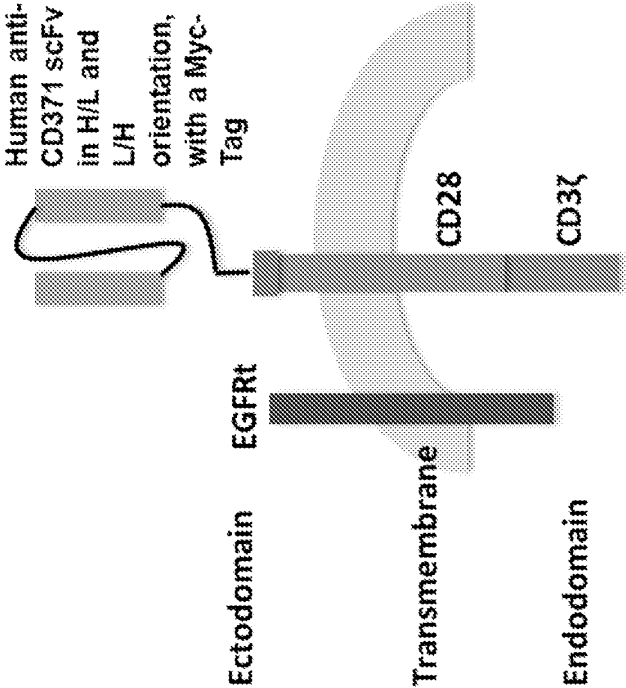


Phage-based CD371-targeted CARs



- Et.B10L3H_MT_h28Z (B10 Light-Heavy scFv orientation with a 15-amino acid G4S linker, L3H, and a CD28Z-based signaling domain)
- Et.B10L4H_MT_hBBZ (B10 Light-Heavy scFv orientation with a 19-amino acid G4S linker, L4H, and a 4-1BBZ-based signaling domain)
- Et.B10L4H_MT_h28Z (B10 Light-Heavy scFv orientation with a 19-amino acid G4S linker, L4H, and a CD28Z-based signaling domain)
- Et.B10H3L_MT_h28Z (B10, Heavy-Light scFv orientation with a 15-amino acid G4S linker, H3L, and a CD28Z-based signaling domain)
- Et.B10H4L_MT_h28Z (B10, Heavy-Light scFv orientation with a 19-amino acid G4S linker, H4L, and a CD28Z-based signaling domain)
- Et.C3H3L_MT_h28Z (C3, Heavy-Light scFv orientation with a 15-amino acid G4S linker, H3L, and a CD28Z-based signaling domain)
- Et.C3L3H_MT_h28Z (C3 Light-Heavy scFv orientation with a 15-amino acid G4S linker, L4H, and a CD28Z-based signaling domain)
- Et.D6L3H_MT_h28Z (D6 Light-Heavy scFv orientation with a 15-amino acid G4S linker, L4H, and a CD28Z-based signaling domain)

FIG. 1

CAR Constructs with EGFR and MYC-tag

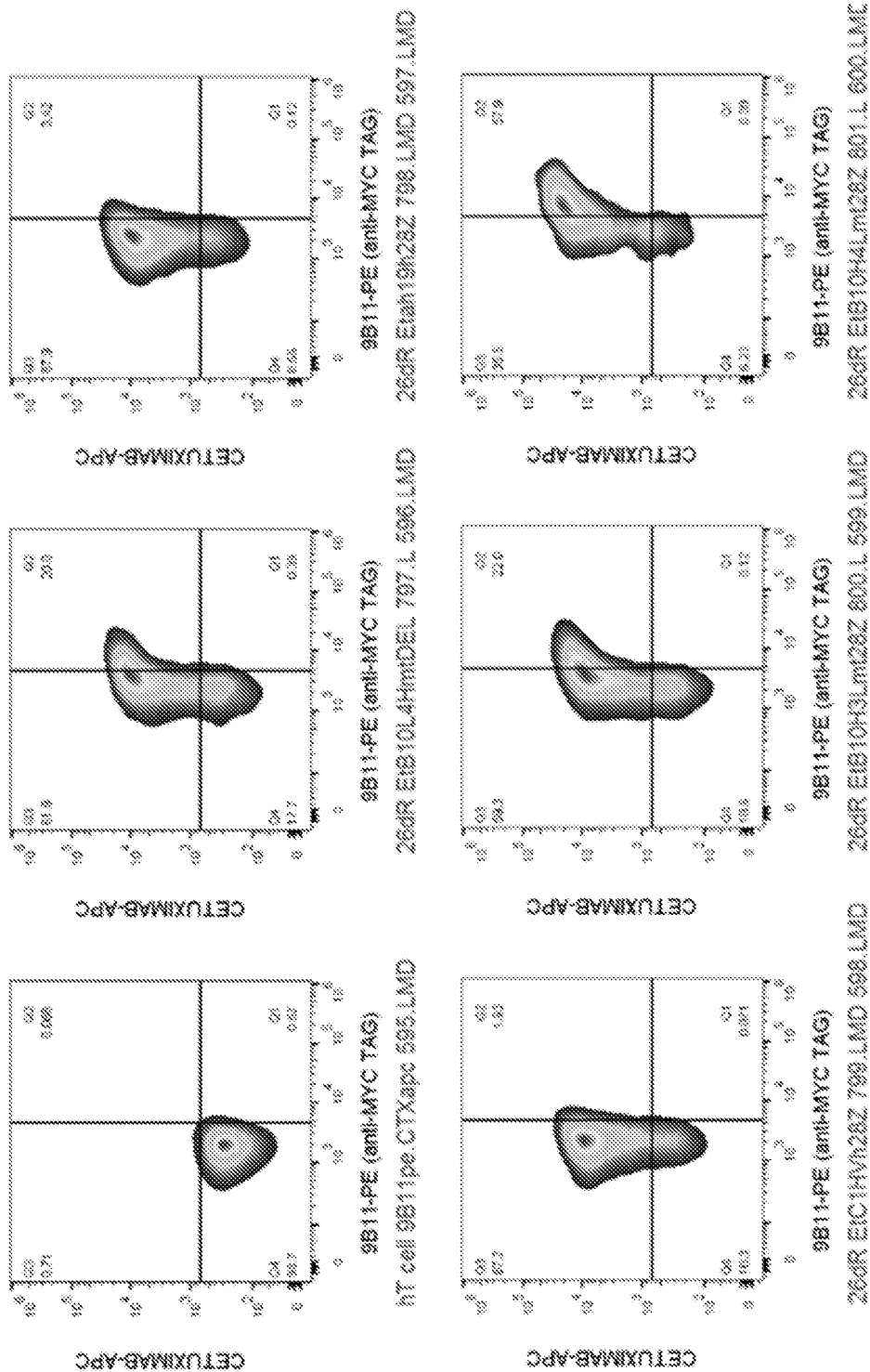


FIG. 2

CAR Constructs with EGFR and MYC-tag

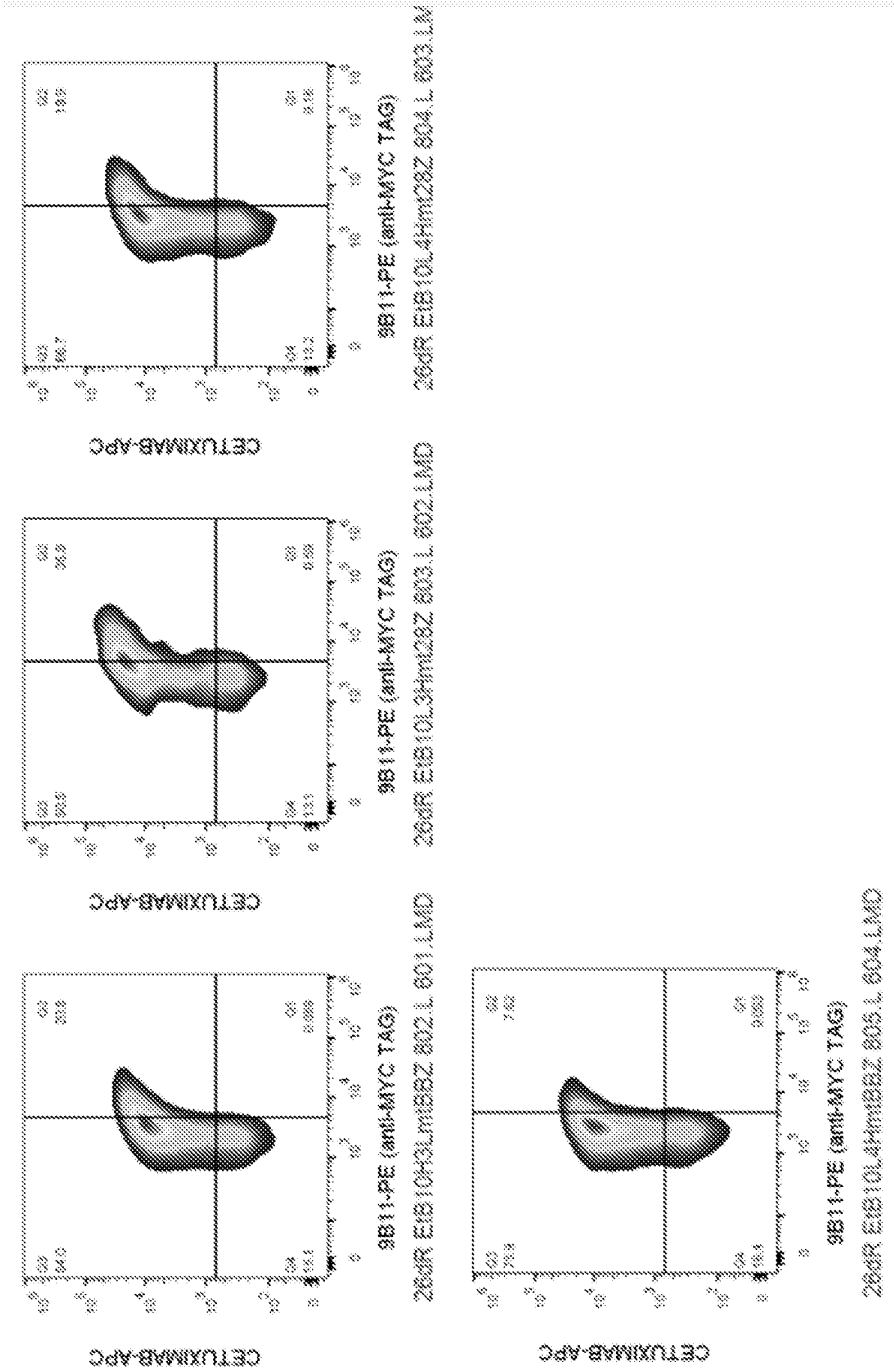
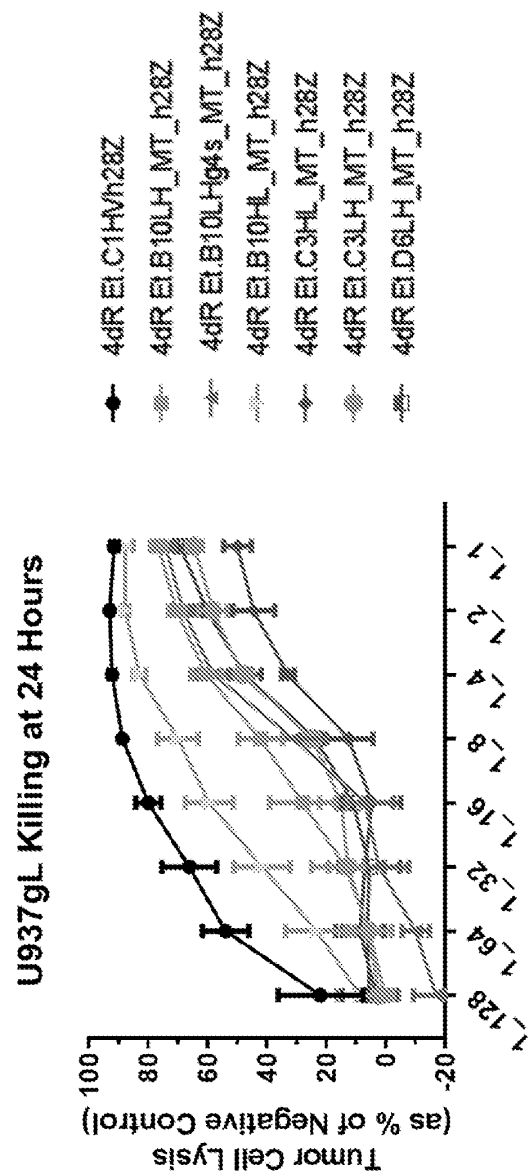


