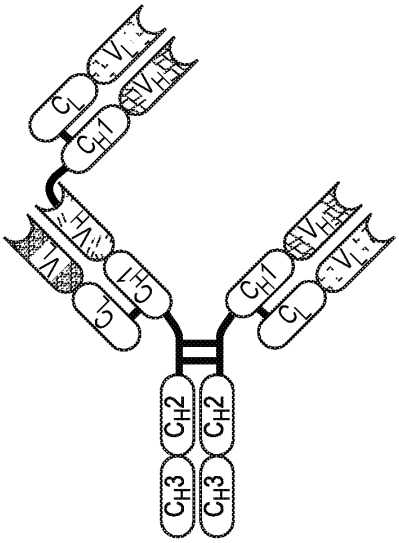


FIG. 1D

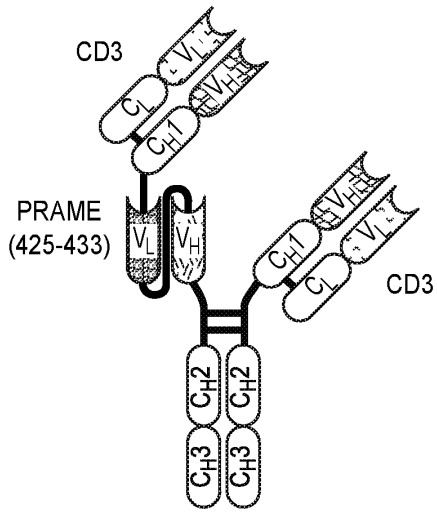


FIG. 2A

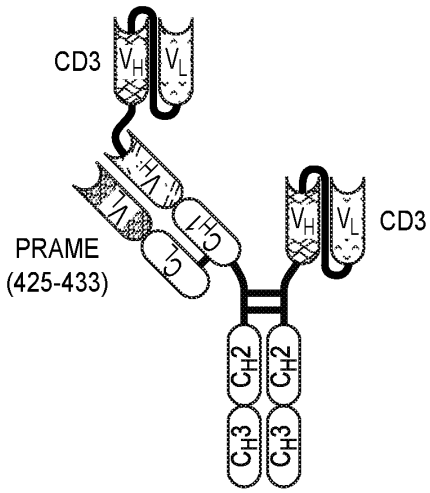


FIG. 2B

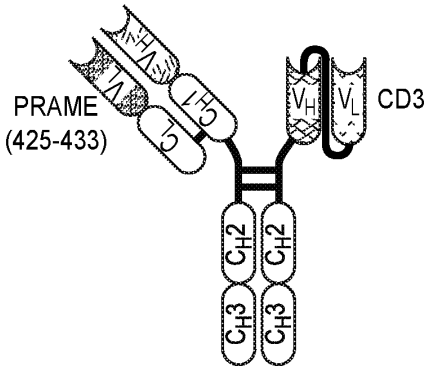


FIG. 2C

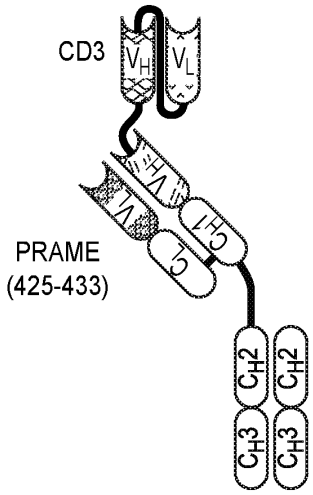


FIG. 2D

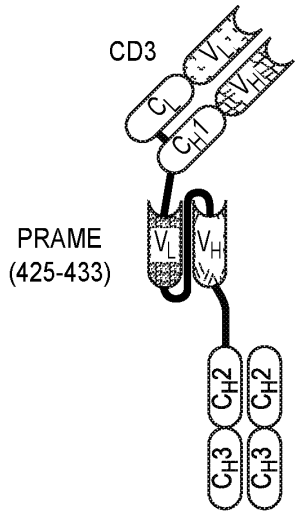


FIG. 2E

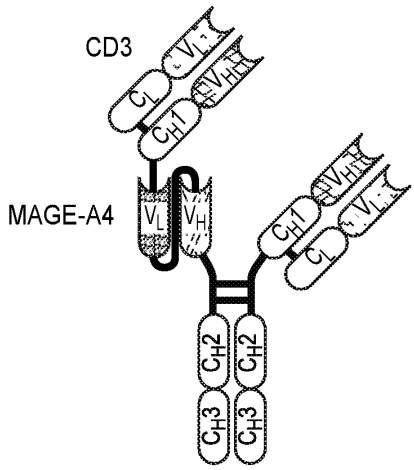


FIG. 2F

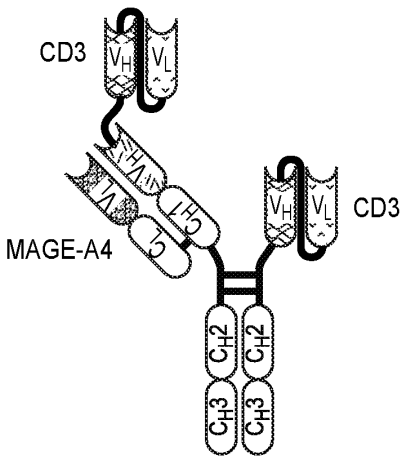


FIG. 2G

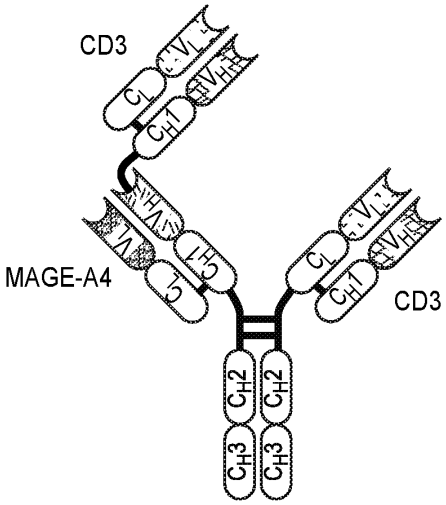


FIG. 2H

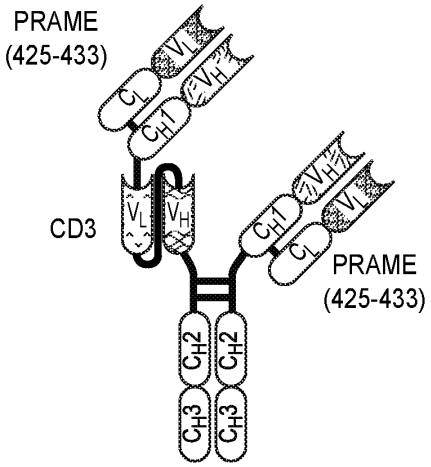


FIG. 2I

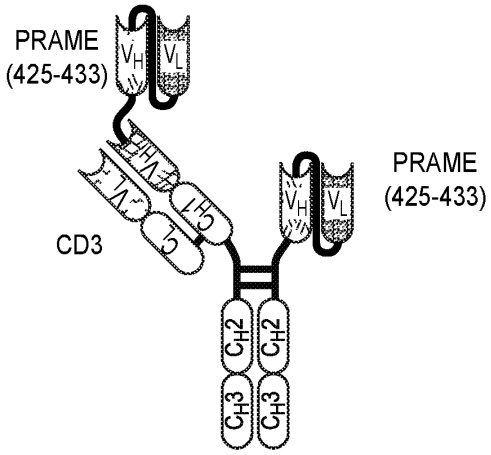


FIG. 2J

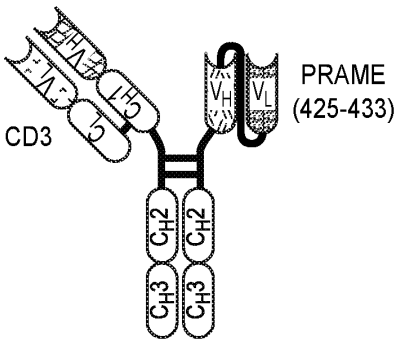


FIG. 2K

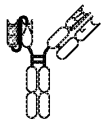
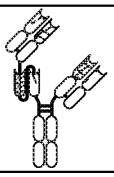
Structure	Description	Name	Symbol
	(PRAME)Fab-Fc x (CD3)scFv-Fc	PRAME-1	●
	(PanHLA-A2)-Fab-Fc x (CD3)scFv-Fc	Positive Ctrl-1	★
	(Isotype)Fab-Fc x (CD3)scFv-Fc	Negative Ctrl-1	X
	(CD3)Fab-(PRAME)scFv-Fc x (CD3)Fab-Fc	PRAME-2	■

