

Figures 1A-1B

A

	Extracellular		TM	Intracellular	Secreted/Co-Expressed
CARMA Concept Cytokine CARMA	Targeting Domain(s)	Hinge Domain	TM Domain	Domain Signaling Domain(s)	
	Targeting Domain(s)	Hinge Domain	TM Domain	Domain Signaling Domain(s)	2A Cytokine(s)
	Targeting Domain(s)	Hinge Domain	TM Domain	Domain Signaling Domain(s)	2A mAb(s)/scFv(s)
mAb CARMA	Targeting Domain(s)	Hinge Domain	TM Domain	Domain Signaling Domain(s)	2A
pep CARMA	Targeting Domain(s)	Hinge Domain	TM Domain	Domain Signaling Domain(s)	2A synergistic peptide
Enz CARMA	Targeting Domain(s)	Hinge Domain	TM Domain	Domain Signaling Domain(s)	2A enzyme
DN CARMA	Targeting Domain(s)	Hinge Domain	TM Domain	Domain Signaling Domain(s)	2A Dominant Neg. Receptor
TAA CARMA	Targeting Domain(s)	Hinge Domain	TM Domain	Domain Signaling Domain(s)	2A Tumor assoc. antigen
CRISPR CARMA	Targeting Domain(s)	Hinge Domain	TM Domain	Domain Signaling Domain(s)	CRISPR Gene Editing

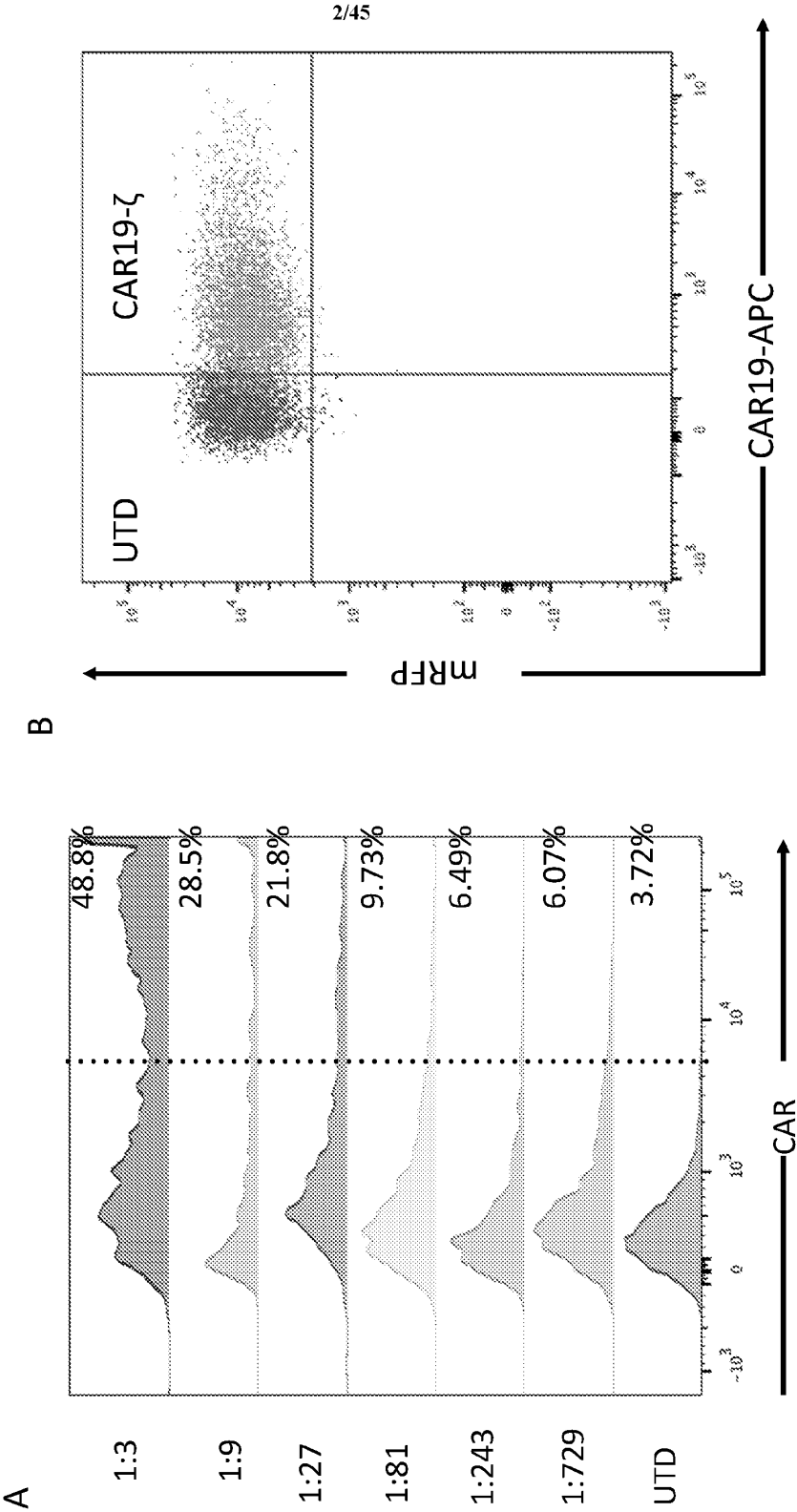
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B

CARMA-ζ	Antigen Specific scFv	CD8 Hinge	CD8 TM	CD8-ζ
CARMA-γ	Antigen Specific scFv	CD8 Hinge	CD8 TM	FCγR1-γ
CARMA-Dectin	Antigen Specific scFv	CD8 Hinge	CD8 TM	Dectin-1

* Specific but not exclusive examples of macrophage CAR construct design.