FIG. 2, Continued



Effector:Tumor Ratio

Dunnett's multiple comparisons test		Mean Diff.	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
1_1	4dR Et.C1.H.vh28Zvs. 4dR Et.B.L.H.MT.h28Z	14.75	2.322 to 27.18	Yes	*	0.0128
	4dR Et.C1.H.vh28Zvs. 4dR Et.B.L.Hg4s.MT.h28Z	17.25	4.822 to 29.68	Yes	**	0.0024
	4dR Et.C1.H.vh28Zvs. 4dR Et.B.HL.MT.h28Z	3.750	-8.678 to 16.18	No	ns	0.9305
	4dR Et.C1.H.vh28Zvs. 4dR Et.C.HL.MT.h28Z	41.50	29.07 to 53.93	Yes	****	<0.0001
	4dR Et.C1.H.vh28Zvs. 4dR Et.C.L.H.MT.h28Z	27.00	14.57 to 39.43	Yes	****	<0.0001
	4dR Et.C1.H.vh28Zvs. 4dR Et.D.L.H.MT.h28Z	22.25	9.822 to 34.68	Yes	****	<0.0001

FIG. 3

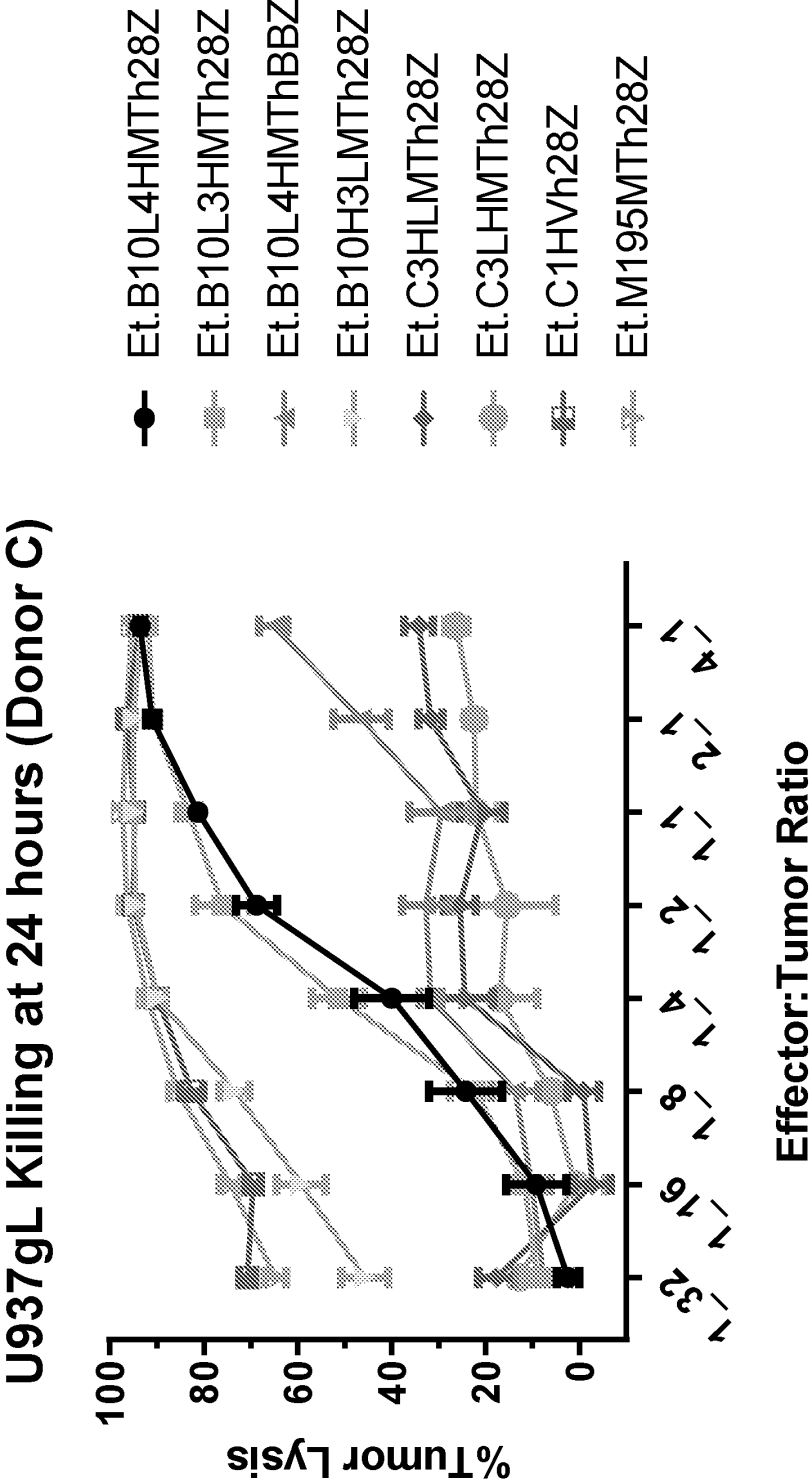


FIG. 4

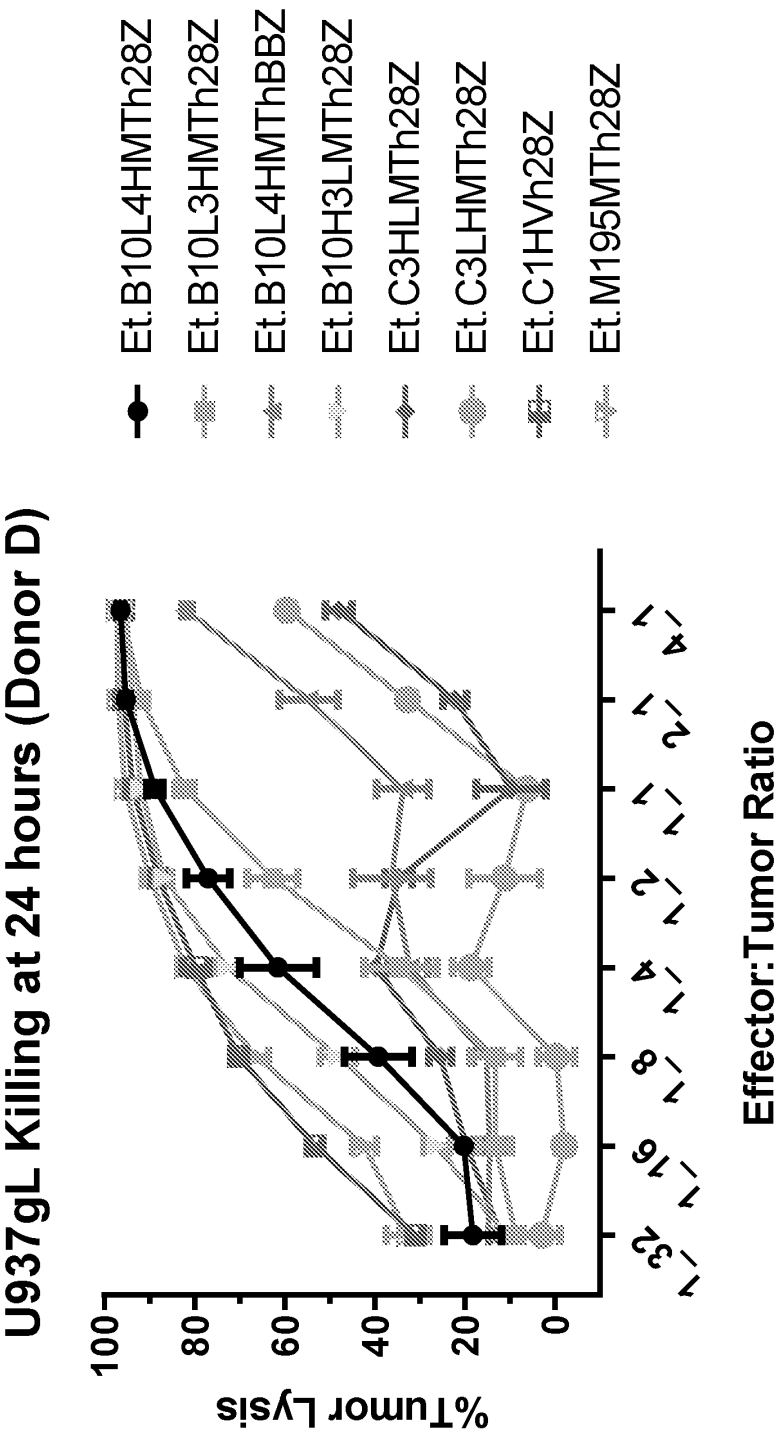


FIG. 5

Donor C CAR T Cell Recursive Stimulation w/ Tumor at E:T of 1:12.5

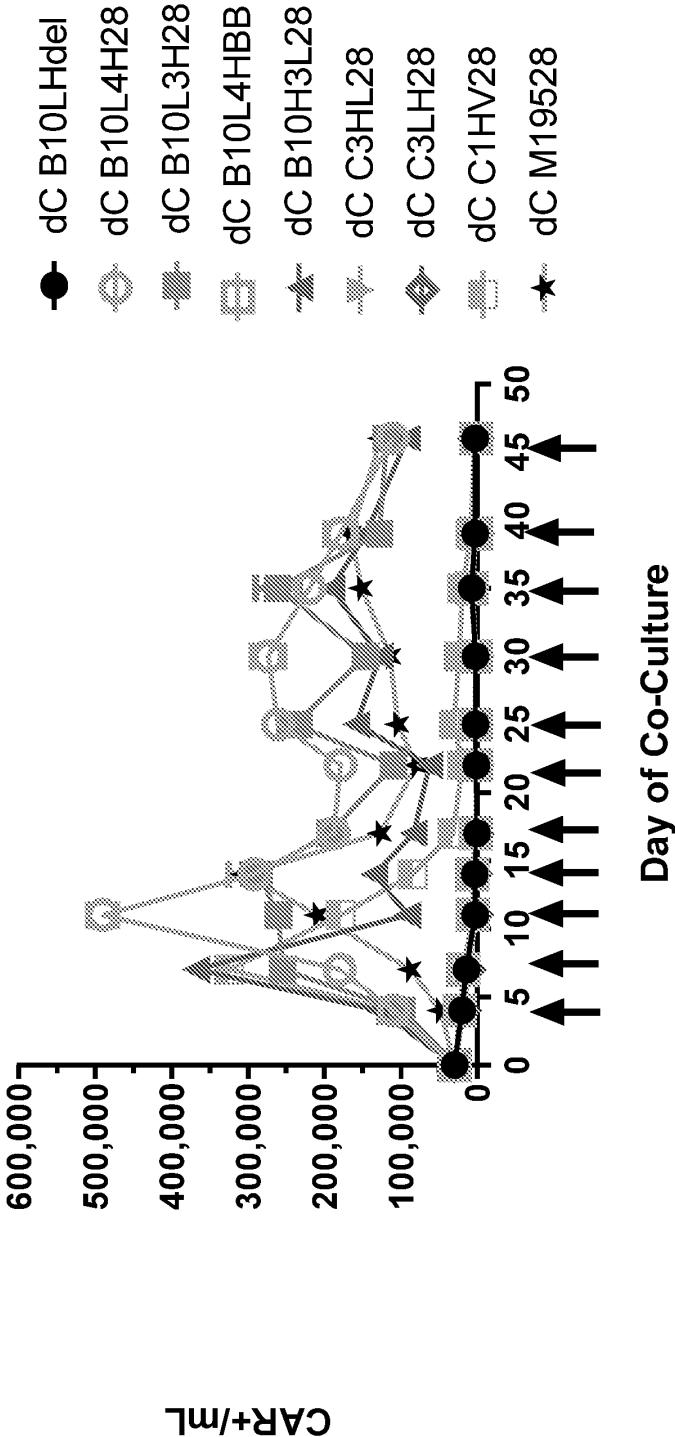


FIG. 6

8/26

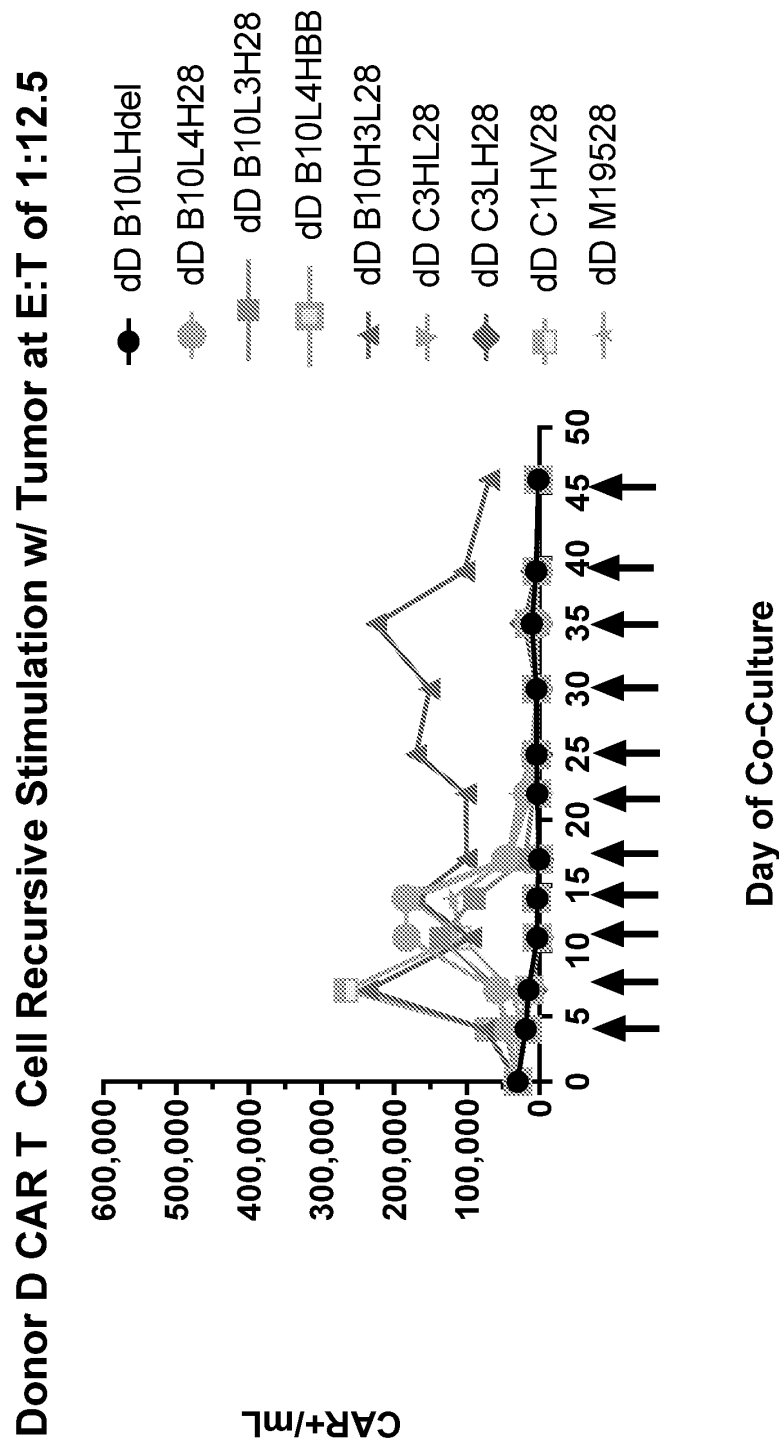


FIG. 7

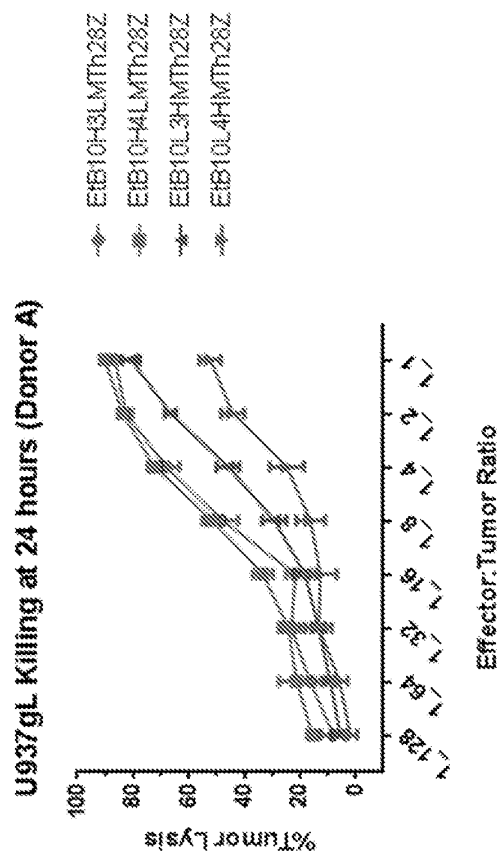