FIG. 3A

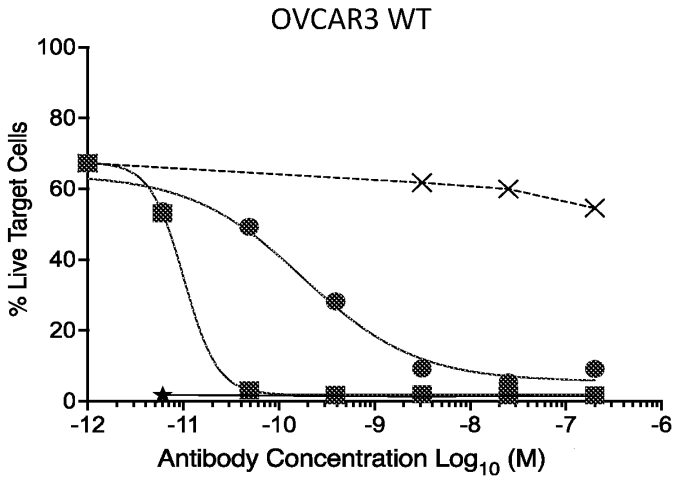


FIG. 3B

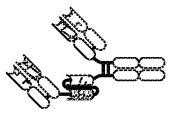
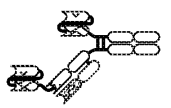
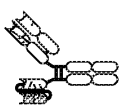
Structure	Description	Name	Symbol
	(CD3)Fab-(PRAME)scFv-Fc x (CD3)Fab-Fc	PRAME-2	
	(PRAME)Fab-(CD3)scFv-Fc x (PRAME)Fab-Fc	PRAME-3	
	(CD3)scFv-(PRAME)Fab-Fc x (CD3)scFv-Fc	PRAME-4	
	(PRAME)scFv-(CD3)Fab-Fc x (PRAME)scFv-Fc	PRAME-5	
	(PRAME)Fab-Fc x (CD3)scFv-Fc	PRAME-1	
	(PanHLA-A2)-Fab-Fc x (CD3)scFv-Fc	Positive Ctrl-1	
	(Isotype)Fab-Fc x (CD3)scFv-Fc	Negative Ctrl-1	
Davis Body	(Ctrl)-Fab-Fc x (CD3)-Fab-Fc (OVCAR3 only)	Positive Ctrl-2	