Figures 2A-2B



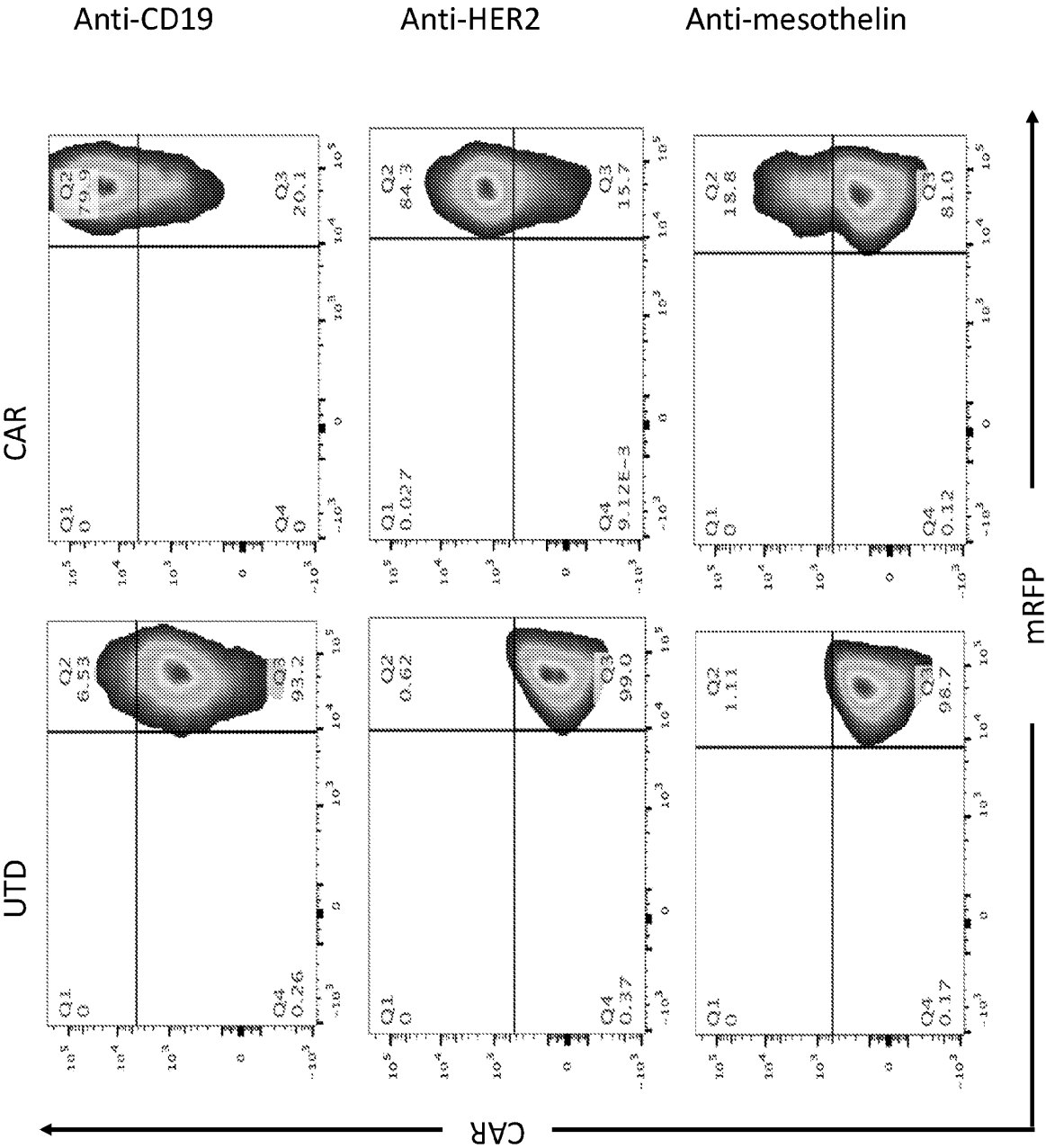