FIG. 8A

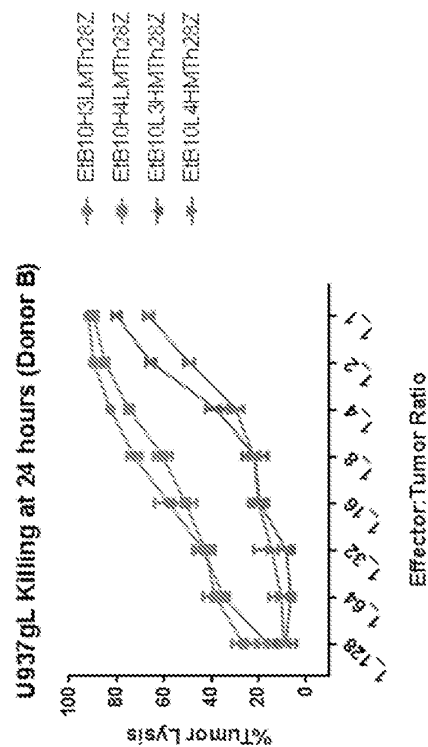


FIG. 8B

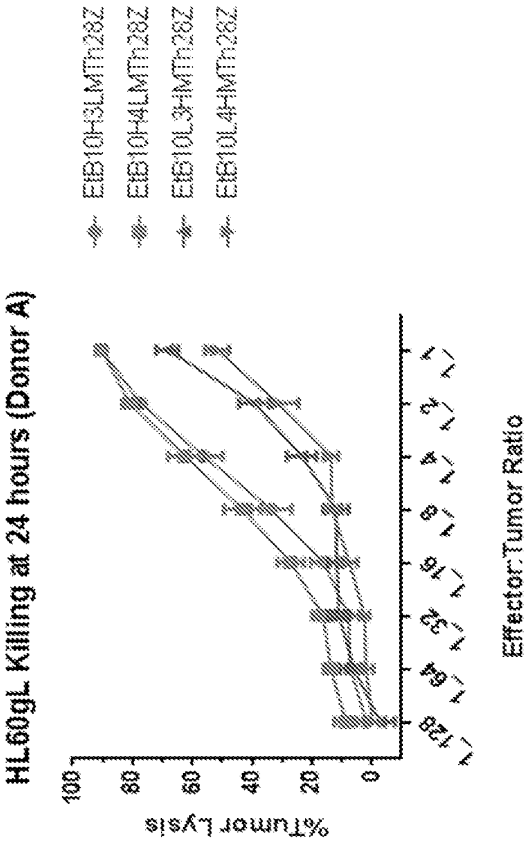


FIG. 9A

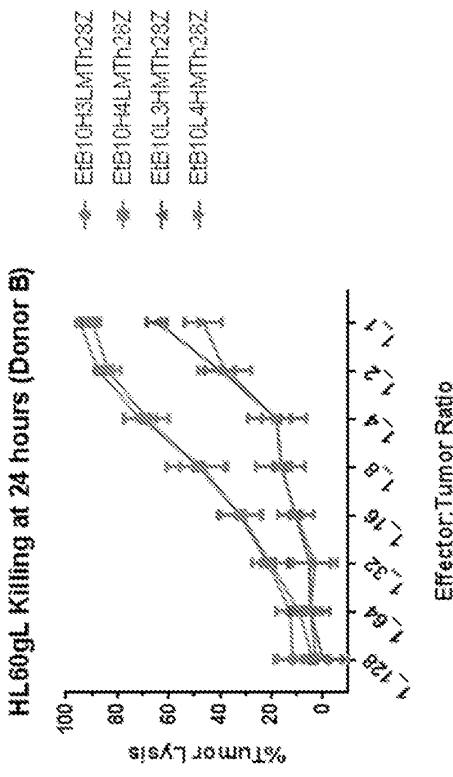


FIG. 9B

Generation of human CD371 CRISPR Knockout Cell Lines

FIG. 10A

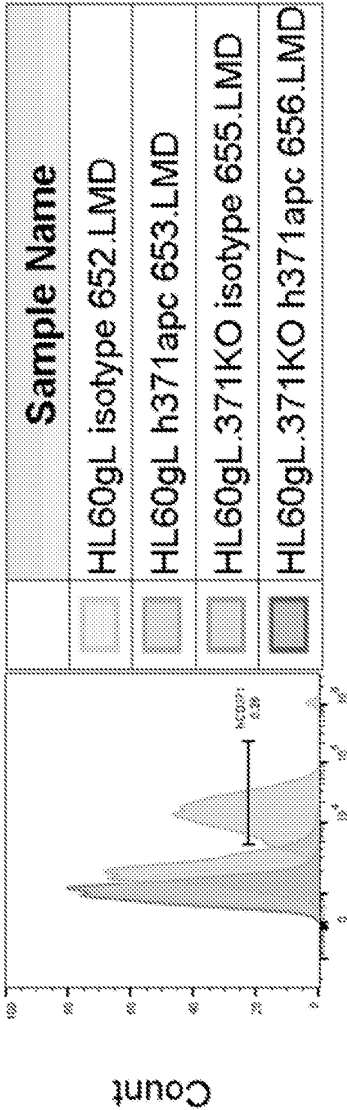
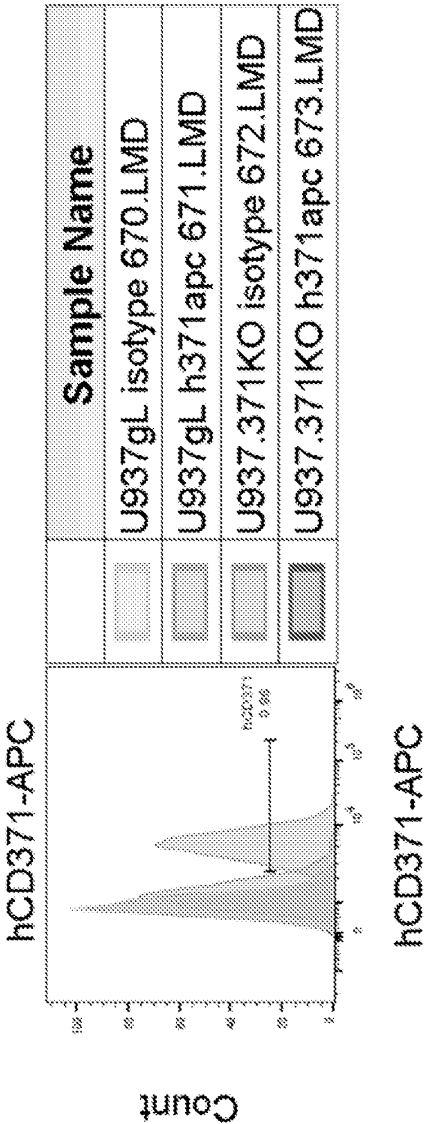


FIG. 10B



U937RFPcyp.371KO Killing at 24 hours (Donor A)

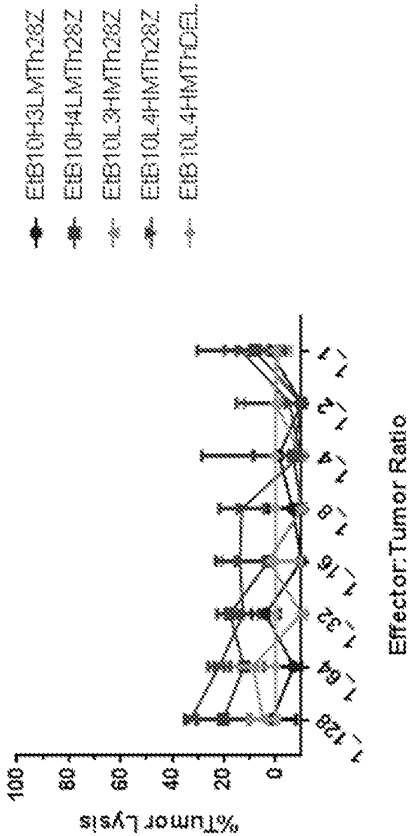


FIG. 11A

U937RFPcyp.371KO Killing at 24 hours (Donor B)