FIG. 4A

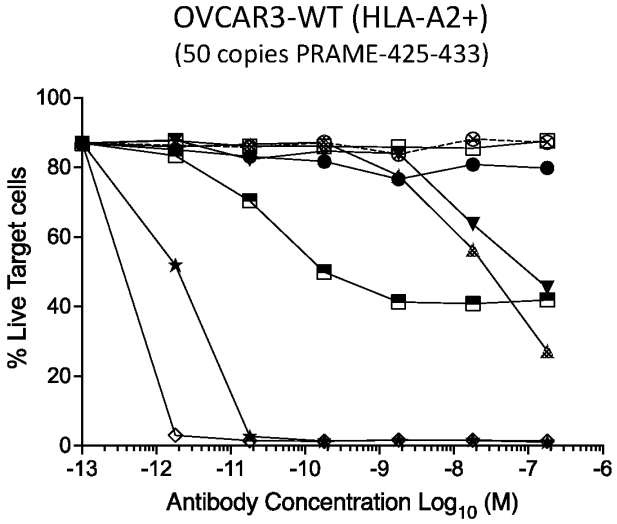


FIG. 4B

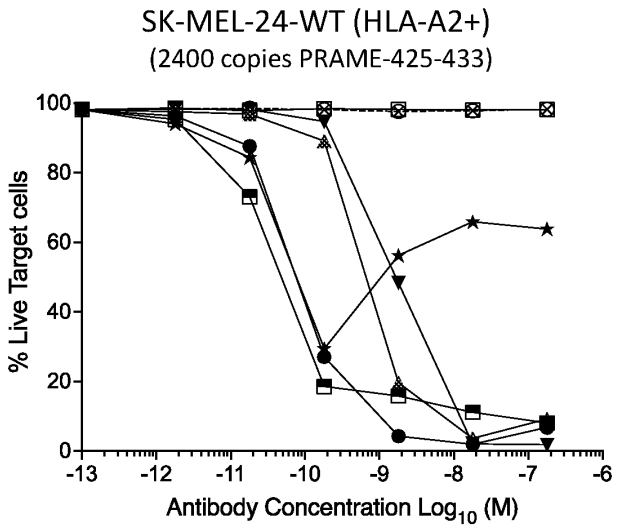


FIG. 4C

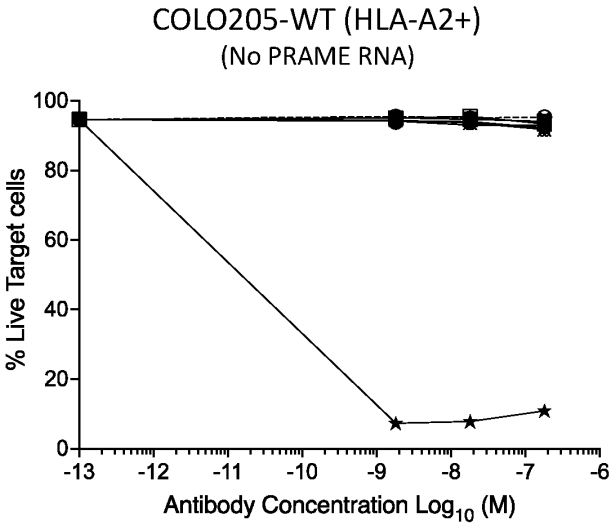


FIG. 4D

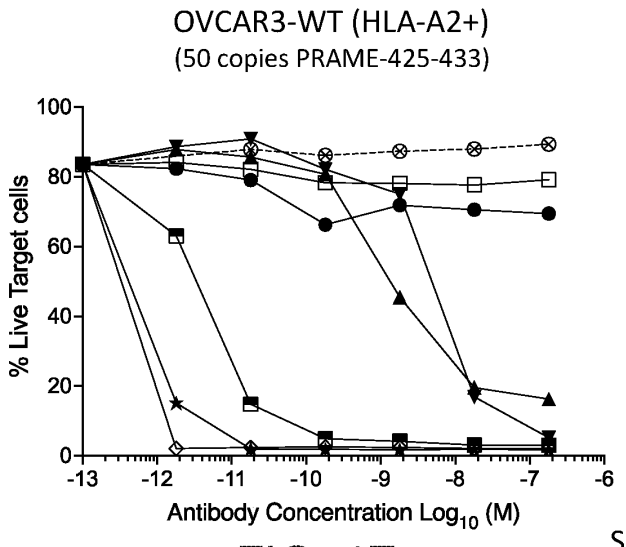


FIG. 4E

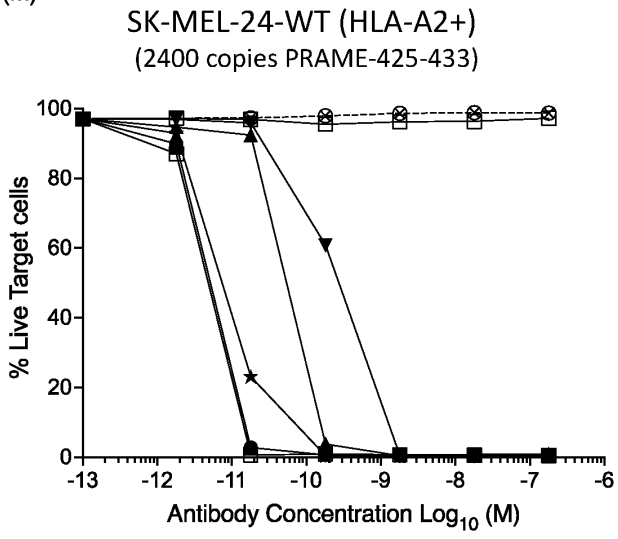


FIG. 4F

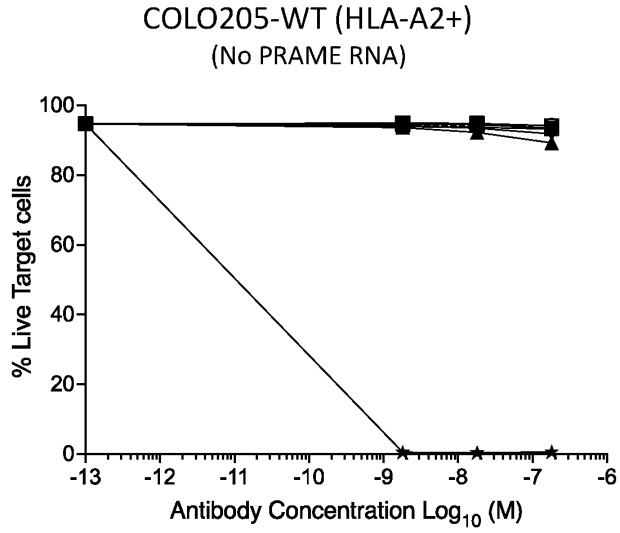


FIG. 4G

