

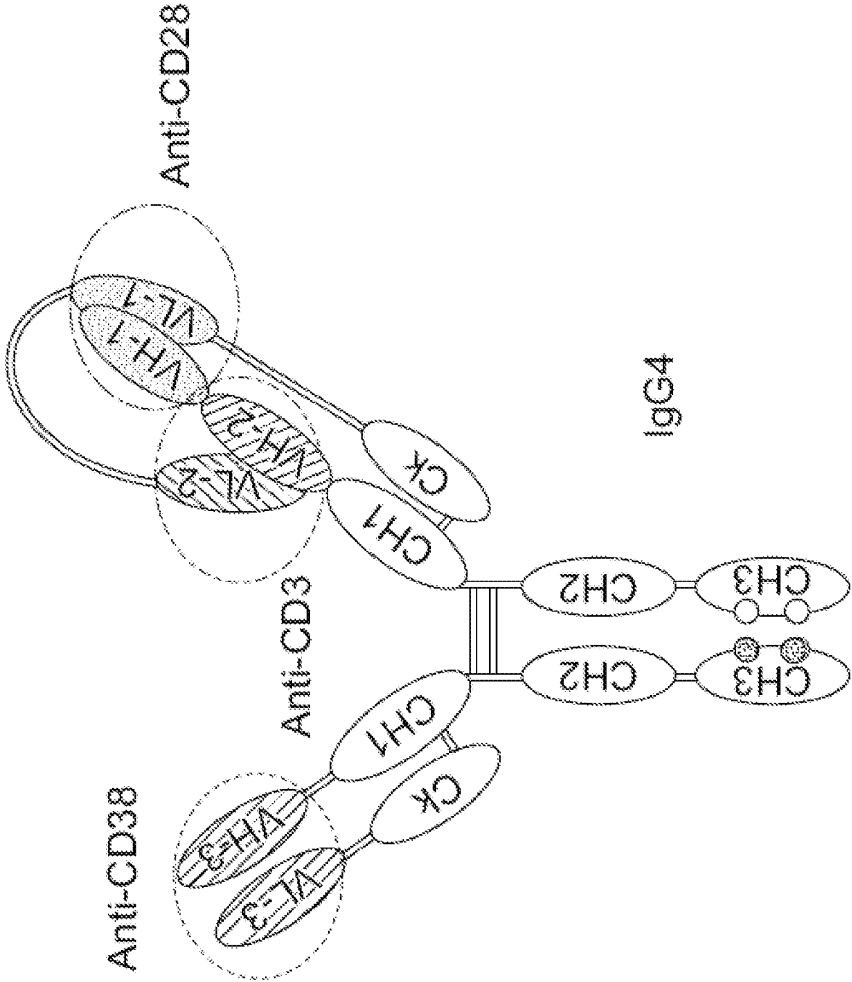


FIG. 1

Affinity of WT TsAbs for individual targets (K_D round up to integer)

TsAbs	CD38	CD28	CD3	Affinity order ranking
CD38 _{SB19} CD28 _{sup} CD3 _{mid}	2 nM	3 nM	23 nM	• CD38 binding: MsAb ≈ TsAbs
CD38 _{SB19} CD28 _{cvn} CD3 _{mid}	2 nM	17 nM	19 nM	
CD38 _{VH1} CD28 _{sup} CD3 _{mid/low}	4/6 nM	2/4 nM	21/76 nM	• CD28 binding: MsAb > TsAb ≥ BsAbs
CD38 _{VH1} CD28 _{cvn} CD3 _{mid/low}	4/6 nM	18/34 nM	23/59 nM	
CD38 _{HHY1370} CD28 _{sup} CD3 _{mid}	1 nM	5 nM	48 nM	• CD3 binding: MsAb ≈ BsAb ≈ TsAb
CD38 _{HHY1370} CD28 _{cvn} CD3 _{mid}	1 nM	19 nM	44 nM	

Impact of multi-target binding to CD38_{SB19} CD28_{sup} CD3_{mid}

State of TsAb	CD38	CD28	CD3	Comments
Single target	2 nM	3 nM	23 nM	Fast kinetics of CD3 binding when all targets are present
All targets	2 nM	4 nM	19 nM	

FIG. 2

TsAbs	¹ KD value against rec. protein by SPR (nM)	² Apparent KD value against rec. cells by FACS (nM)
CD38 _{S819} CD28 _{sup} CD3 _{mid}	2	4
CD38 _{VH1} CD28 _{sup} CD3 _{mid/low}	4/6	1.1
CD38 _{VH1} CD28 _{con} CD3 _{mid/low}	4/6	4.4
CD38 _{VH11376} CD28 _{sup} CD3 _{mid}	1	no accurate EC50 value could be estimated (no saturation)