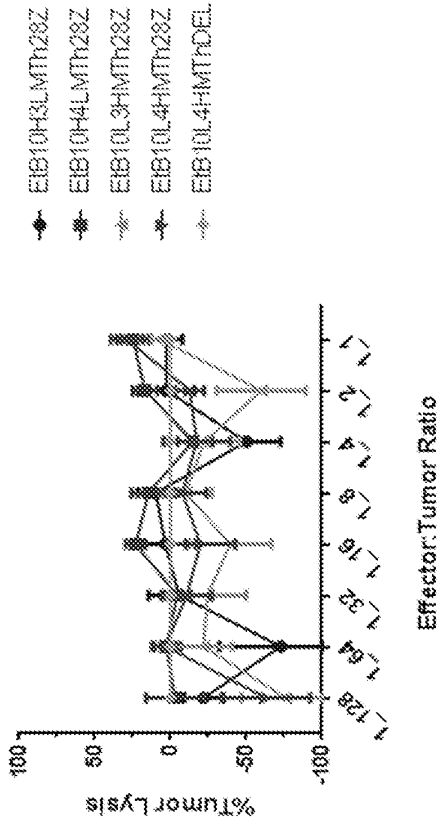


FIG. 11B

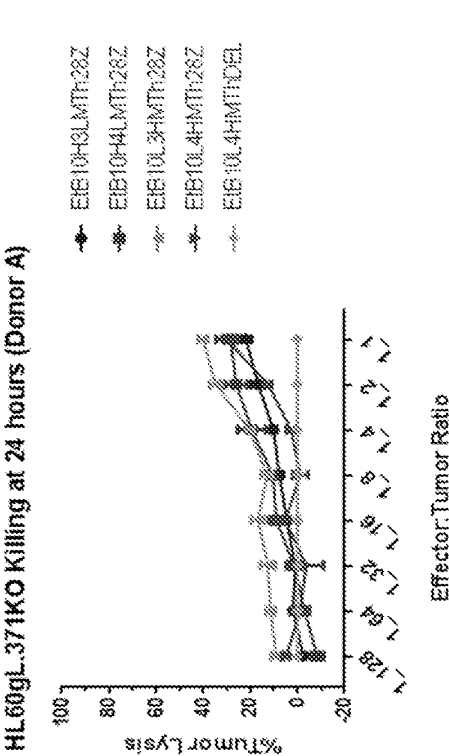


FIG. 12A

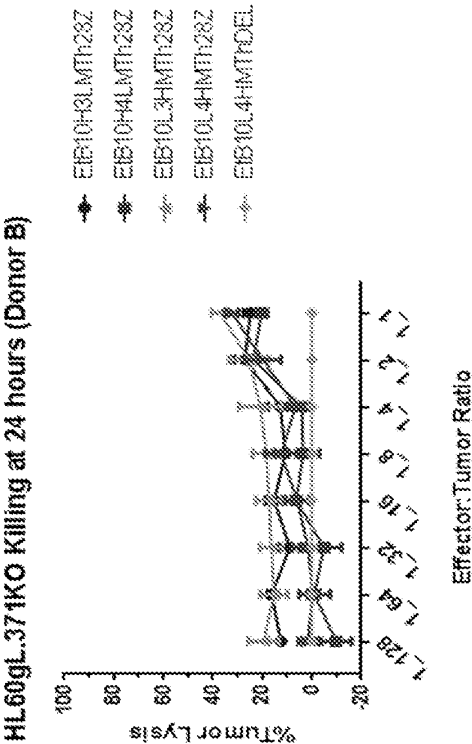


FIG. 12B

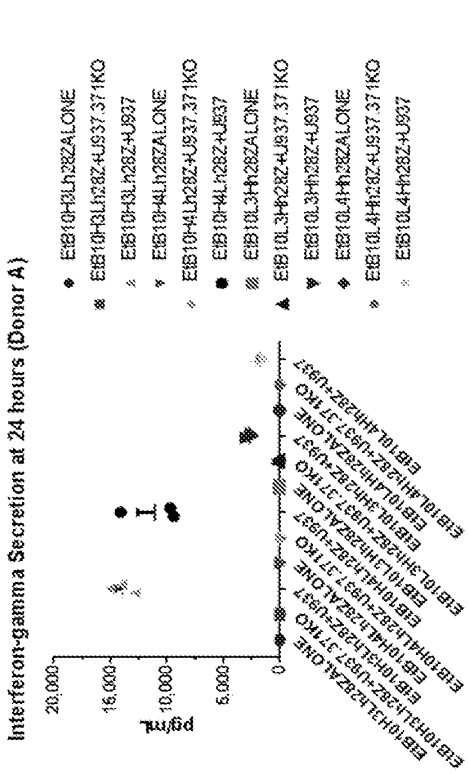


FIG. 13A

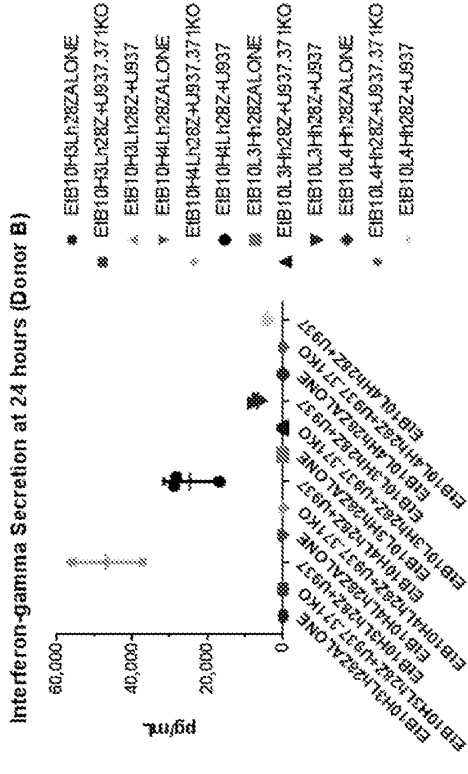


FIG. 13B

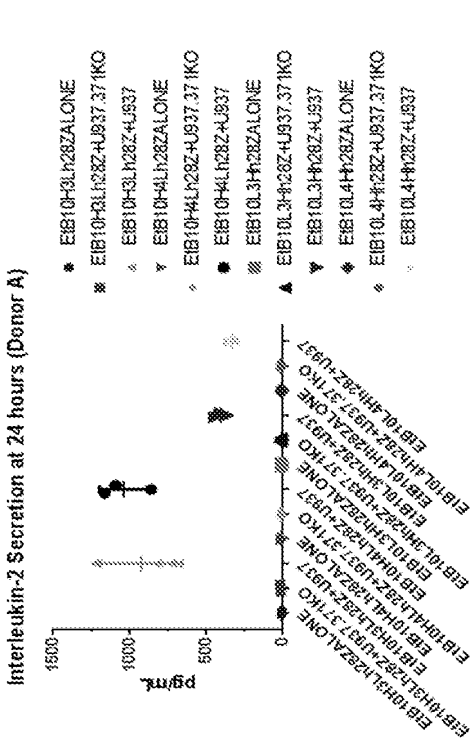


FIG. 14A

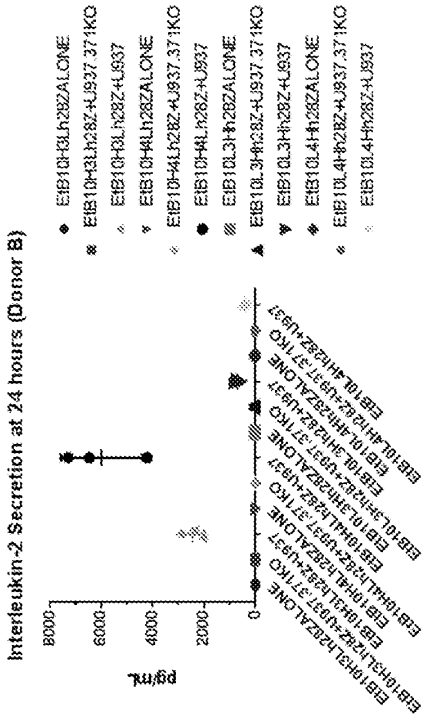


FIG. 14B

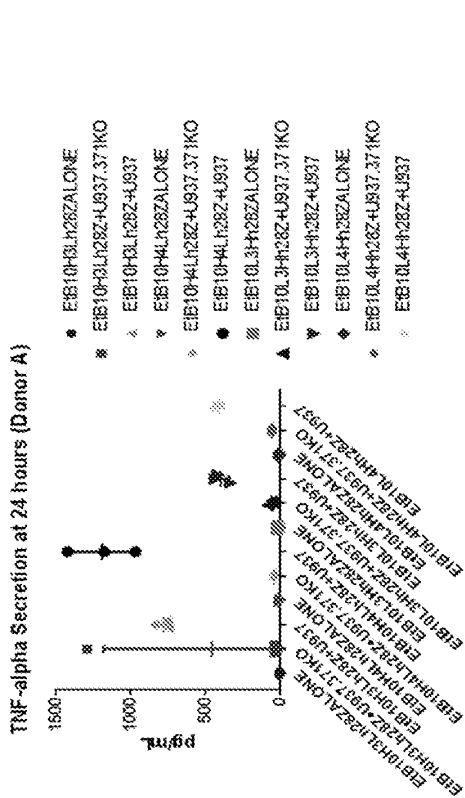


FIG. 15A

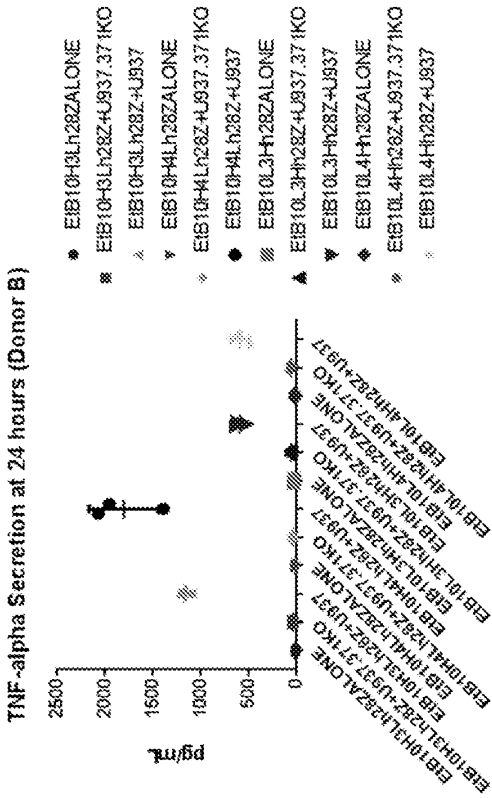