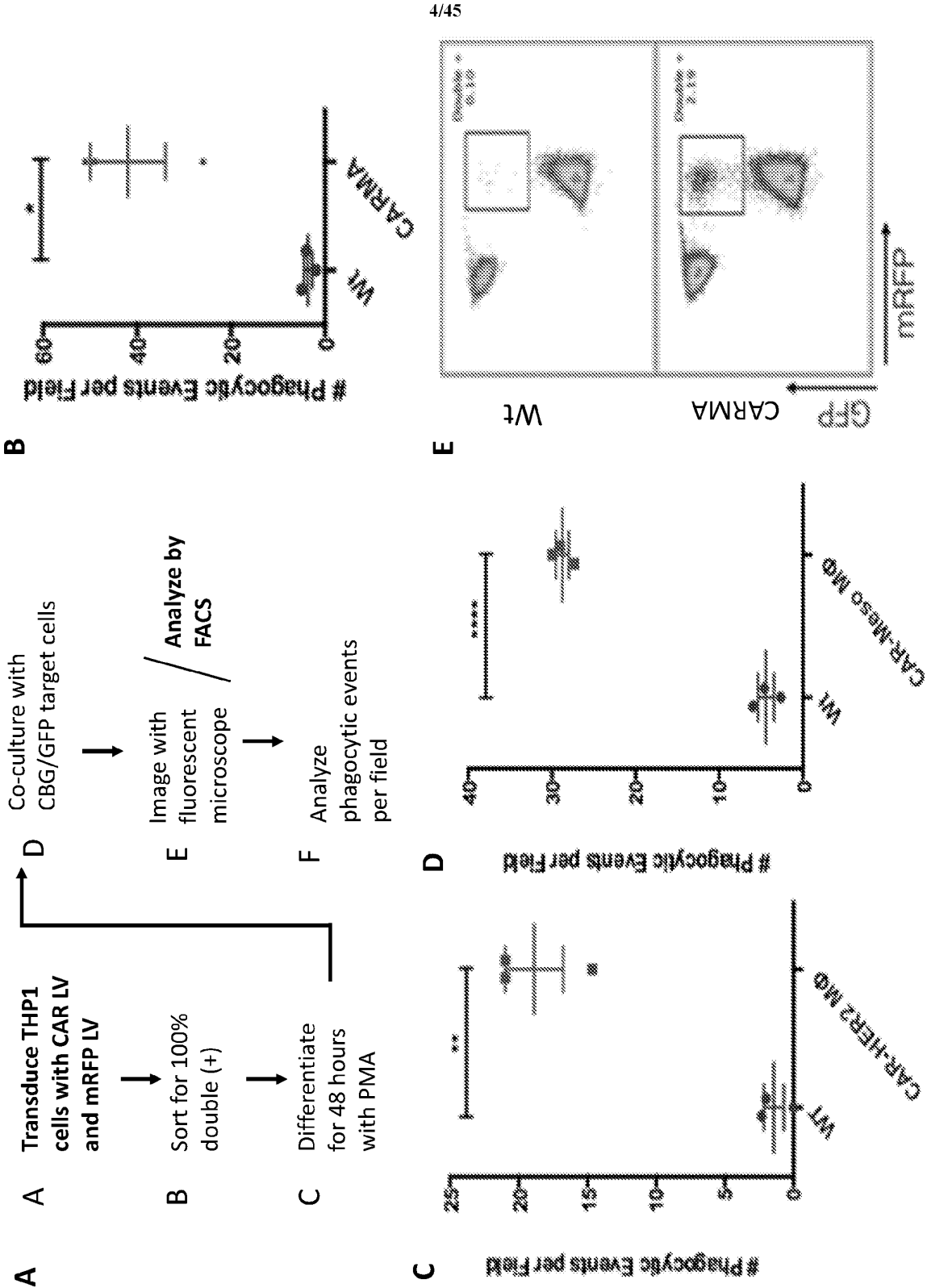
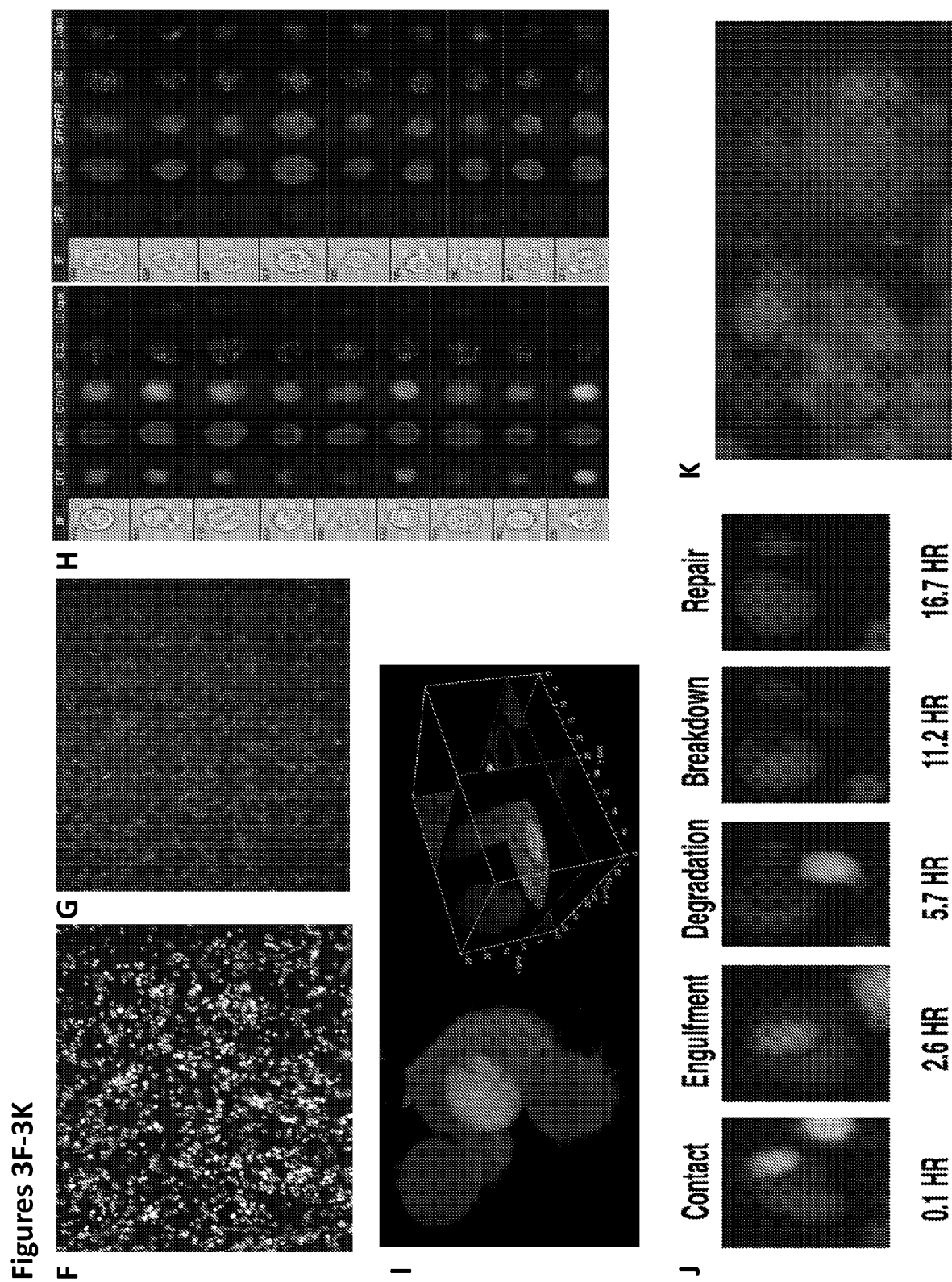