FIG. 3

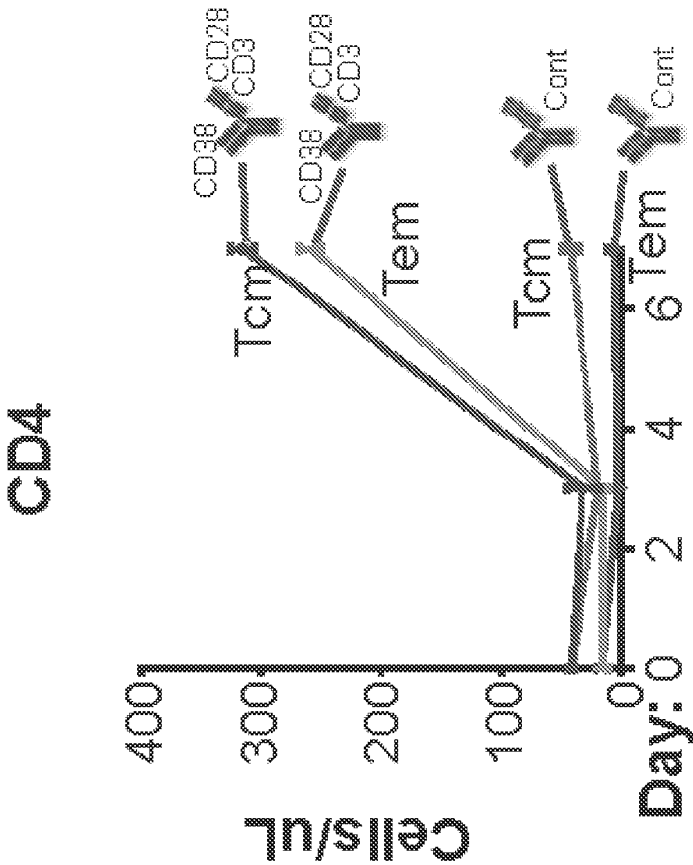


FIG. 4A

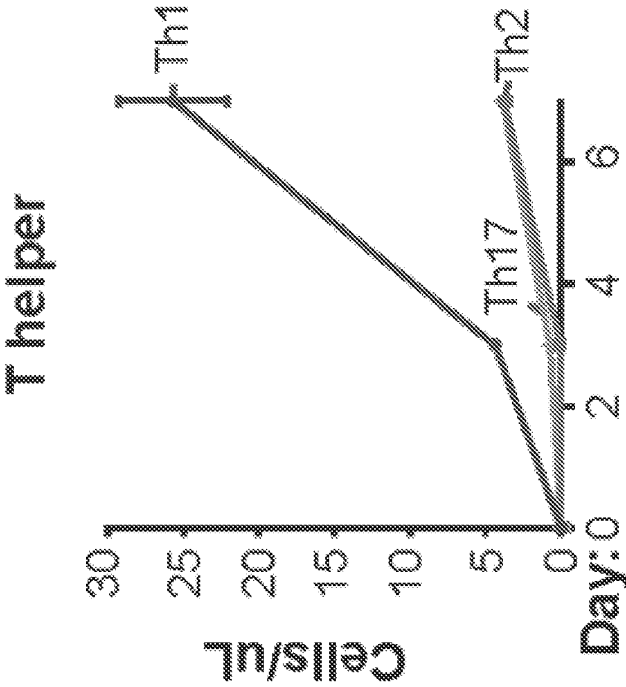


FIG. 4B

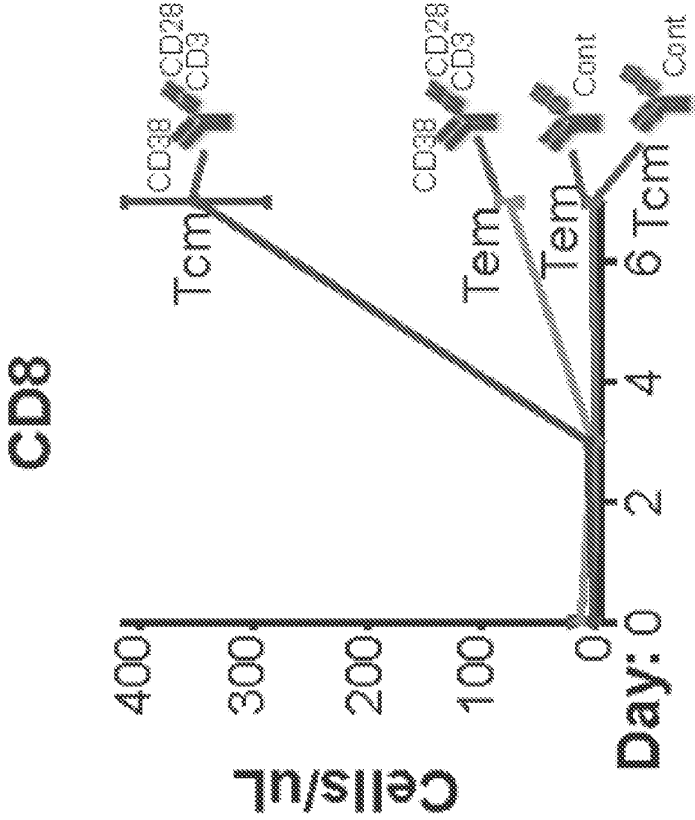


FIG. 4C