OVCAR3-WT (HLA-A2+)
(50 copies PRAME-425-433)

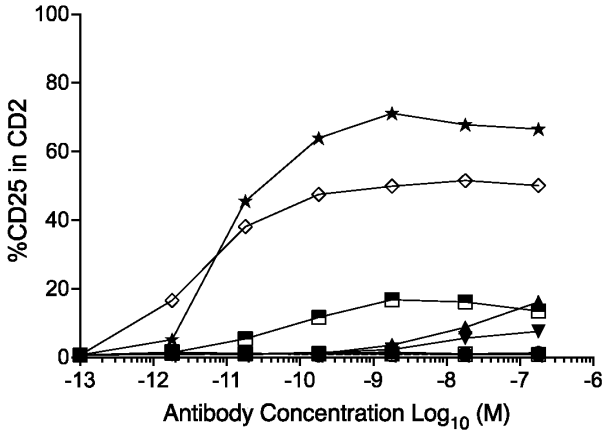


FIG. 4H

SK-MEL-24-WT (HLA-A2+)
(2400 copies PRAME-425-433)

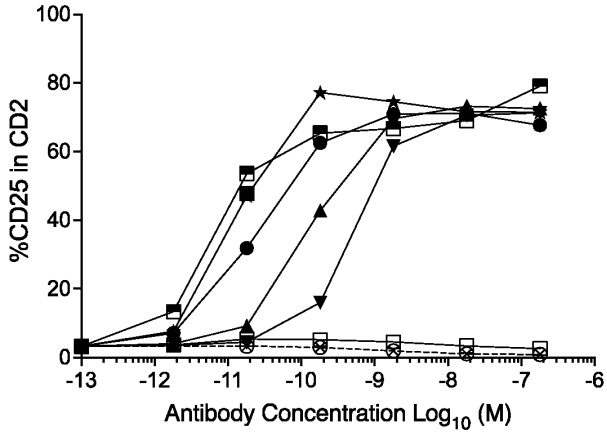


FIG. 4I

COLO205-WT (HLA-A2+)
(No PRAME RNA)

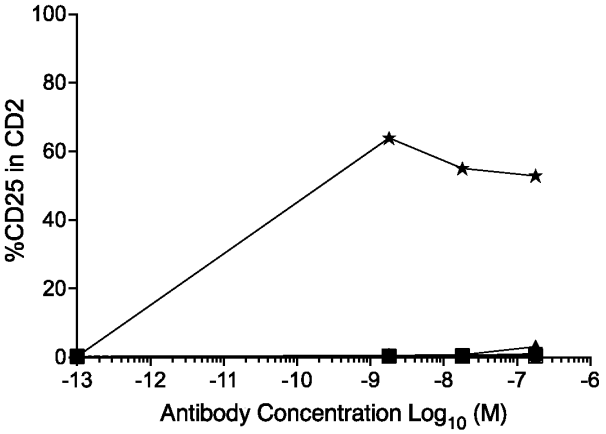


FIG. 4J

OVCAR3-WT (HLA-A2+)
(50 copies PRAME-425-433)