FIG. 15B

Donor A CAR T Cell Recursive Stimulation w/ Tumor at E:T of 1:5

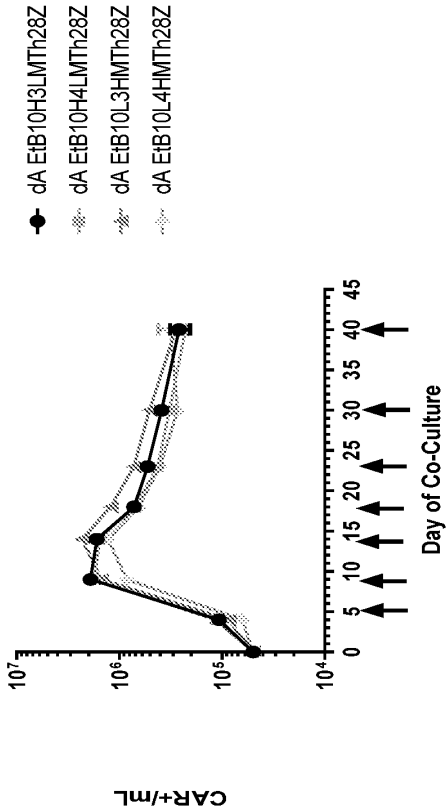


FIG. 16A

Donor B CAR T Cell Recursive Stimulation w/ Tumor at E:T of 1:5

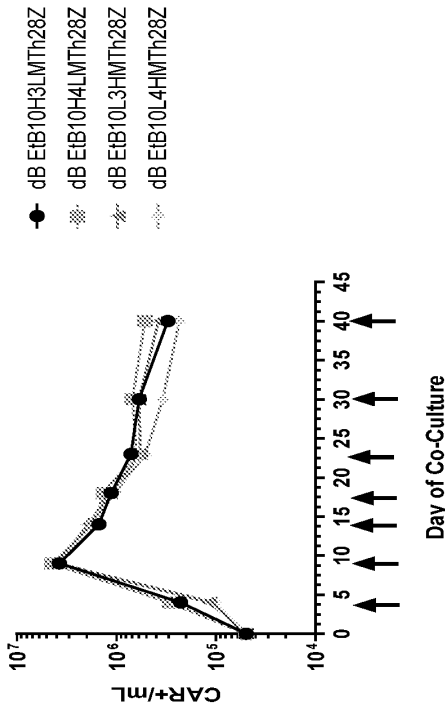


FIG. 16B

Xenograft Model of AML

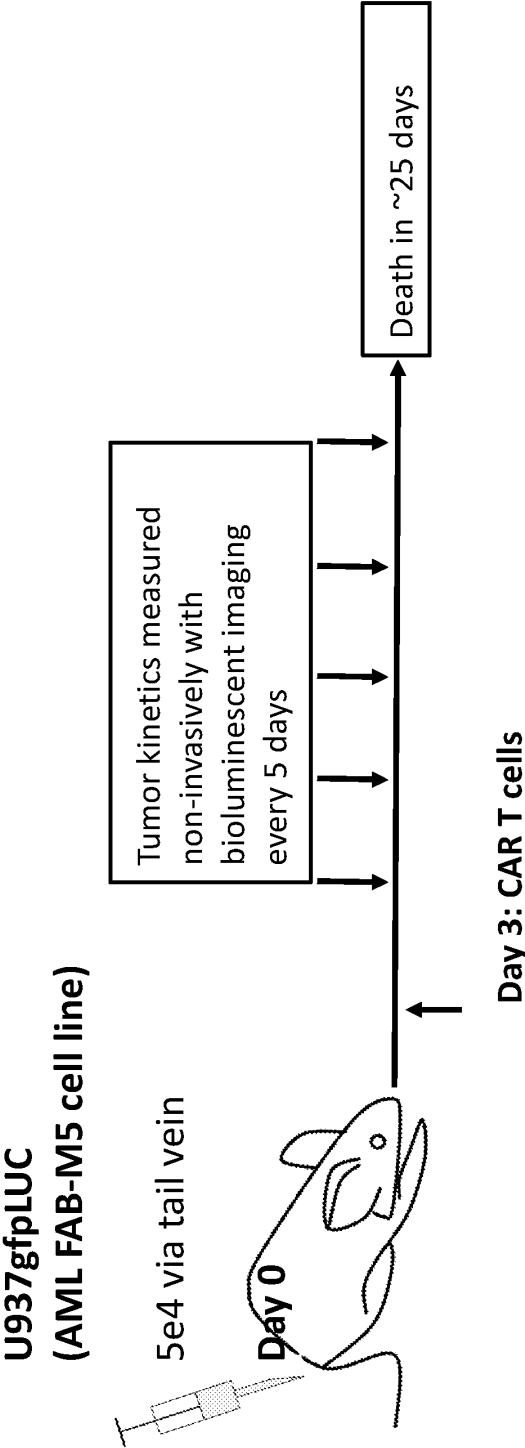


FIG. 17

19/26

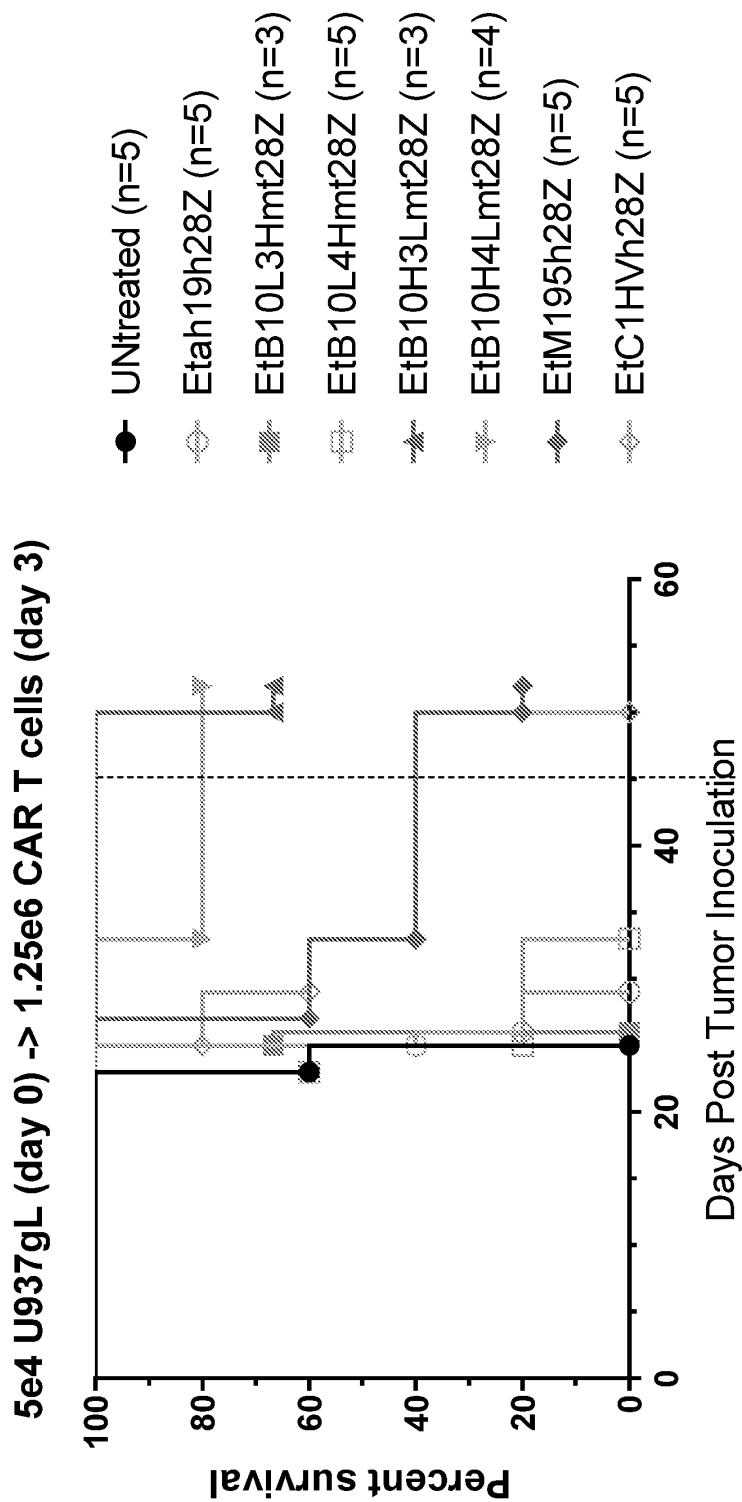


FIG. 18

5e4 U937gL (day 0) -> 1.25E6 CAR+ T cells (day 3)