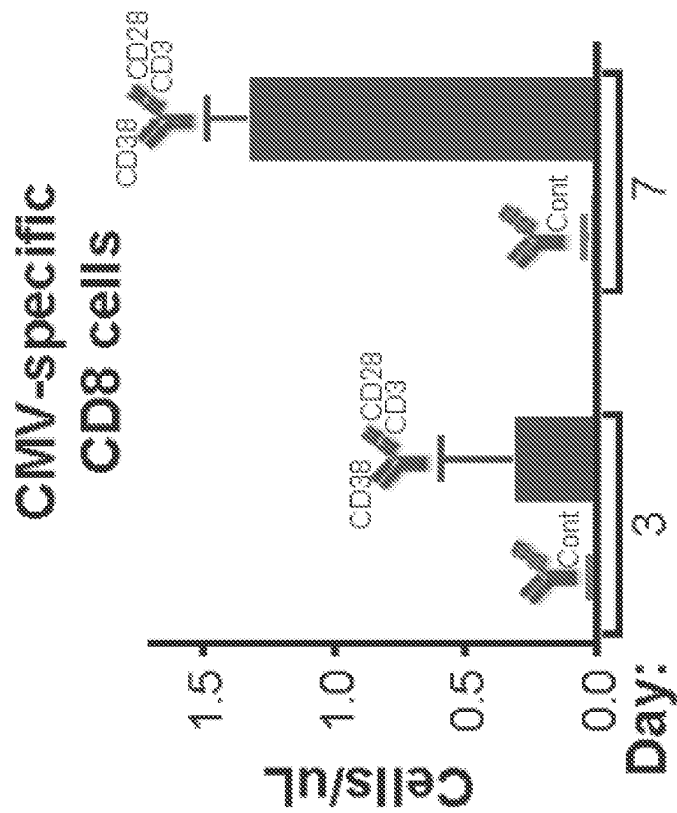


FIG. 4D

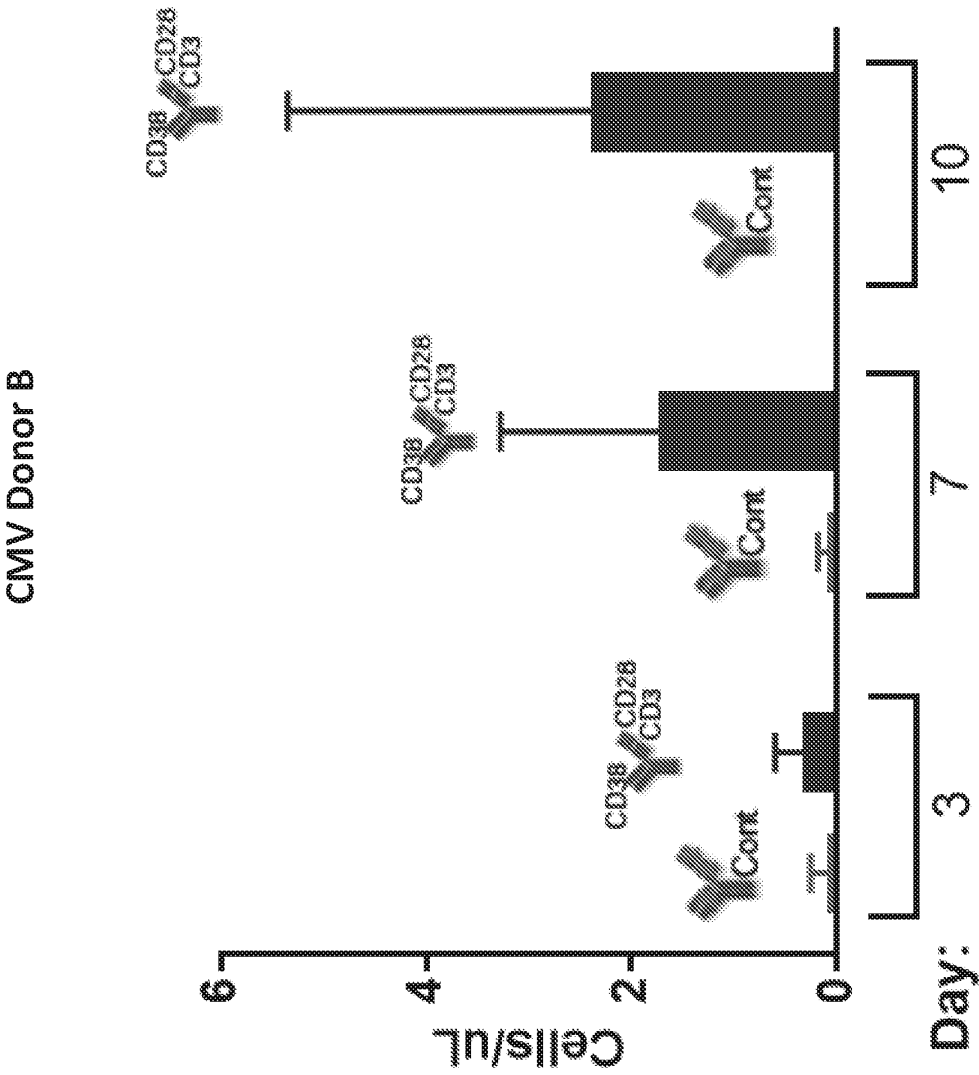


FIG. 5A

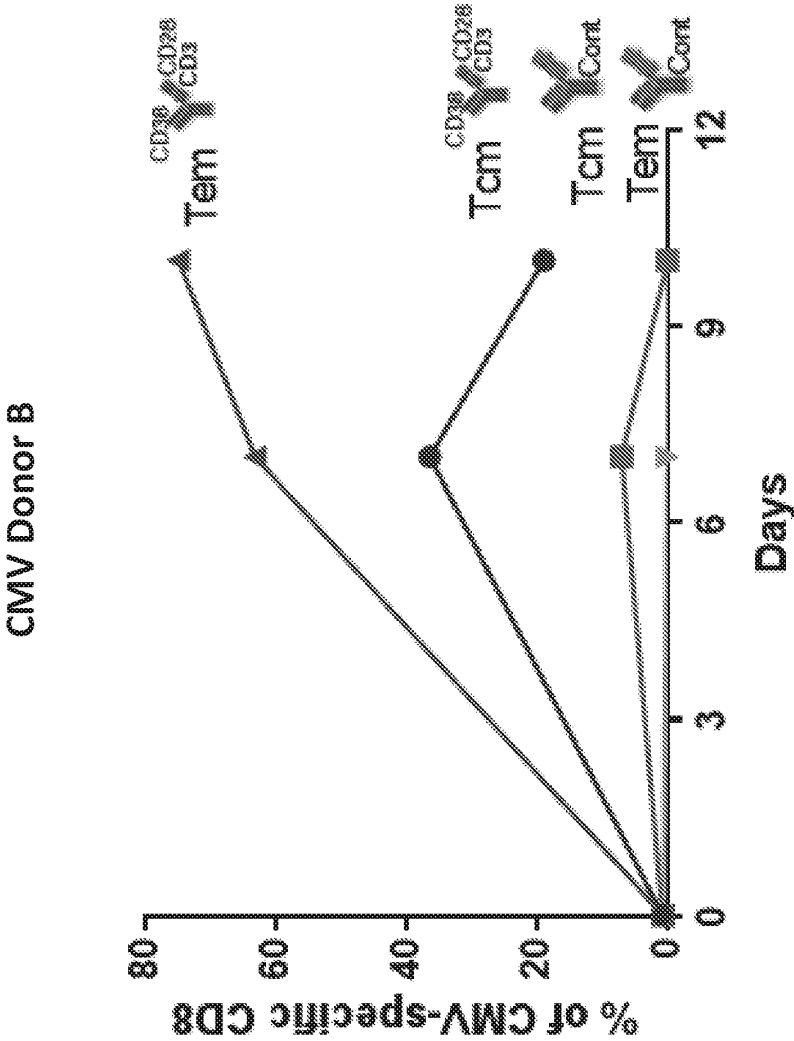


FIG. 5B

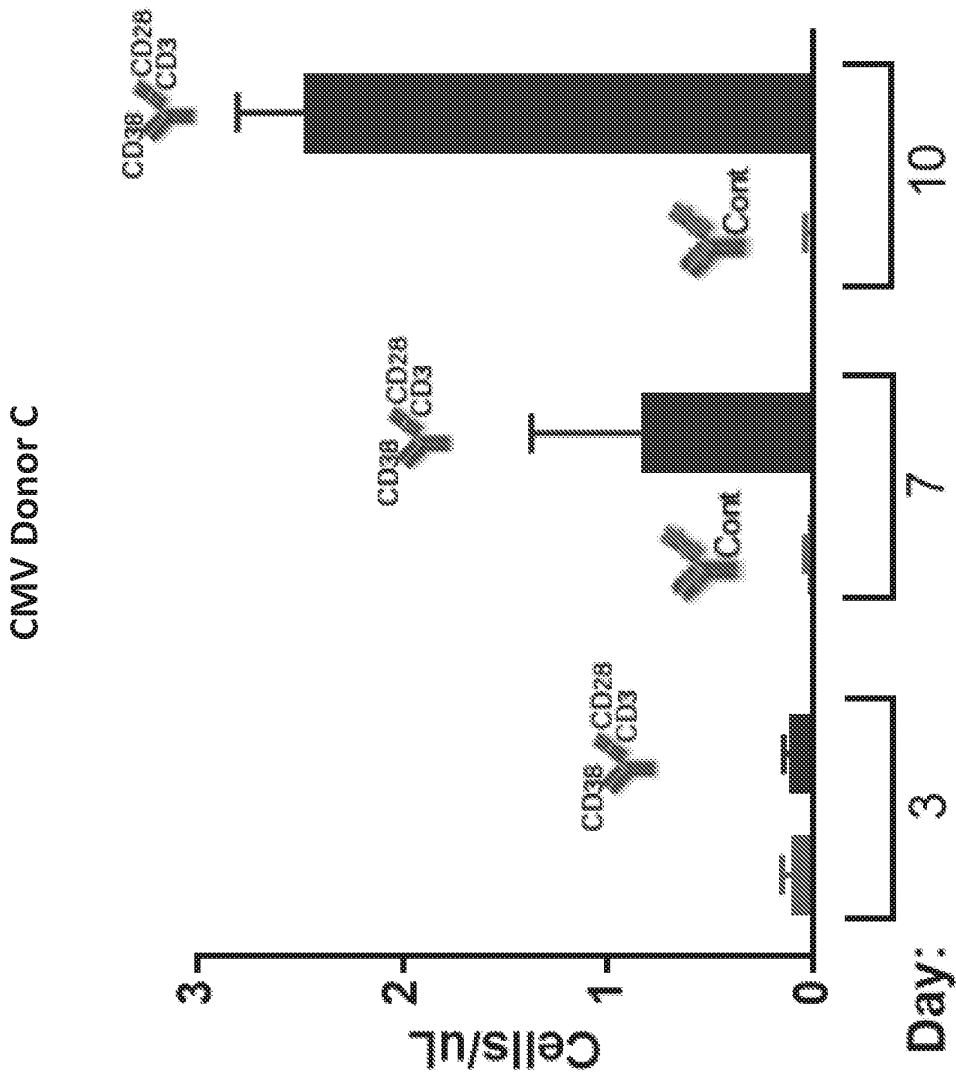