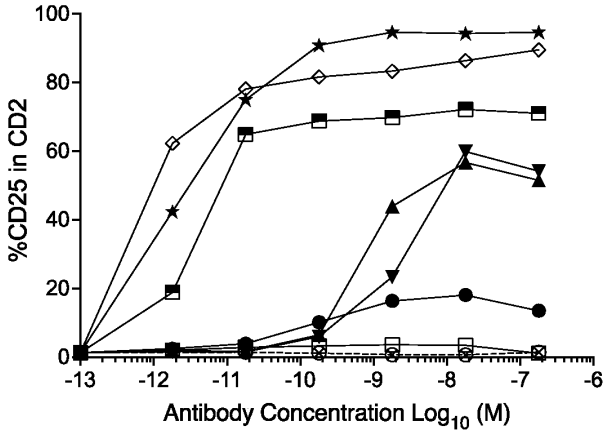


FIG. 4K

SK-MEL-24-WT (HLA-A2+)
(2400 copies PRAME-425-433)

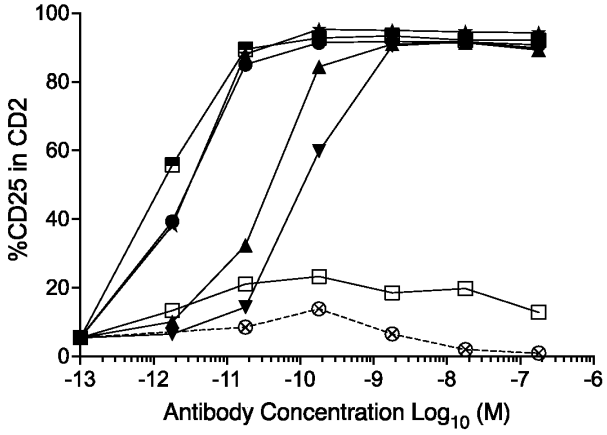


FIG. 4L

COLO205-WT (HLA-A2+)
(No PRAME RNA)

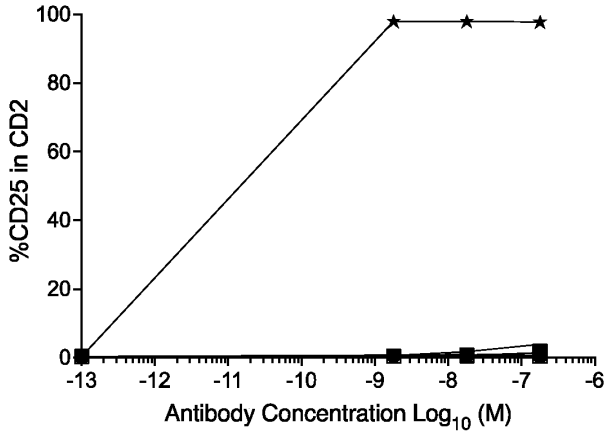


FIG. 4M

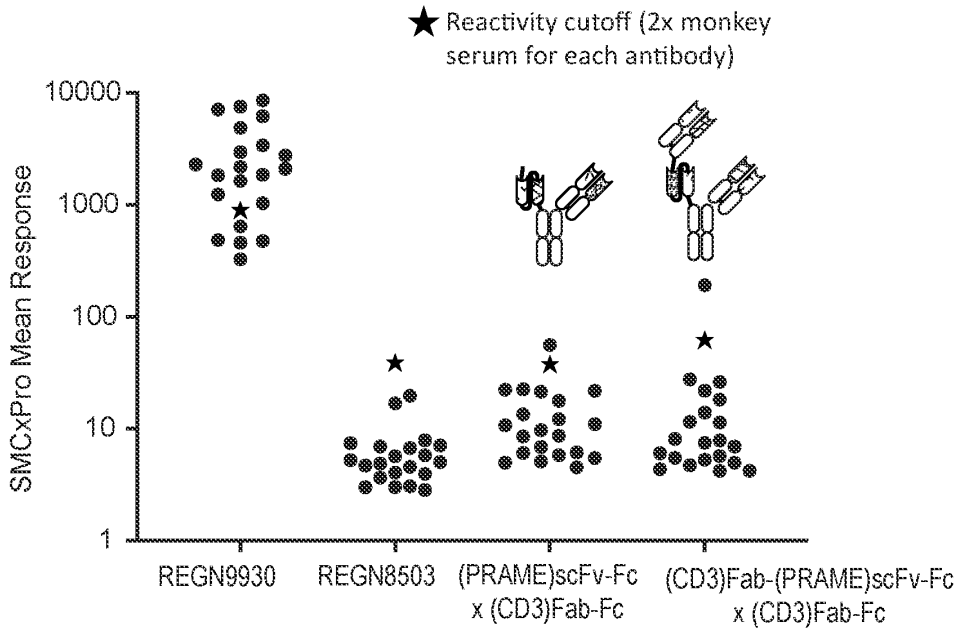

Reactivity cutoff (2x monkey serum for each antibody)
SMCxPro Mean Response
10000
1000
100
10
1
REGN9930
REGN8503
(PRAME)scFv-Fc x (CD3)Fab-Fc
(CD3)Fab-(PRAME)scFv-Fc x (CD3)Fab-Fc