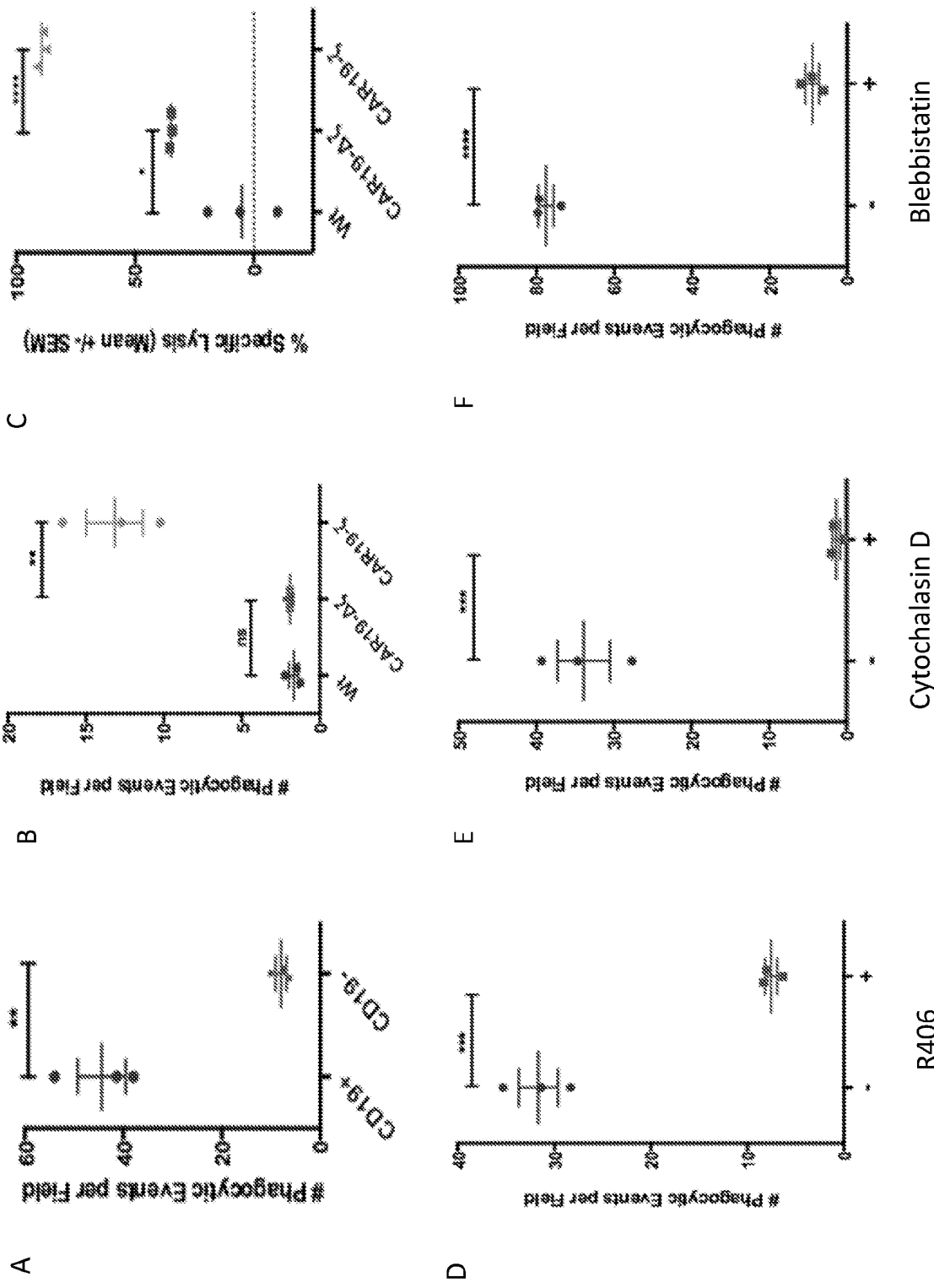
Figure 2C

Figures 3A-3E