FIG. 6A

CMV Donor C

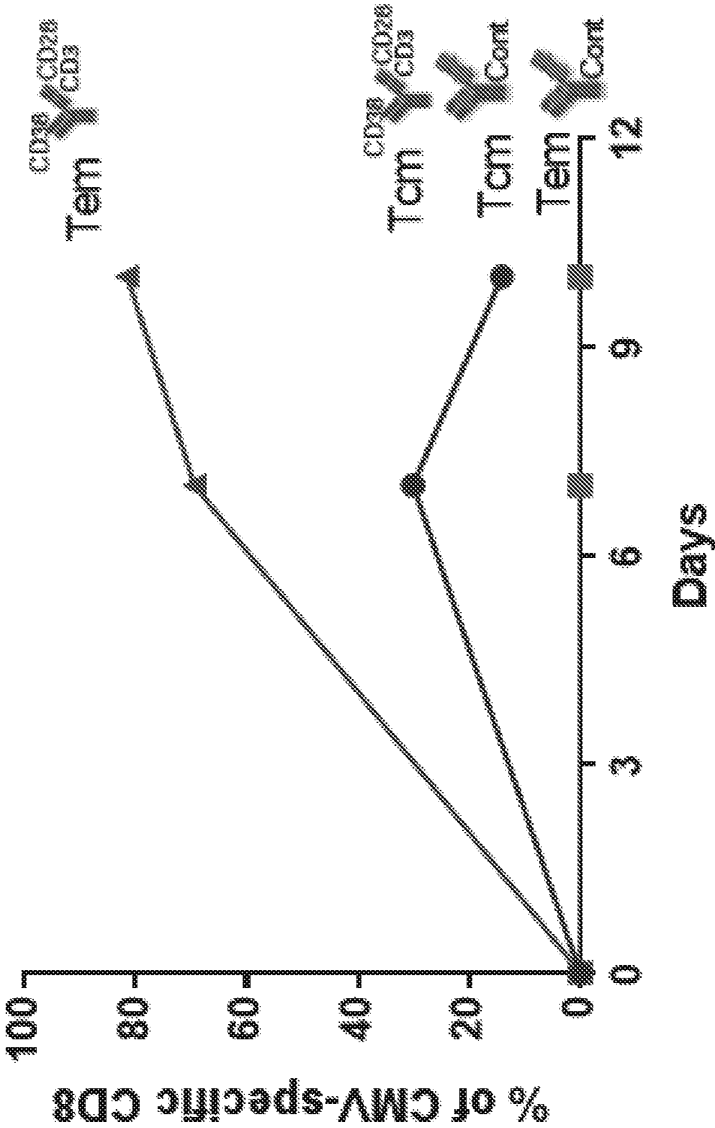


FIG. 6B

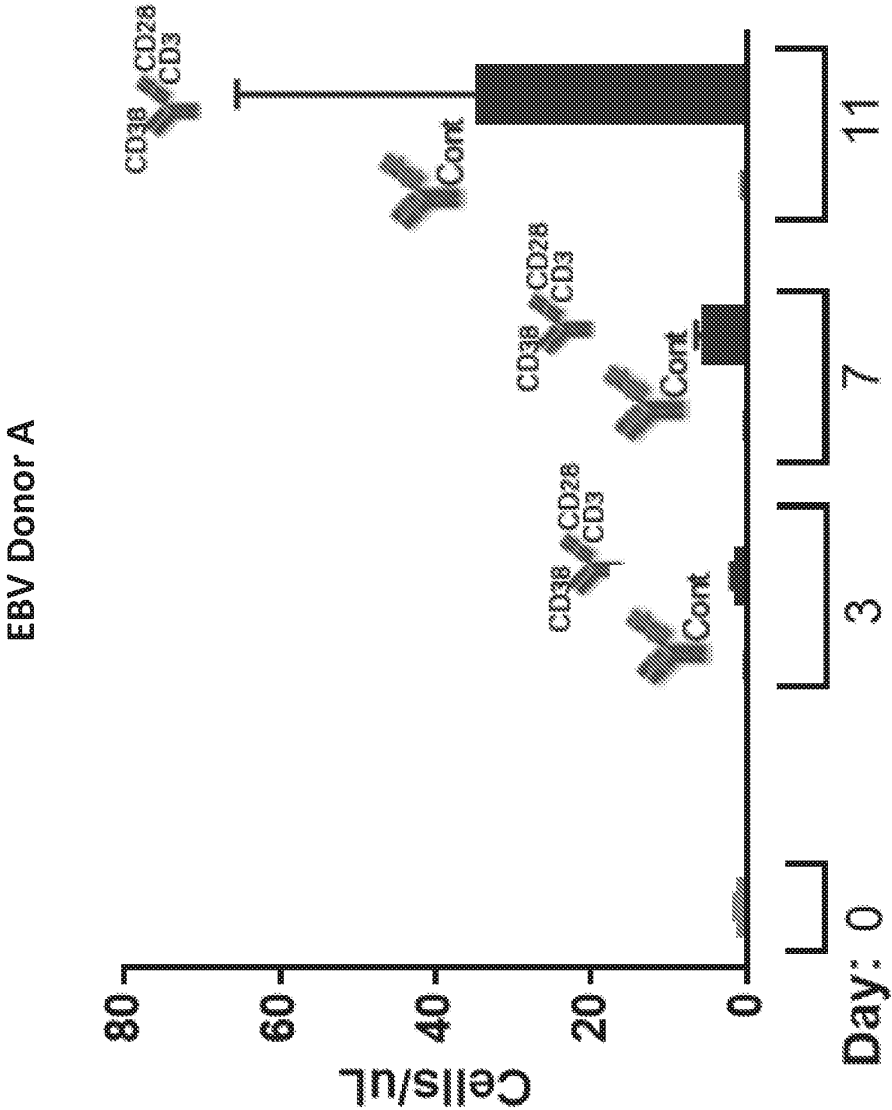


FIG. 7A

EBV Donor A

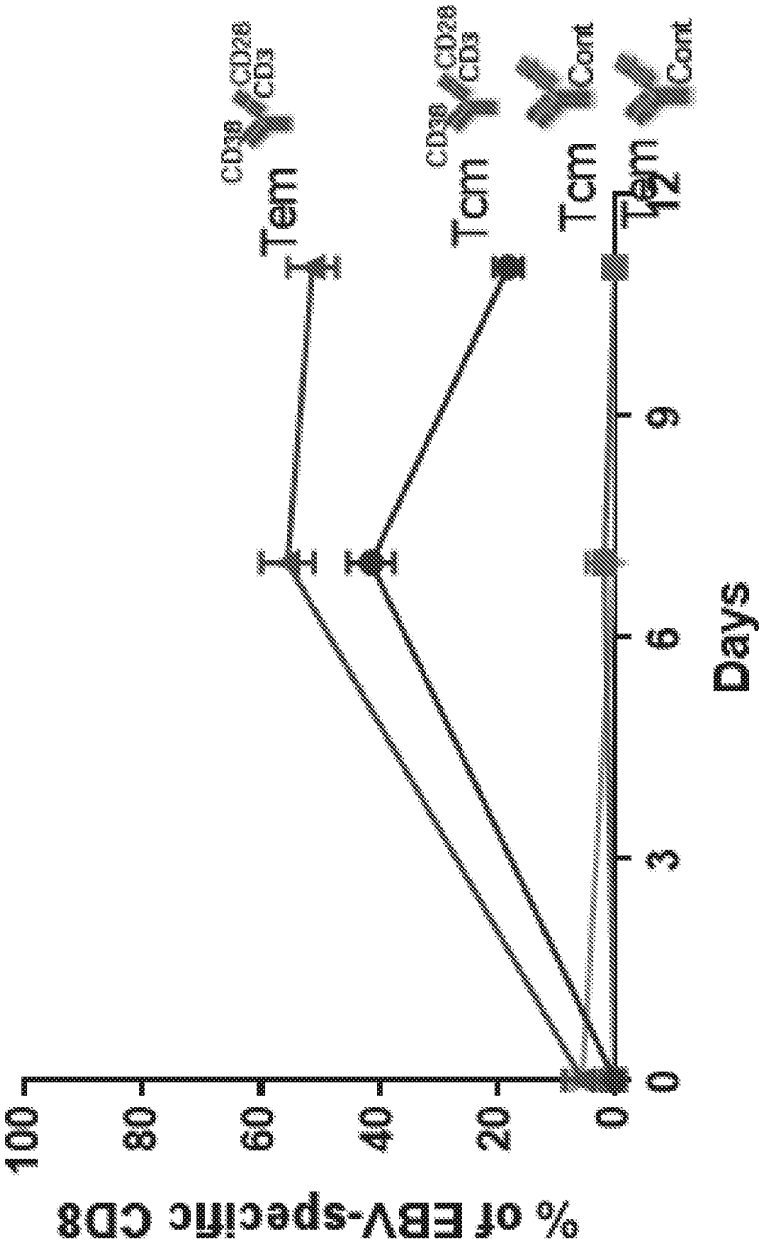