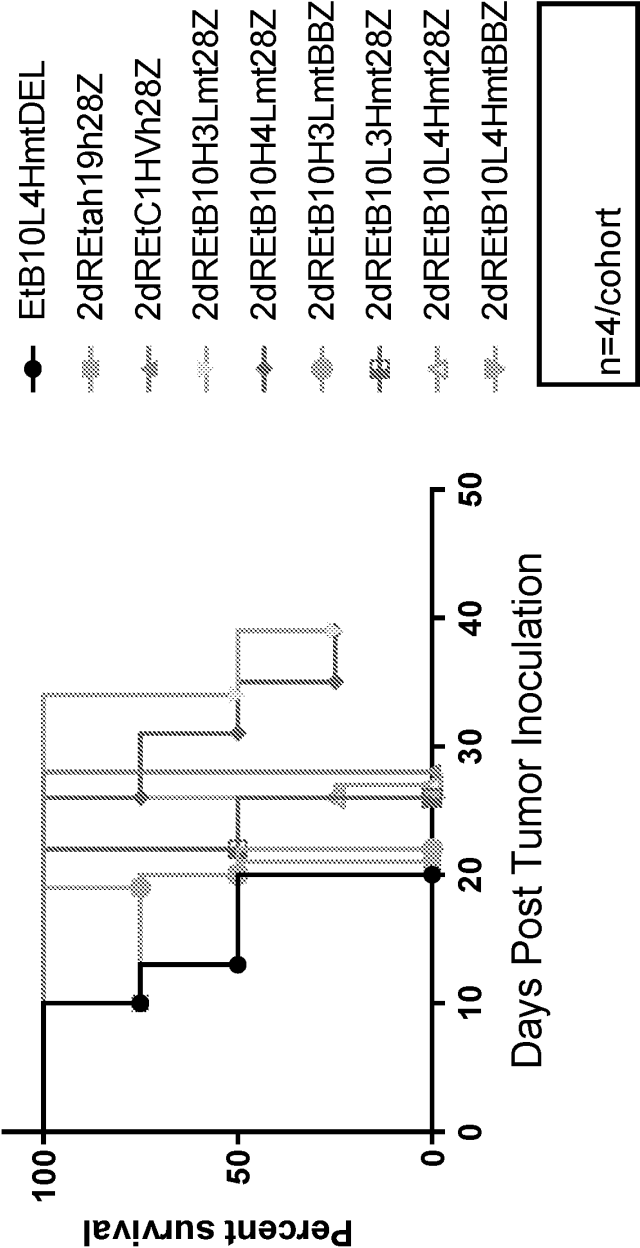


FIG. 19

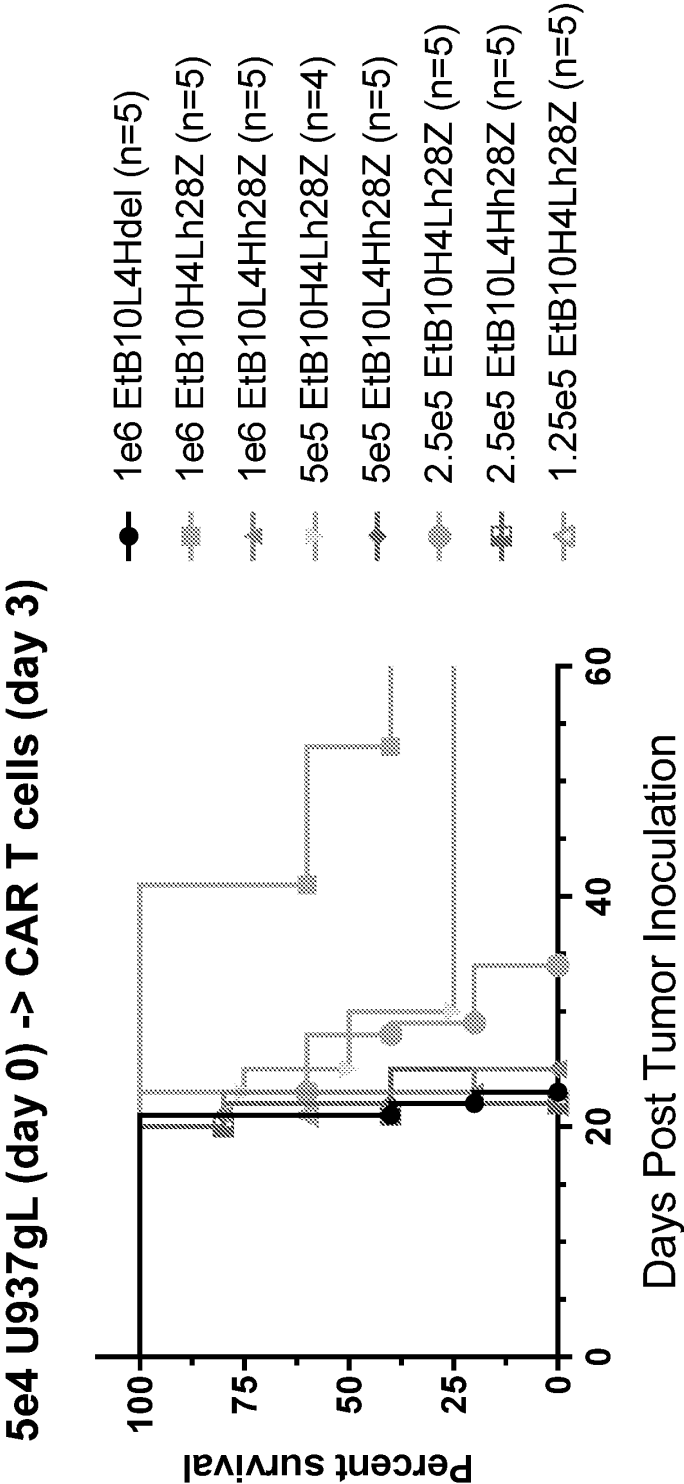


FIG. 20

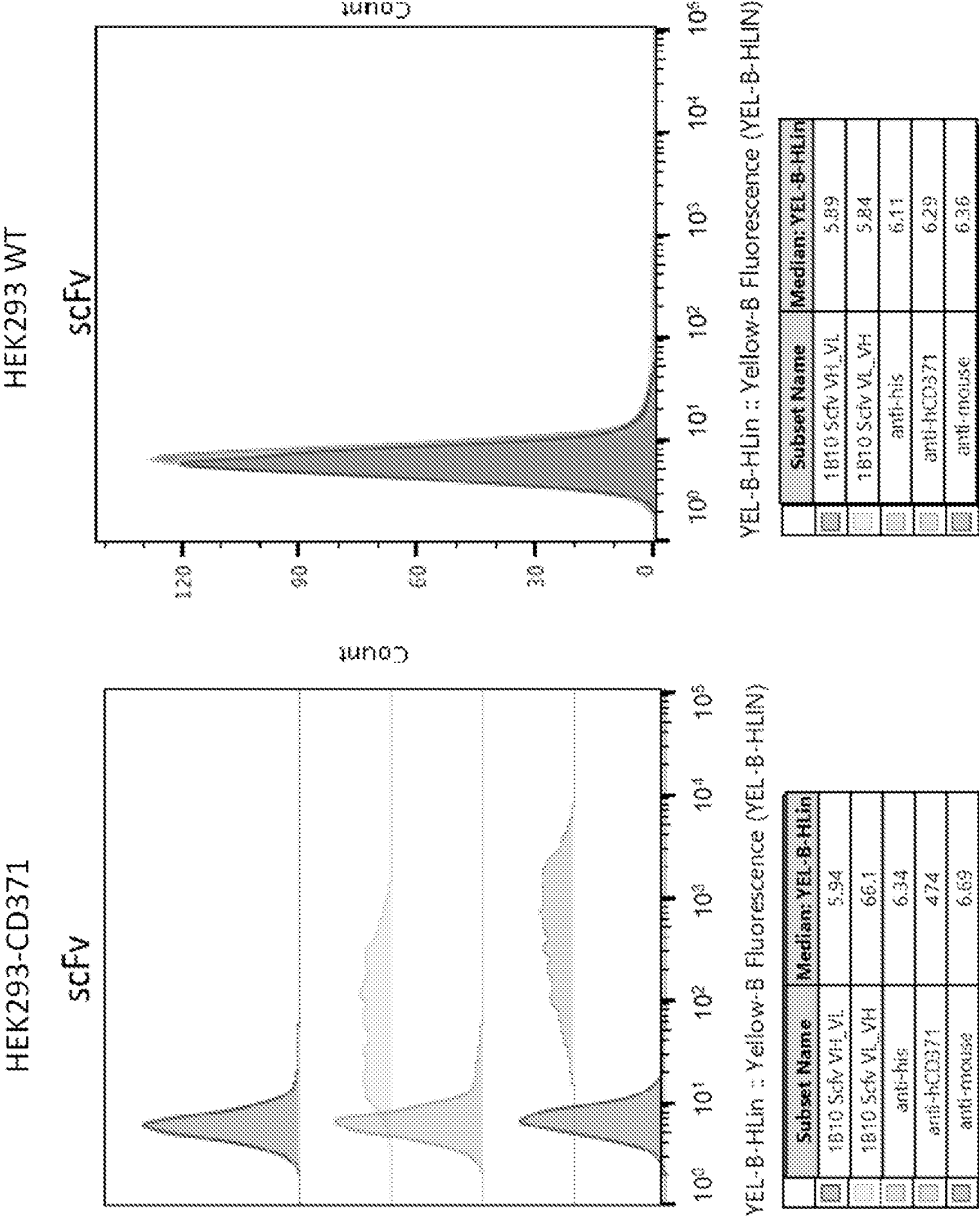


FIG. 21

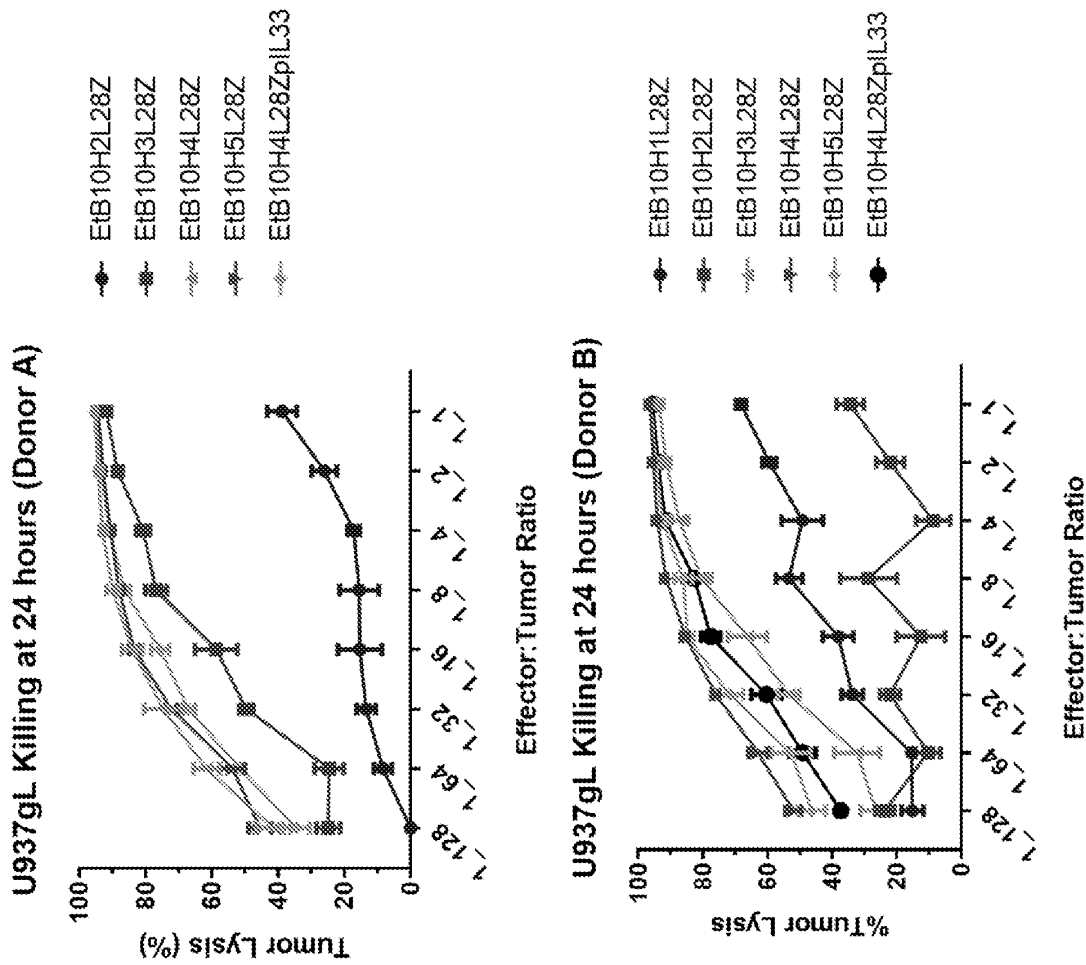