FIG. 5

Structure	Description	Name	Symbol
	(CD3)Fab-(PRAME)scFv-Fc x (CD3)Fab-Fc	PRAME-2	
	(CD3)Fab-(MAGEA4)scFv-Fc x (CD3)Fab-Fc	MAGEA4-1	
	(CD3)Fab-(Isotype)scFv-Fc x (CD3)Fab-Fc	Negative Ctrl-2	
	(PRAME)scFv-Fc x (CD3)Fab-Fc	PRAME-6	
	(PRAME)Fab-Fc x (CD3)scFv-Fc	PRAME-1	
	(PanHLA-A2)-Fab-Fc x (CD3)scFv-Fc	Positive Ctrl-1	
	(CD3)scFv-(PRAME)Fab-Fc x (CD3)scFv-Fc	PRAME-4	
	(CD3)scFv-(MAGEA4)Fab-Fc x (CD3)scFv-Fc	MAGEA4-2	
	(CD3)Fab-(PRAME)scFv-Fc x Fc	PRAME-7	
	(CD3)scFv-(PRAME)Fab-Fc x Fc	PRAME-8	
	(CD3)Fab-(MAGEA4)Fab-Fc x (CD3)Fab-Fc	MAGEA4-3	

FIG. 6A

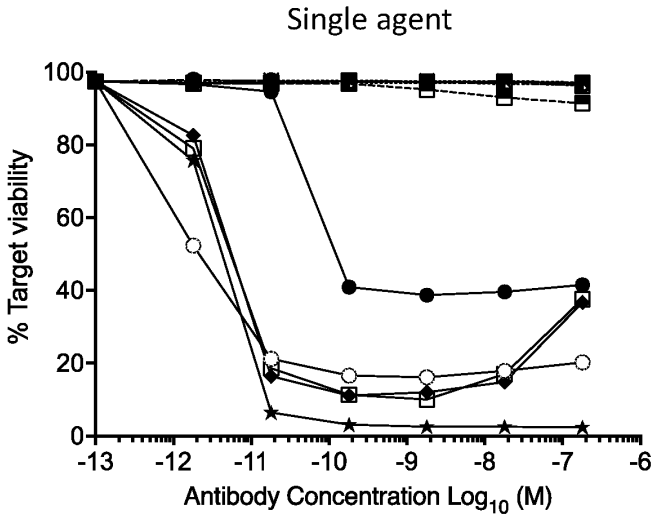

Single agent
100
80
60
40
20
0
% Target viability
-13
-12
-11
-10
-9
-8
-7
-6
Antibody Concentration Log10 (M)

FIG. 6B

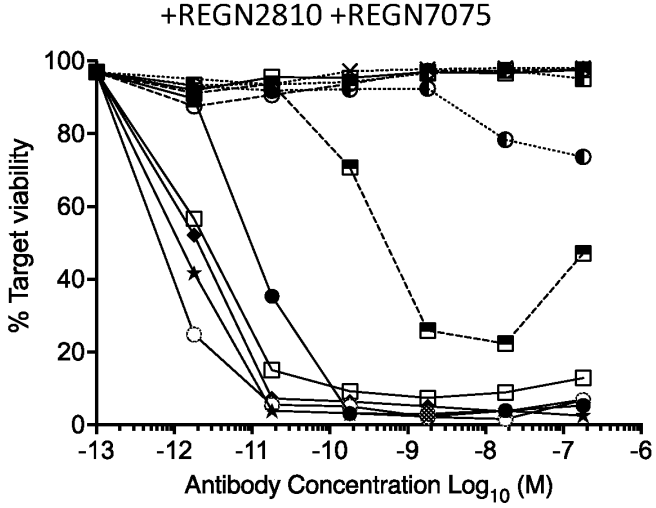

+REGN2810 +REGN7075
100
80
60
40
20
0
% Target viability
-13
-12
-11
-10
-9
-8
-7
-6
Antibody Concentration Log10 (M)

FIG. 6C

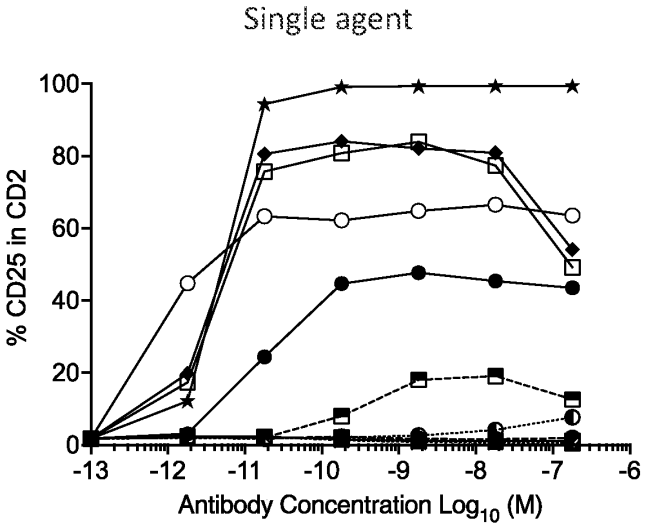

Single agent
100
80
60
40
20
0
% CD25 in CD2
-13
-12
-11
-10
-9
-8
-7
-6
Antibody Concentration Log10 (M)