FIG. 7B

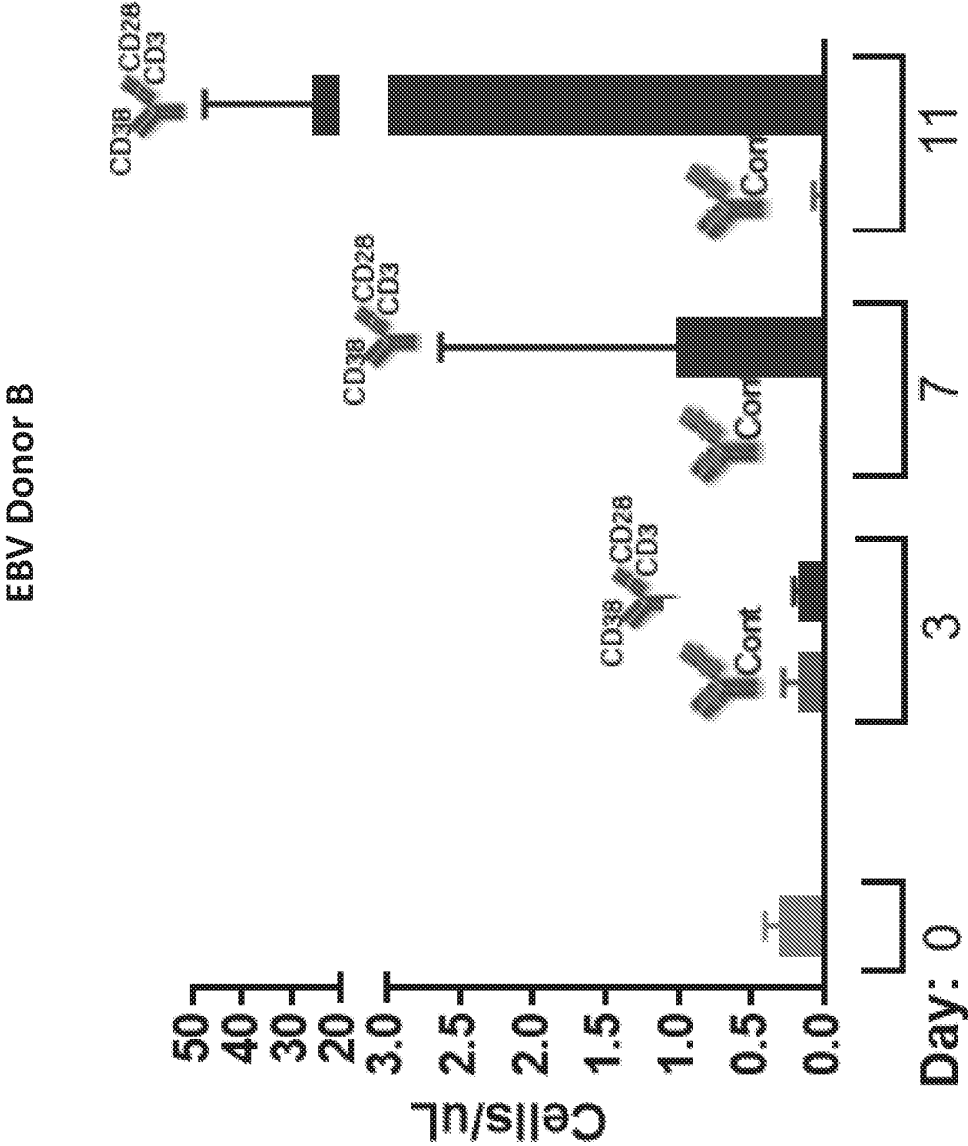


FIG. 8A

EBV Donor B

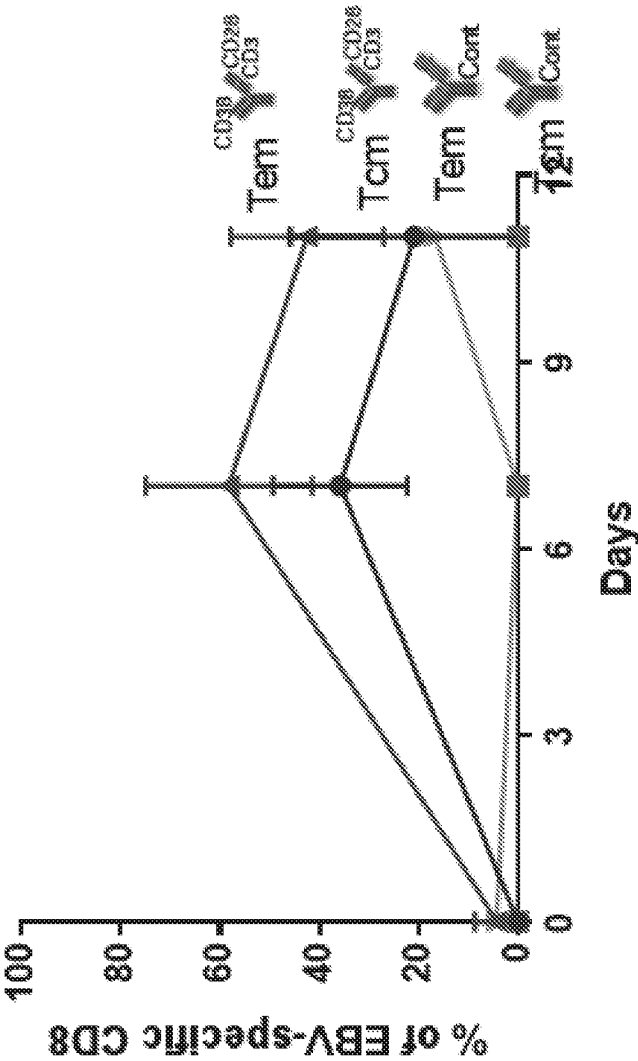


FIG. 8B

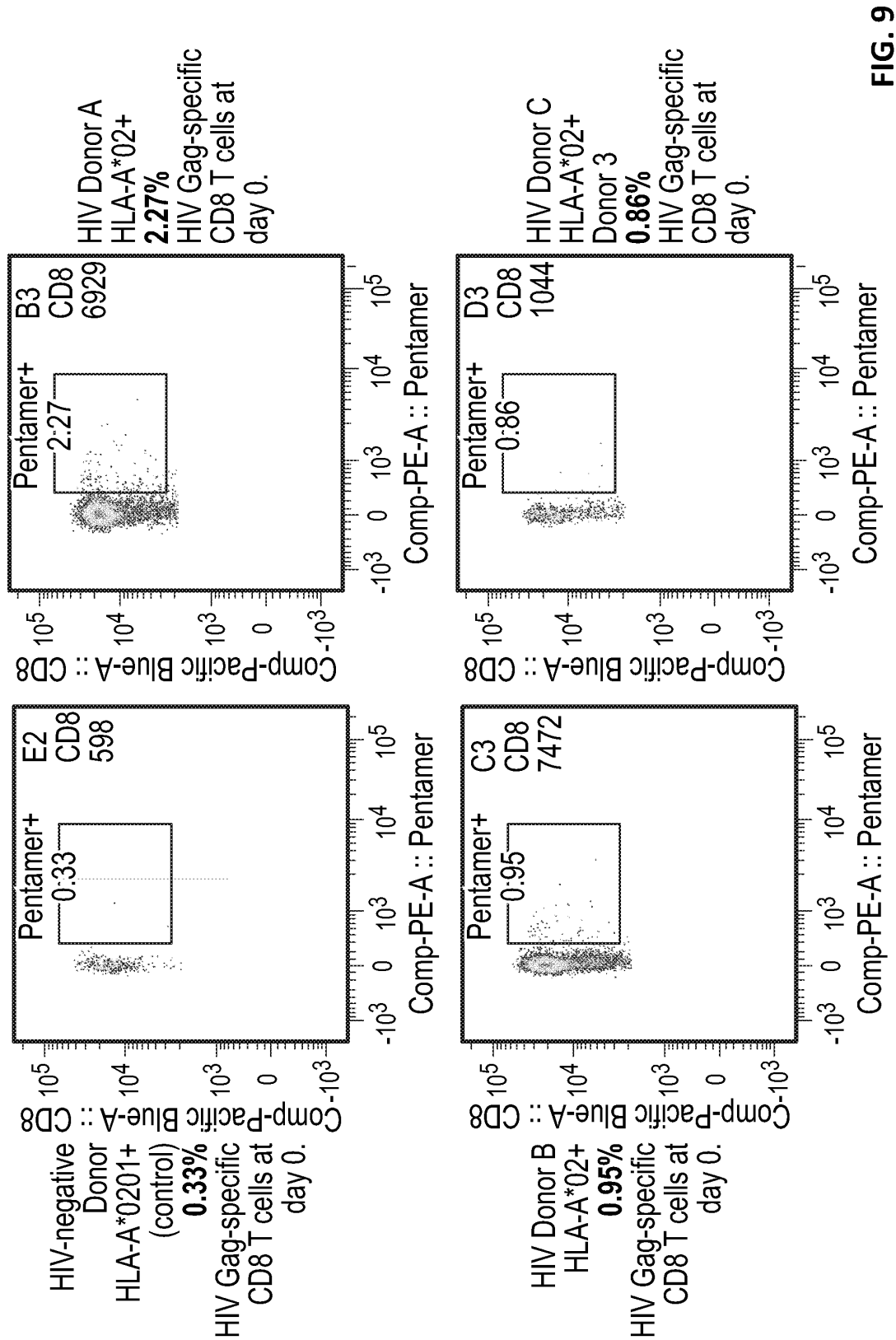