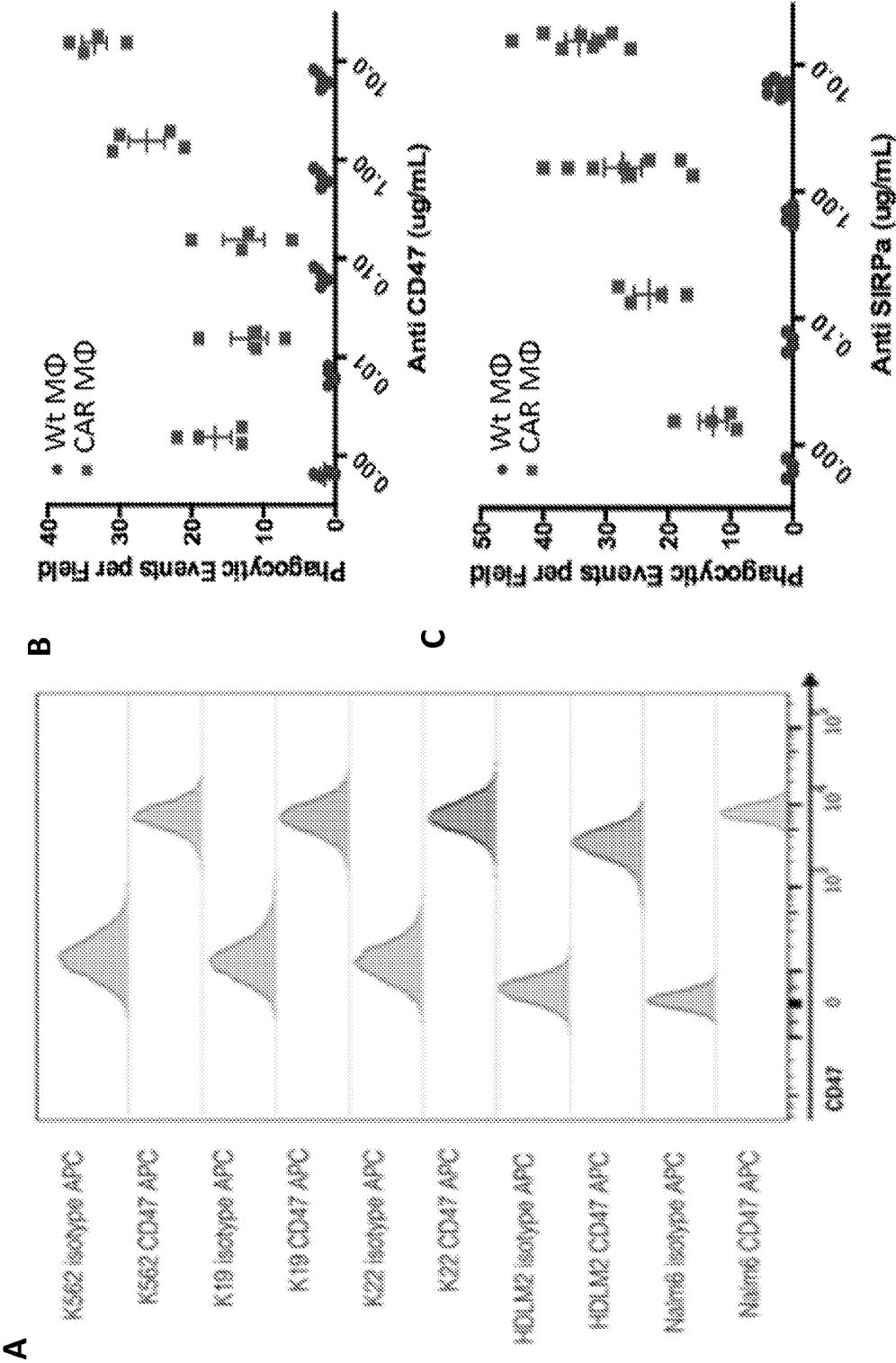




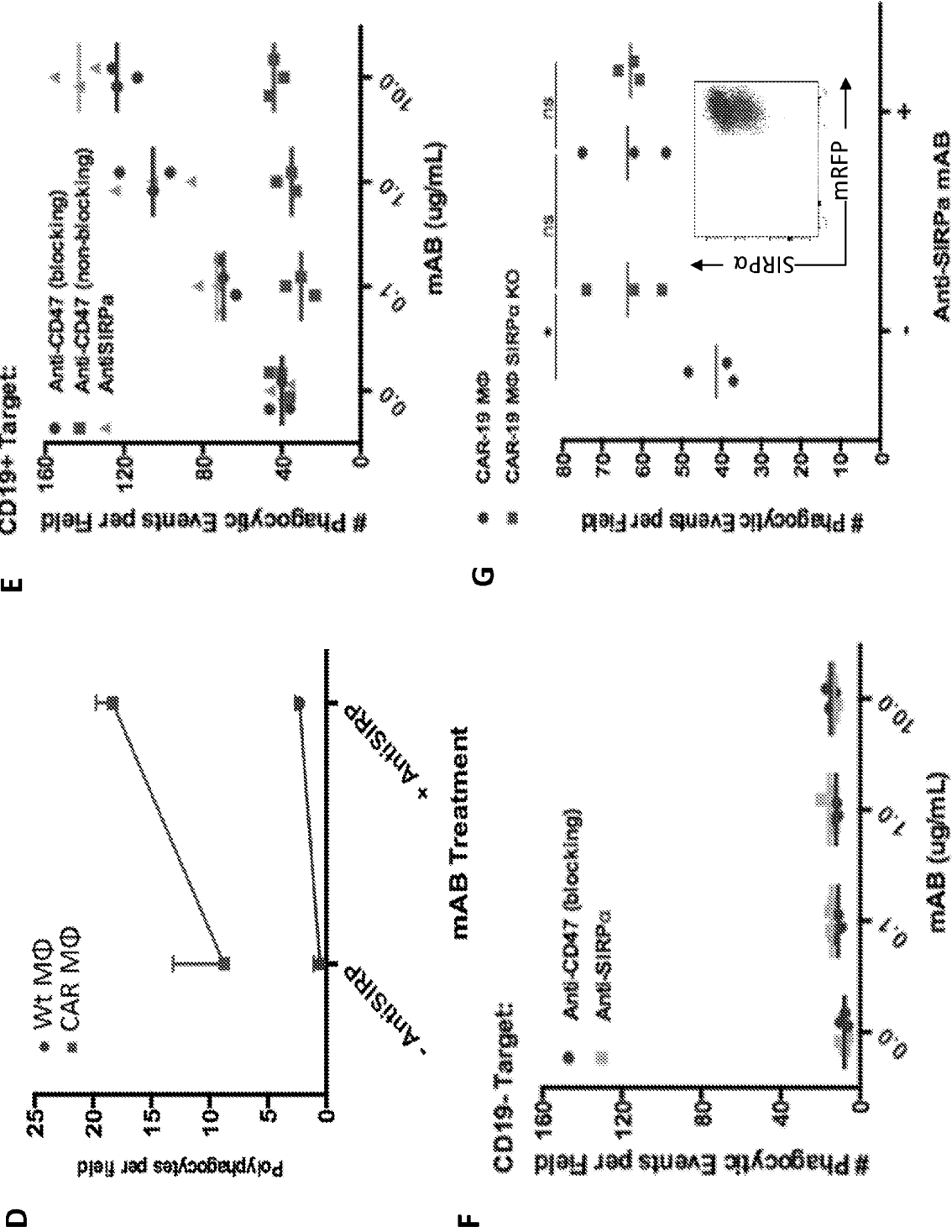
Figures 4A-4F