FIG. 6D

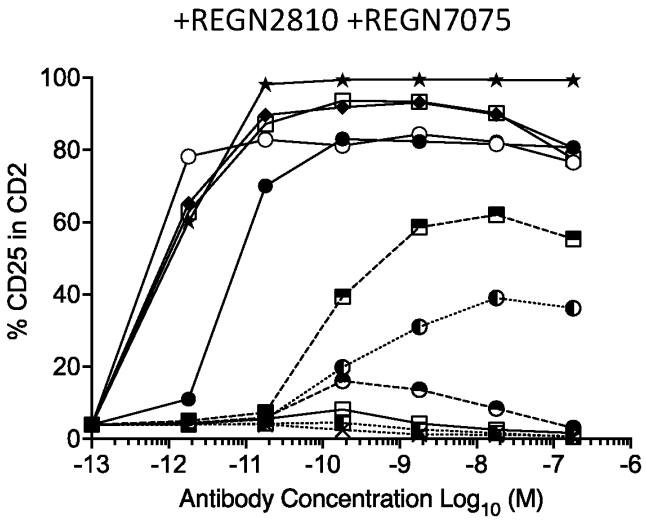

+REGN2810 +REGN7075
100
80
60
40
20
0
% CD25 in CD2
-13
-12
-11
-10
-9
-8
-7
-6
Antibody Concentration Log10 (M)

FIG. 6E

Structure								
Symbol								
Description	(PRAME) scFv-Fc x (CD3)Fab-Fc	(PRAME)Fab -Fc x (CD3)scFv-Fc	(PanHLA-A2)-Fab-Fc x (CD3)scFv-Fc	(CD3)Fab-(PRAME) scFv-Fc x (CD3)Fab-Fc	(CD3)Fab-(Isotype) scFv-Fc x (CD3)Fab-Fc	(CD3)scFv-(PRAME)Fab -Fc x (CD3)scFv-Fc	(CD3)Fab-(PRAME) scFv-Fc x Fc	(CD3)scFv-(PRAME)Fab -Fc x Fc
Title	PRAME-6	PRAME-1	Positive Ctrl-1	PRAME-2	Negative Ctrl-2	PRAME-4	PRAME-7	PRAME-8