FIG. 9

HIV Donor D

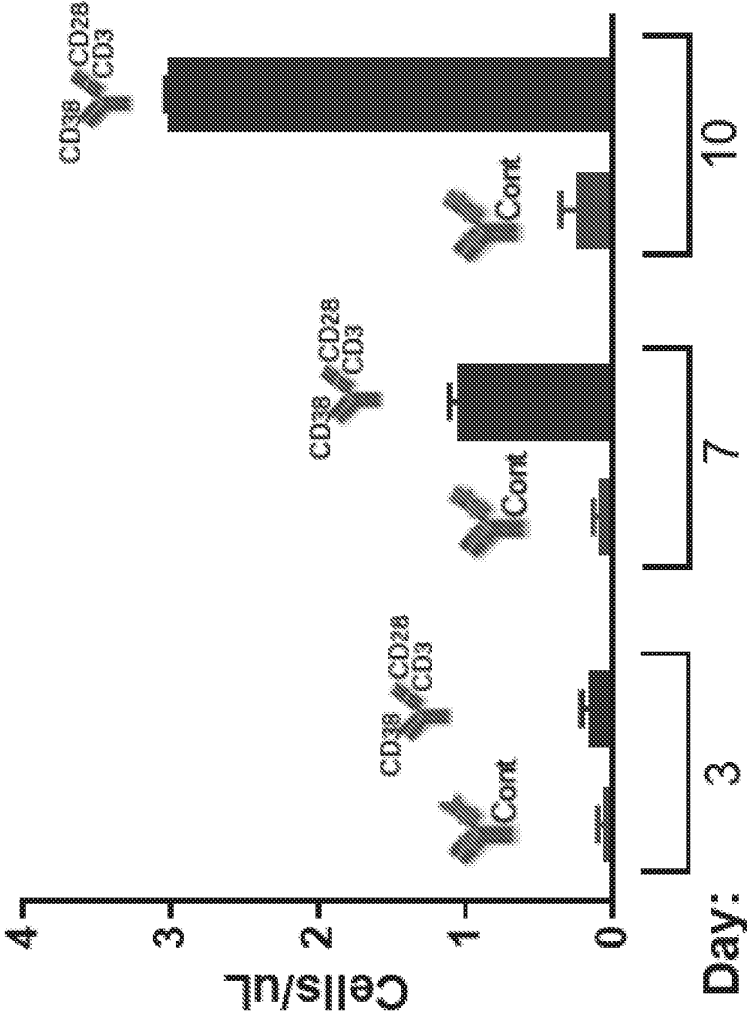


FIG. 10A

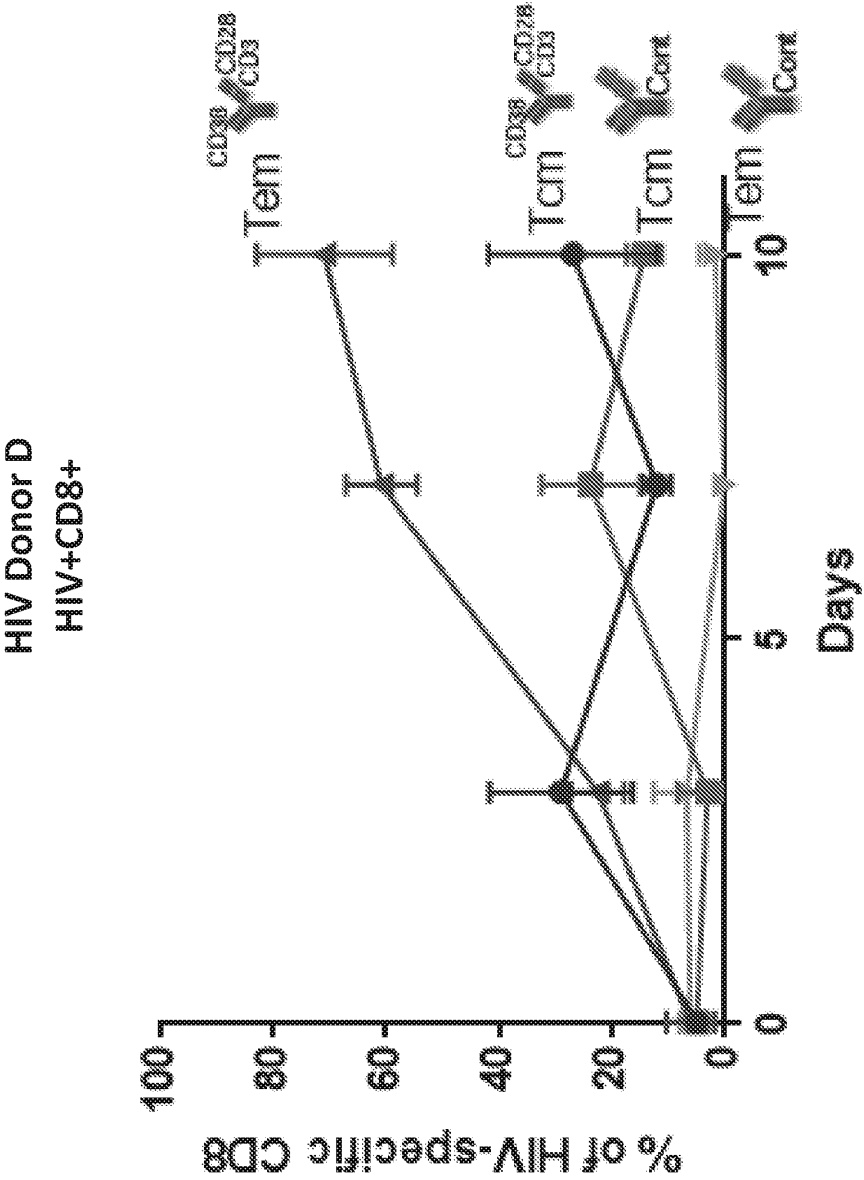


FIG. 10B

HIV Donor E