FIG. 22

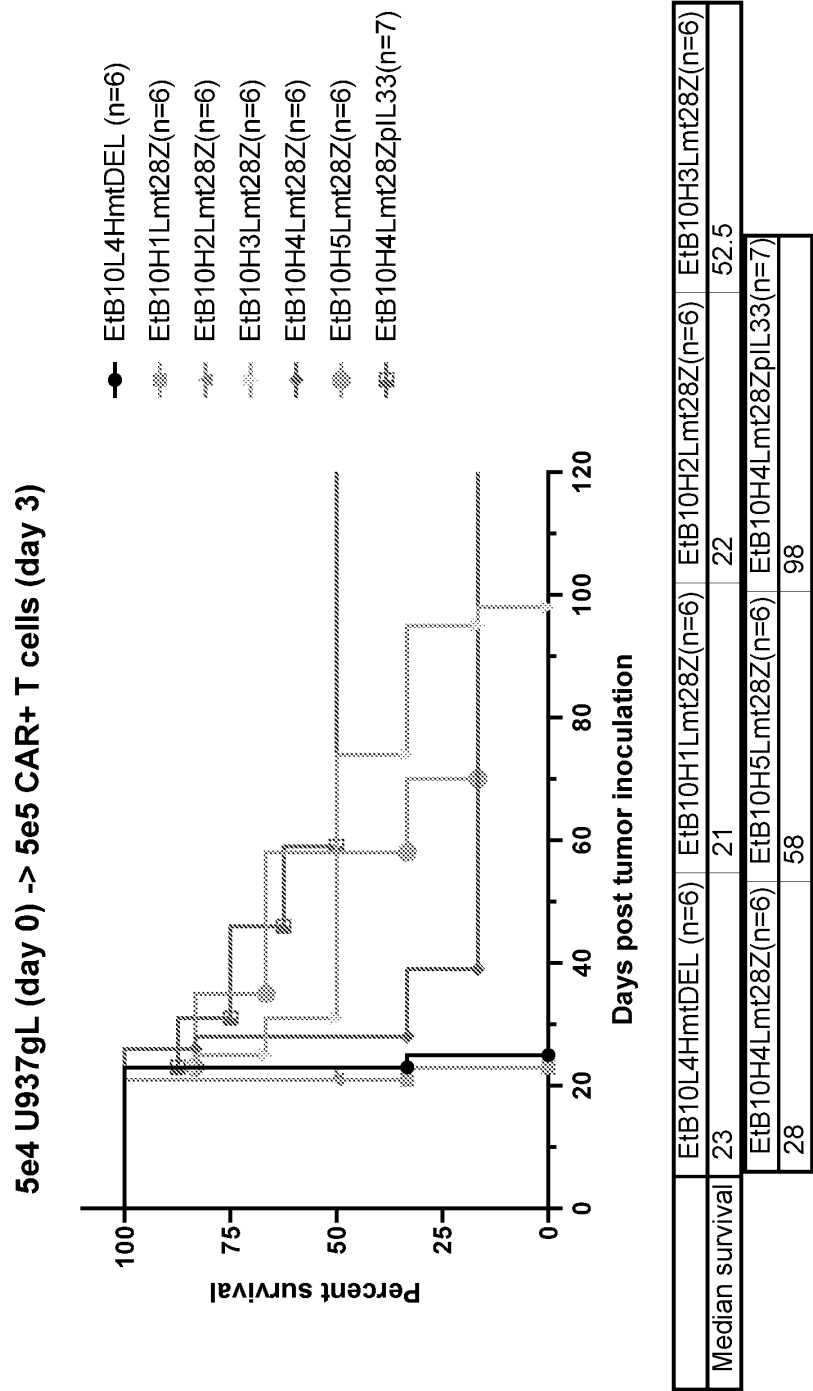


FIG. 23

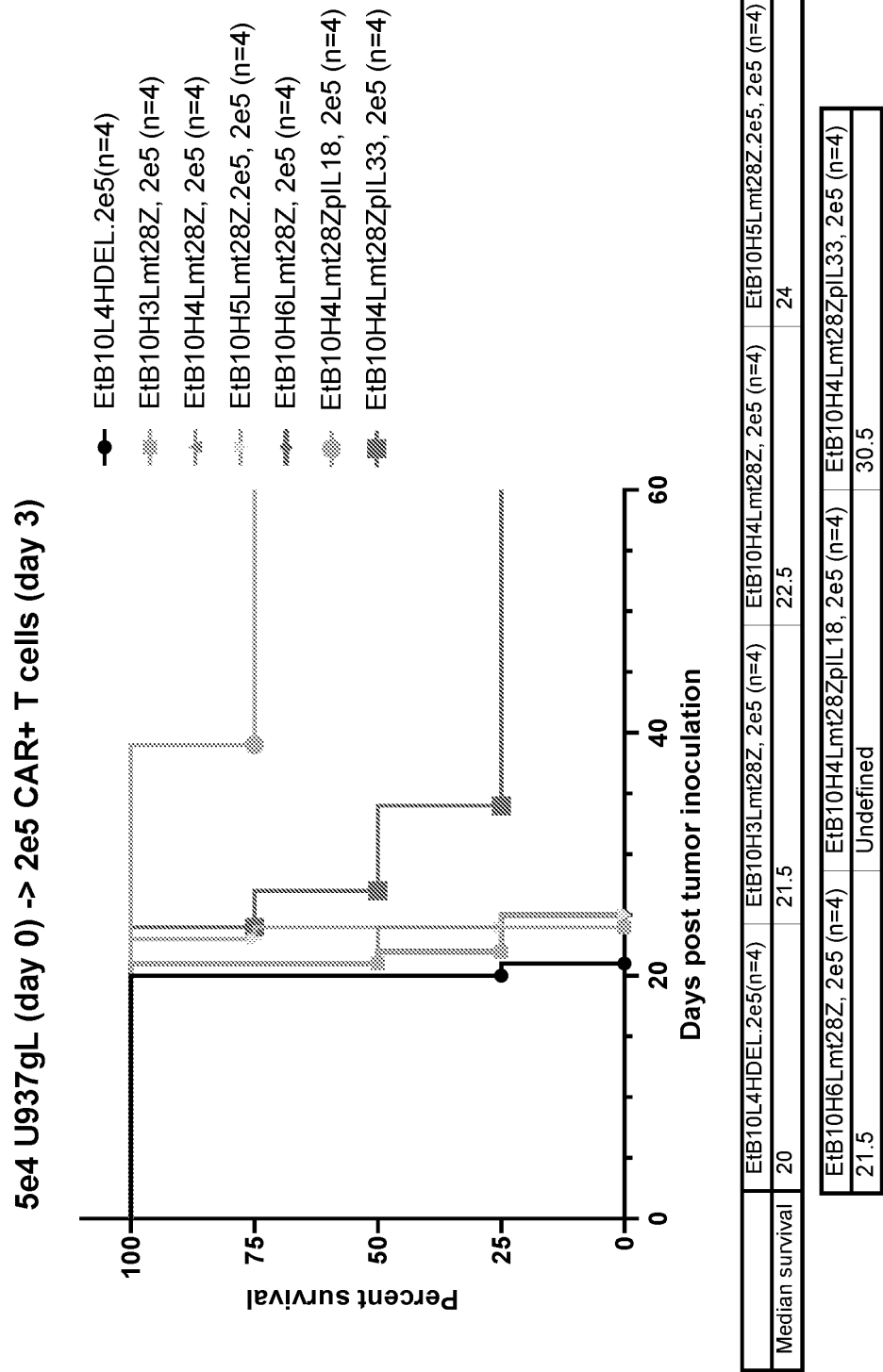


FIG. 24

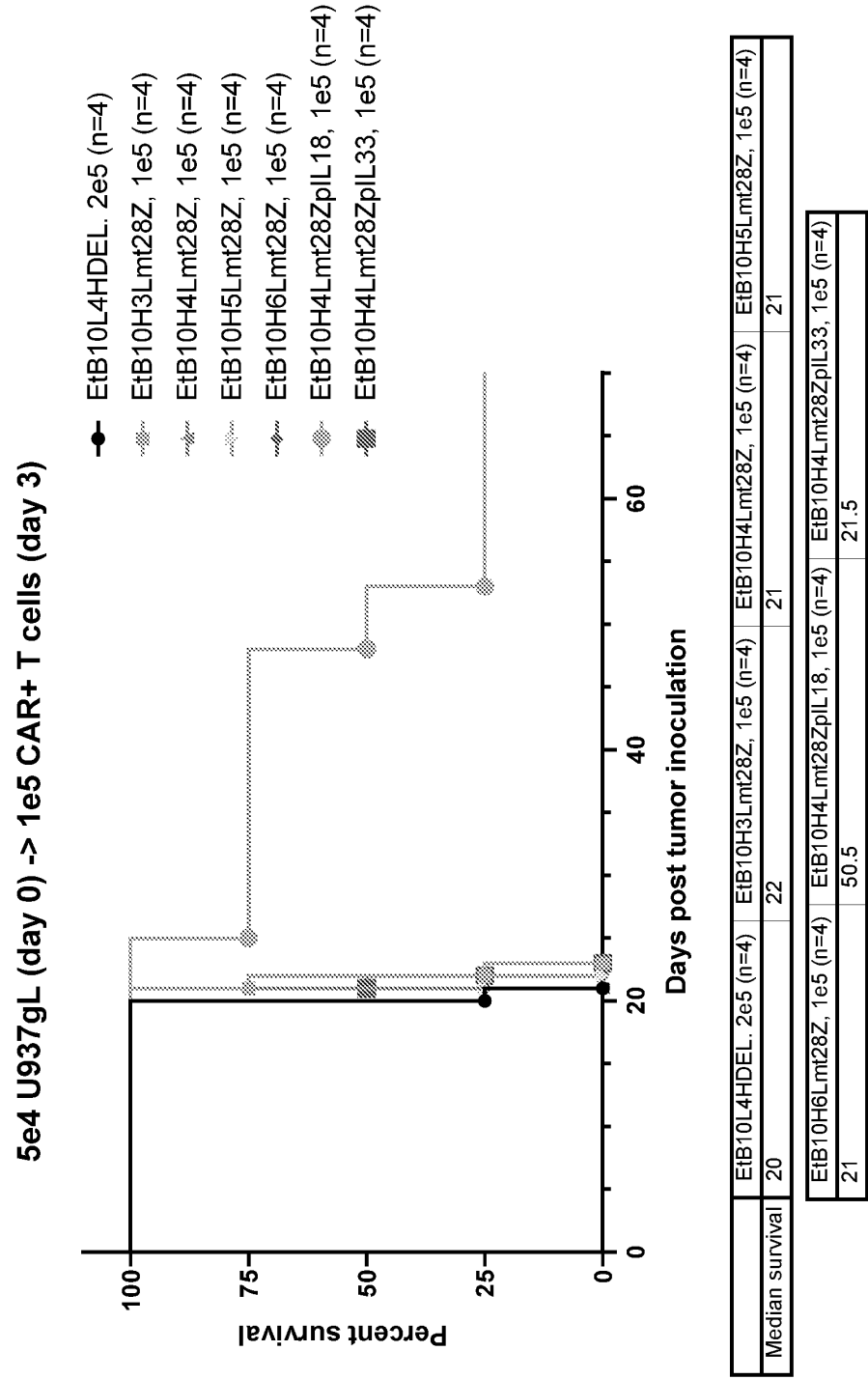


FIG. 25