Figures 5A-5C



Figures 5D-5G



Figures 6A-6D

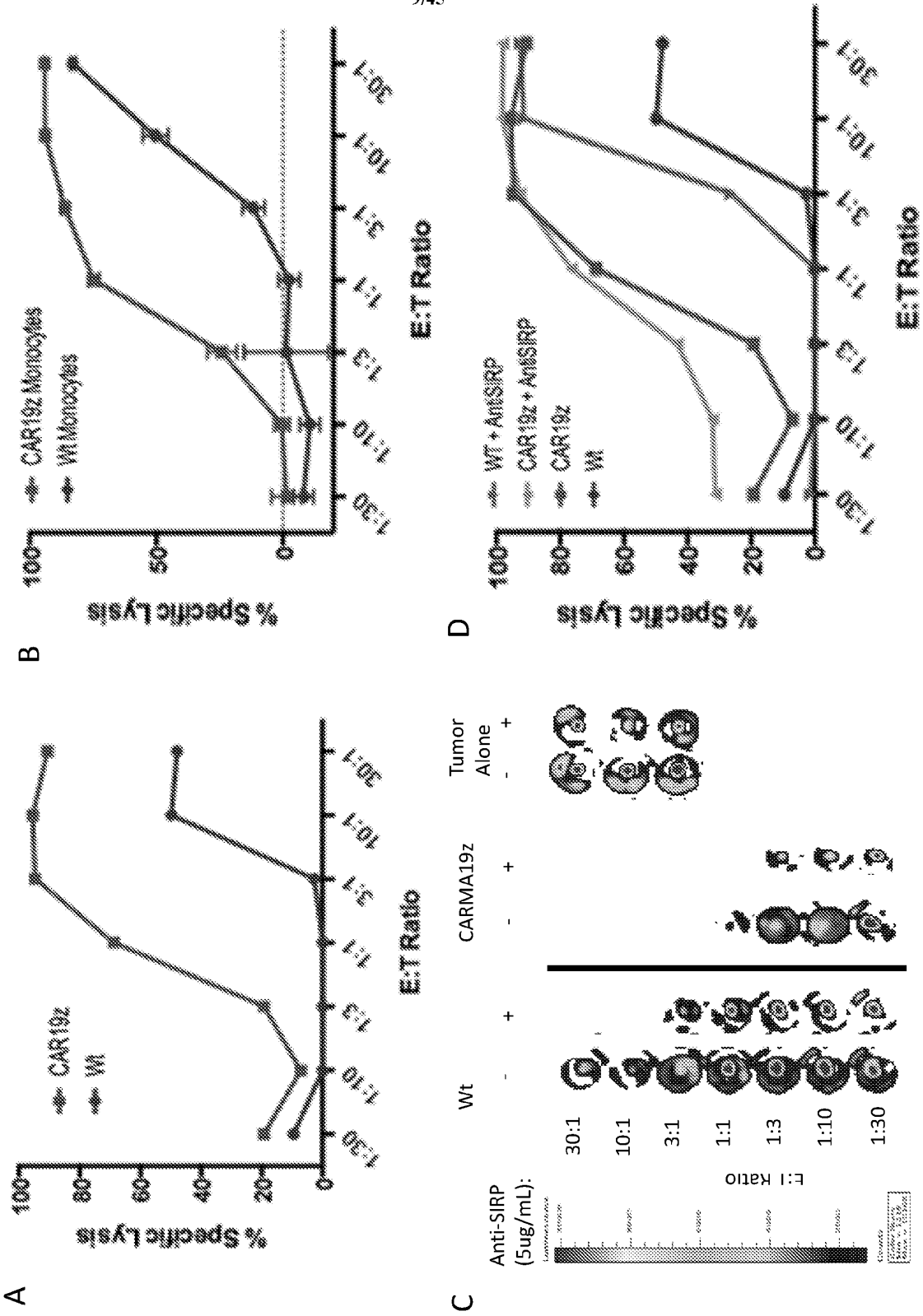