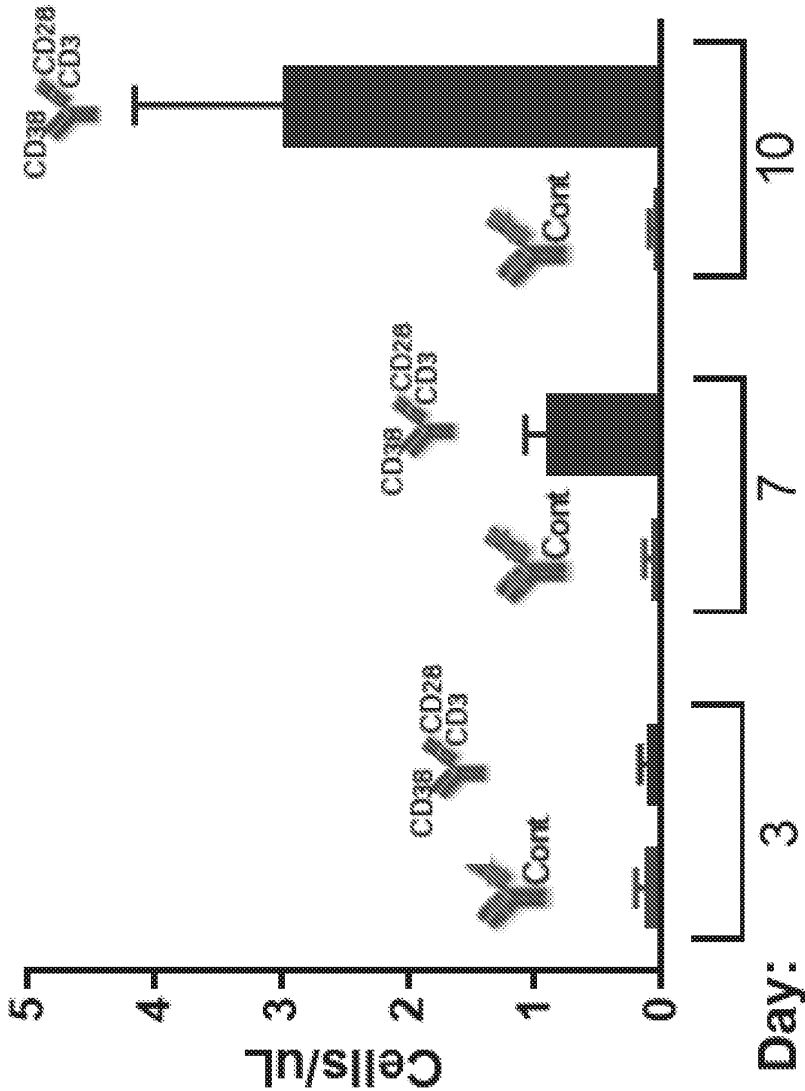


FIG. 11A

HIV Donor E
HIV+CD8+

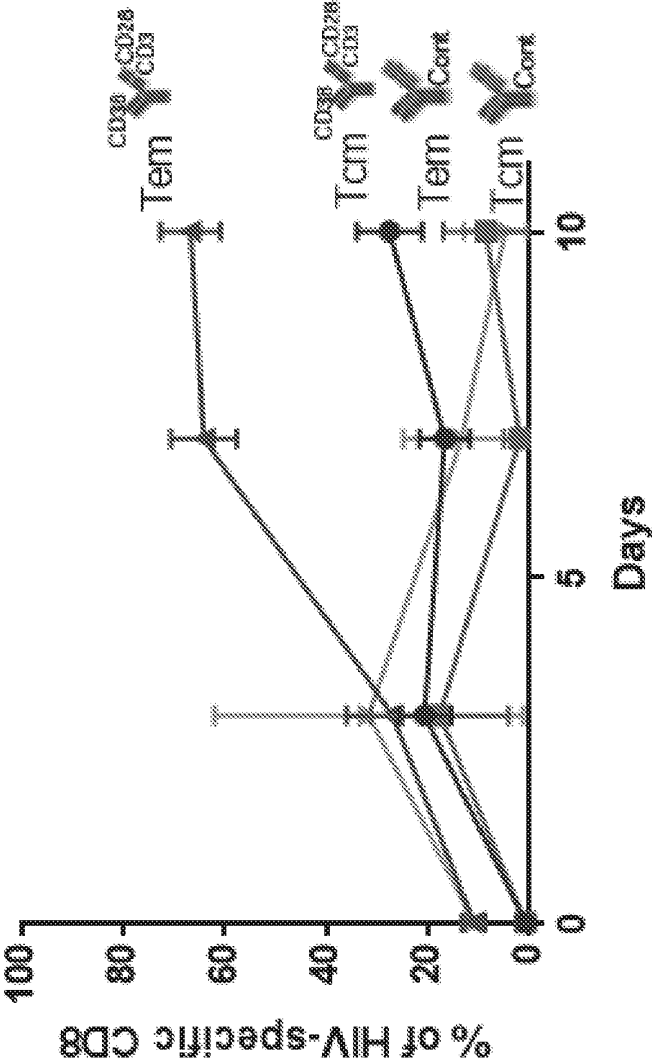


FIG. 11B

HIV Donor F

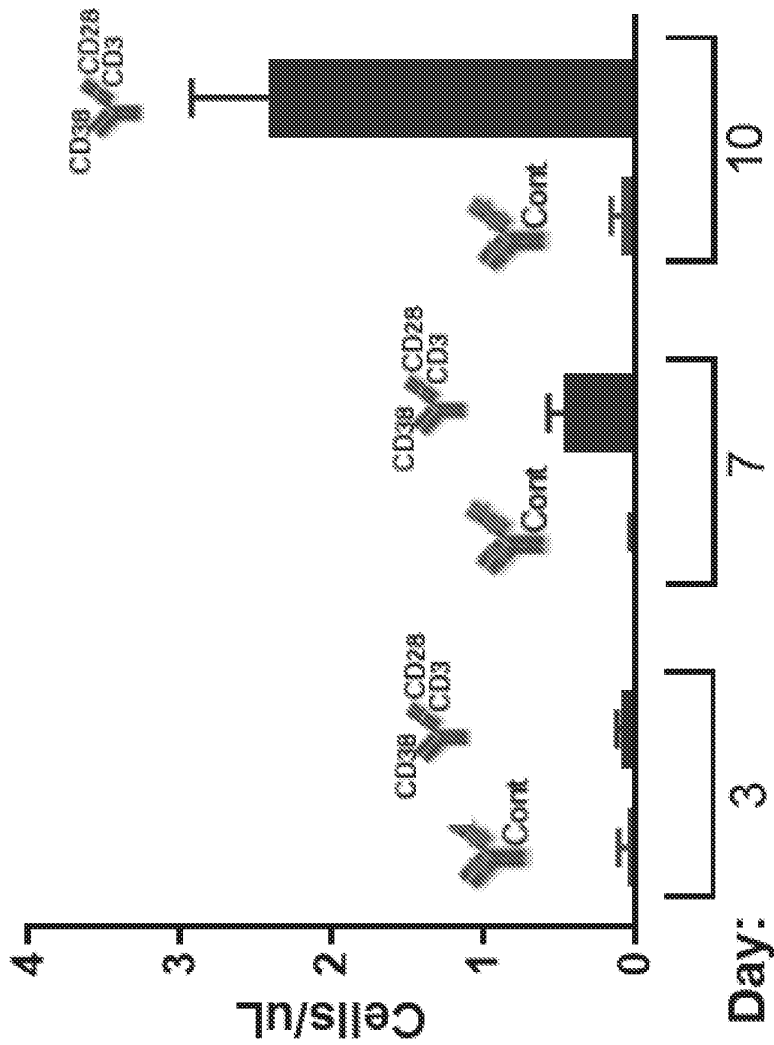


FIG. 12A