FIG. 7A

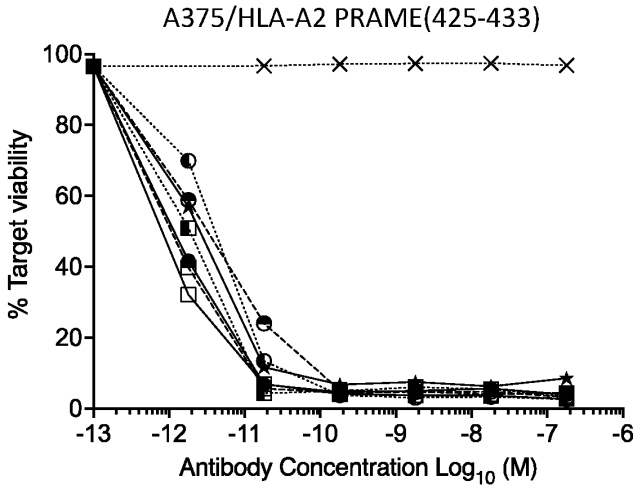


FIG. 7B

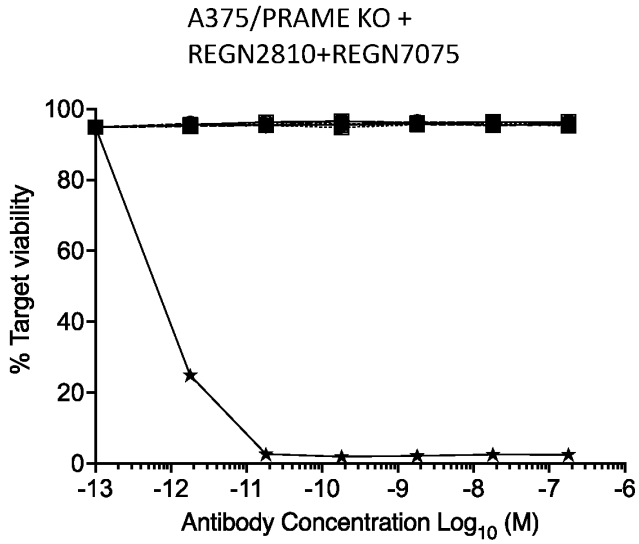


FIG. 7C

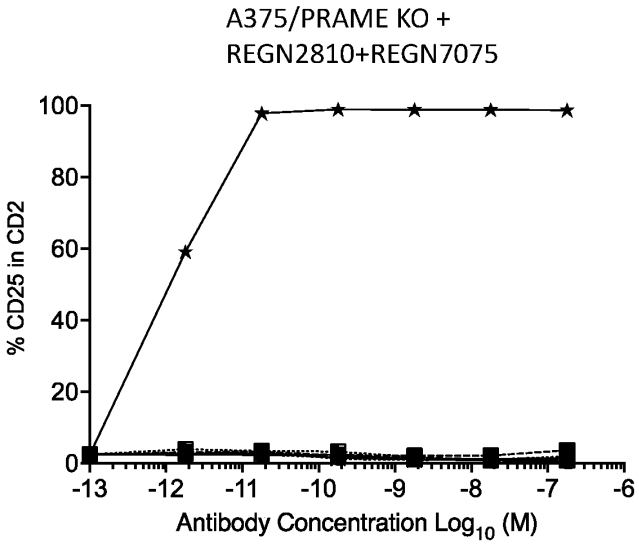


FIG. 7D

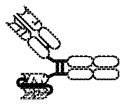
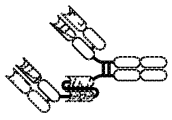
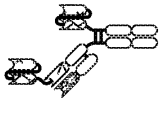
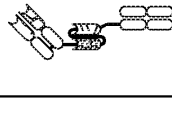
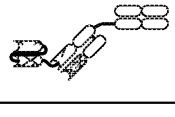
Structure								
Symbol								
Description	(PRAME) scFv-Fc x (CD3)Fab Fc	(PRAME)Fab -Fc x (CD3)scFv-Fc	(PanHLA-A2)-Fab-Fc x (CD3)scFv-Fc	(CD3)Fab-(PRAME) scFv-Fc x (CD3)Fab-Fc	(CD3)Fab-(Isotype) scFv-Fc x (CD3)Fab-Fc	(CD3)scFv-(PRAME)Fab -Fc x (CD3)scFv-Fc	(CD3)Fab-(PRAME) scFv-Fc x Fc	(CD3)scFv-(PRAME)Fab -Fc x Fc	Anti-CD3 antibody	(-) control antibody
Title	PRAME-6	PRAME-1	Positive Ctrl-1	PRAME-2	Negative Ctrl-2	PRAME-4	PRAME-7	PRAME-8	-	-

FIG. 8A

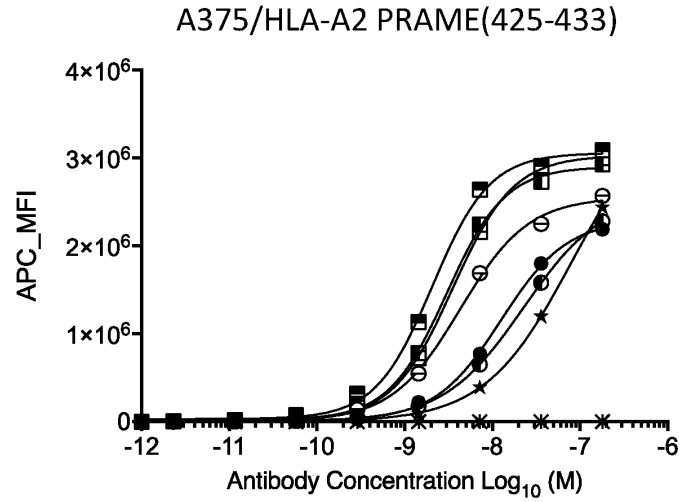

A375/HLA-A2 PRAME(425-433)
APC_MFI
4×10^6
3×10^6
2×10^6
1×10^6
0
-12
-11
-10
-9
-8
-7
-6
Antibody Concentration Log10 (M)

FIG. 8B

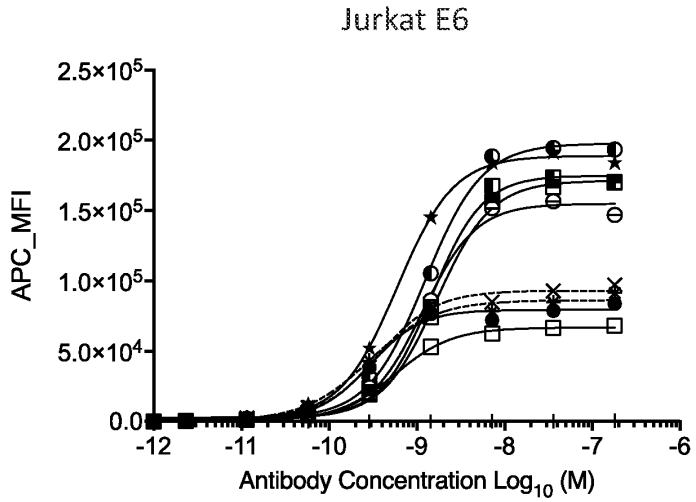

Jurkat E6
APC_MFI
2.5×10^5
2.0×10^5
1.5×10^5
1.0×10^5
5.0×10^4
0.0
-12
-11
-10
-9
-8
-7
-6
Antibody Concentration Log10 (M)

FIG. 8C