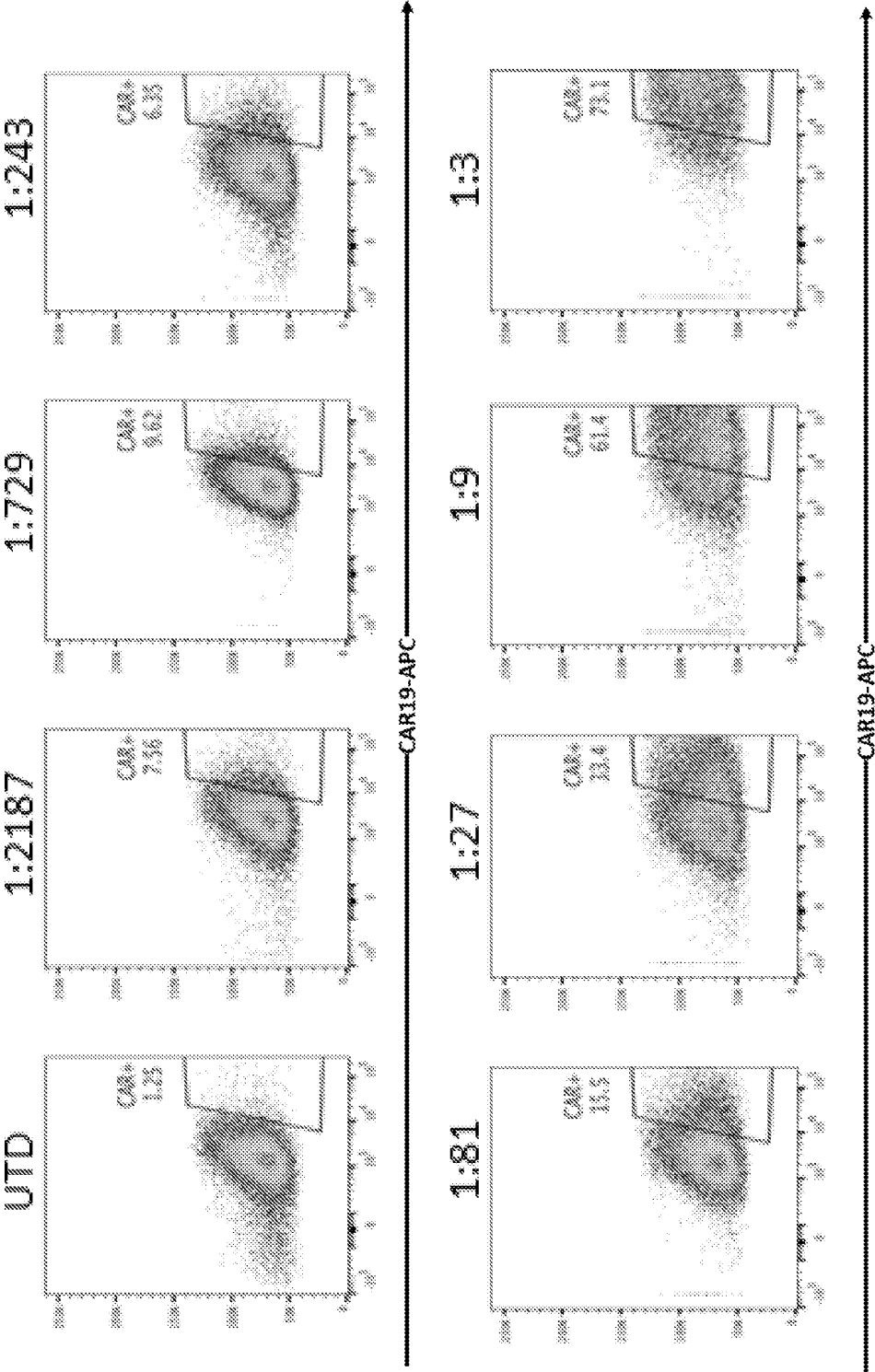
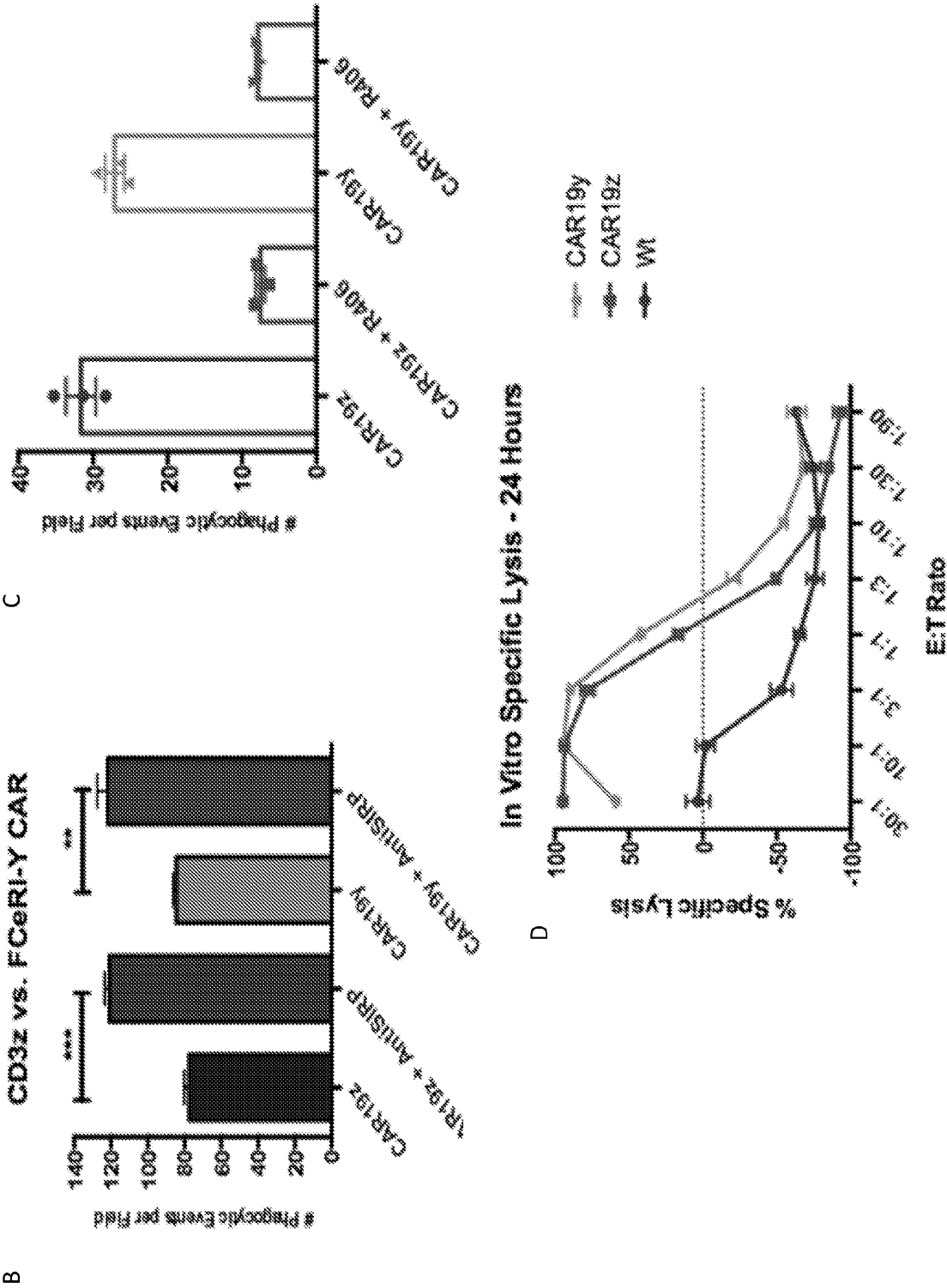