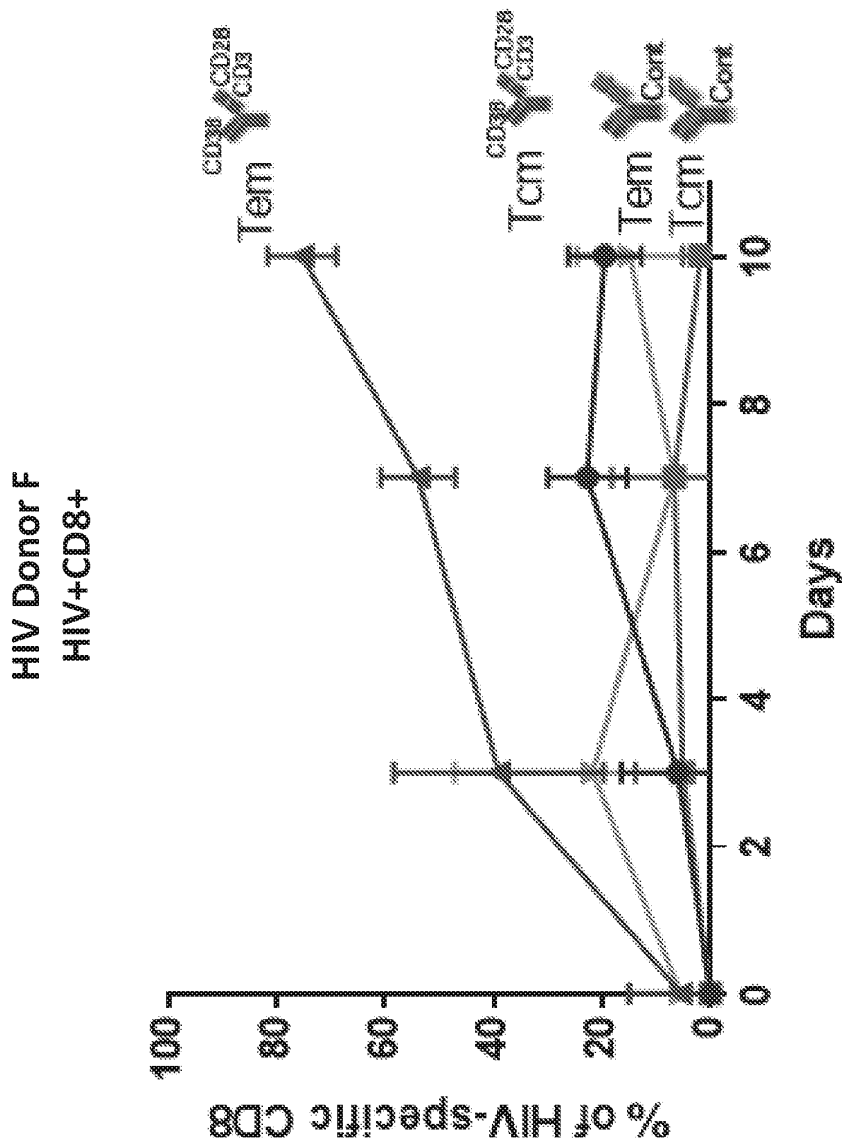


FIG. 12B

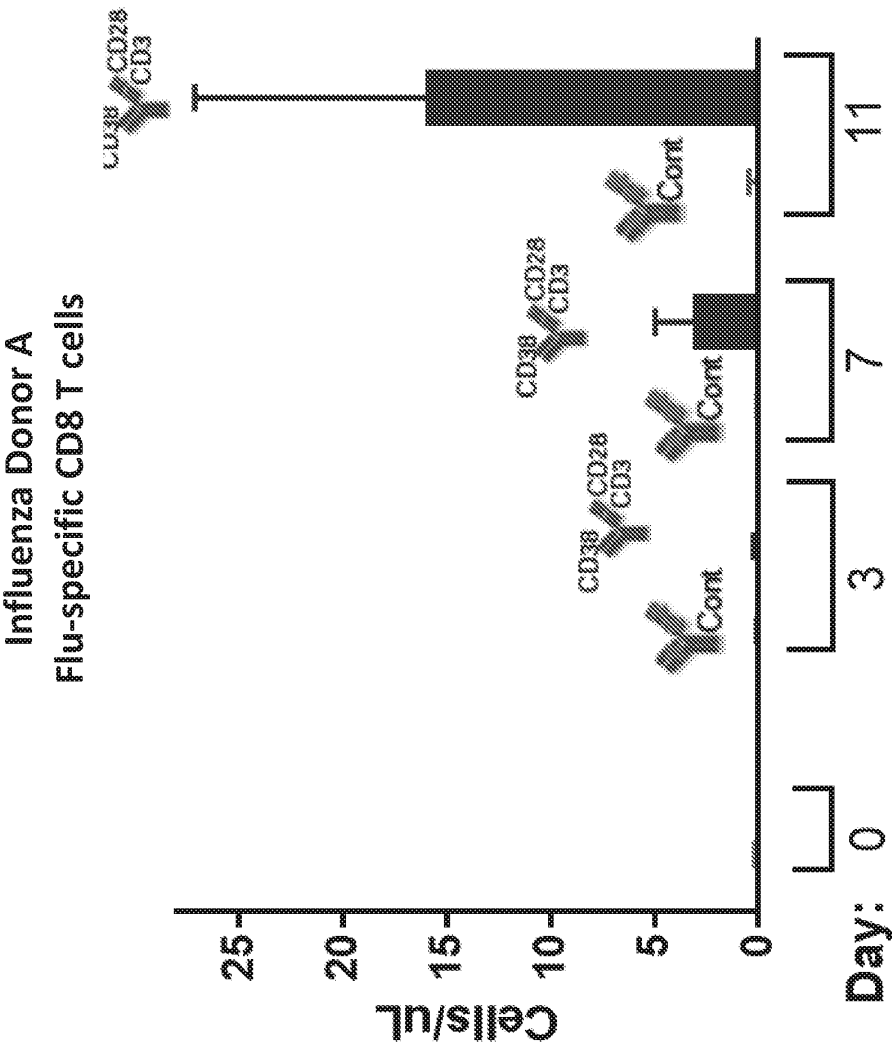


FIG. 13A

Influenza Donor A

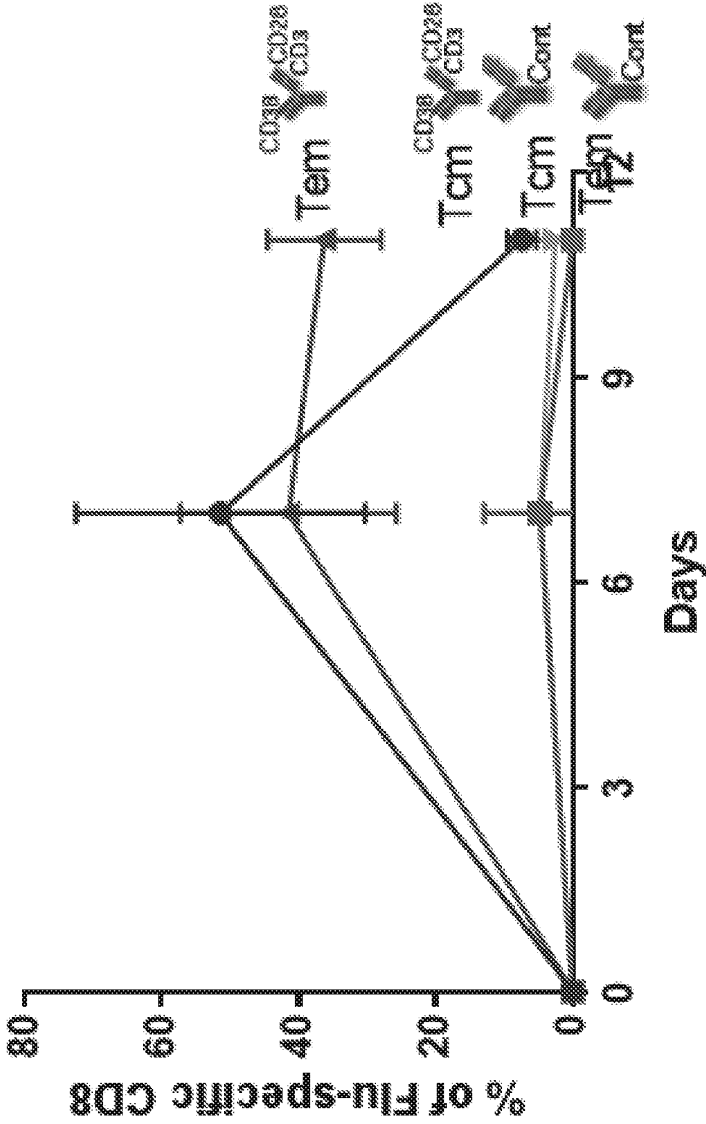


FIG. 13B