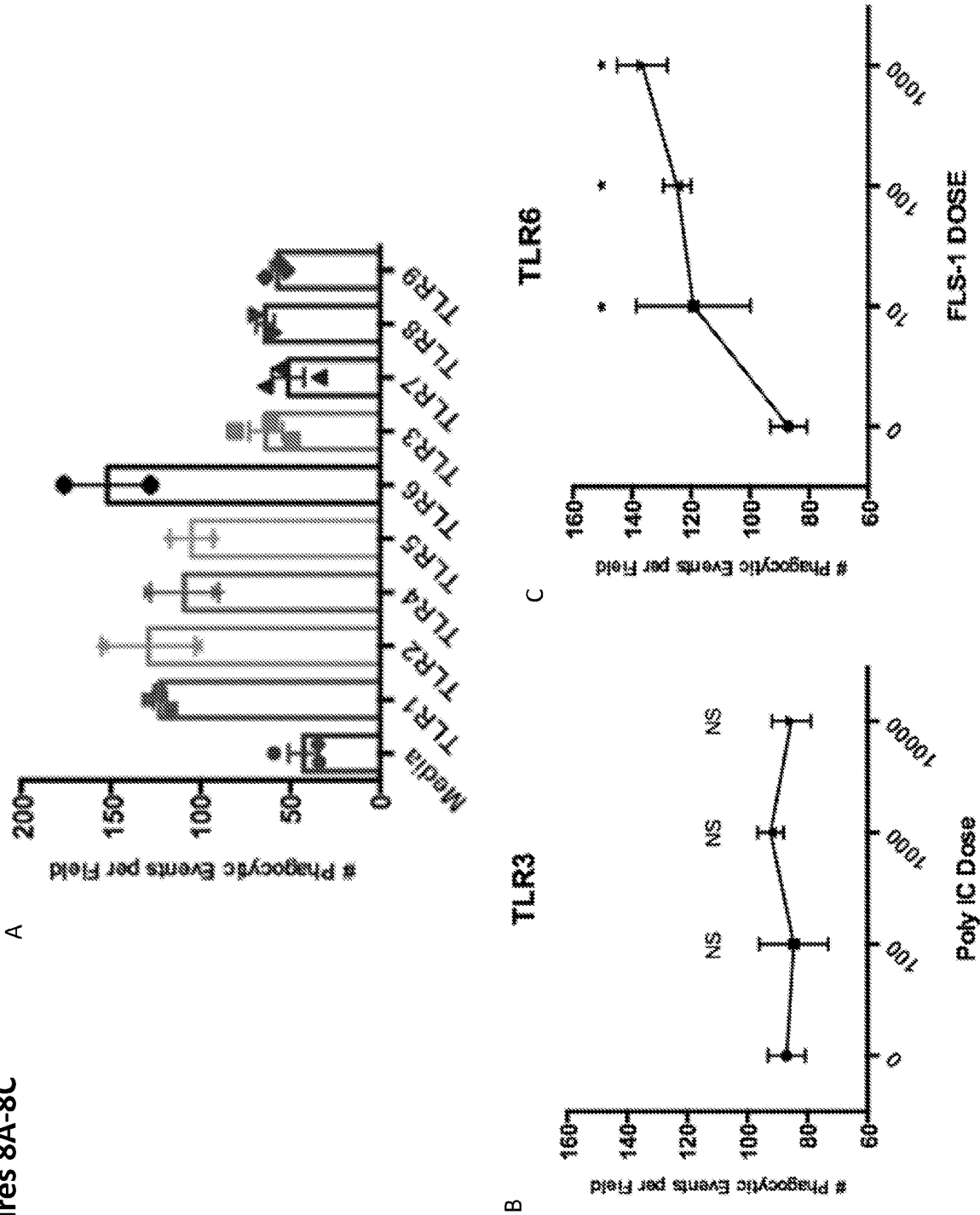
Figure 7A



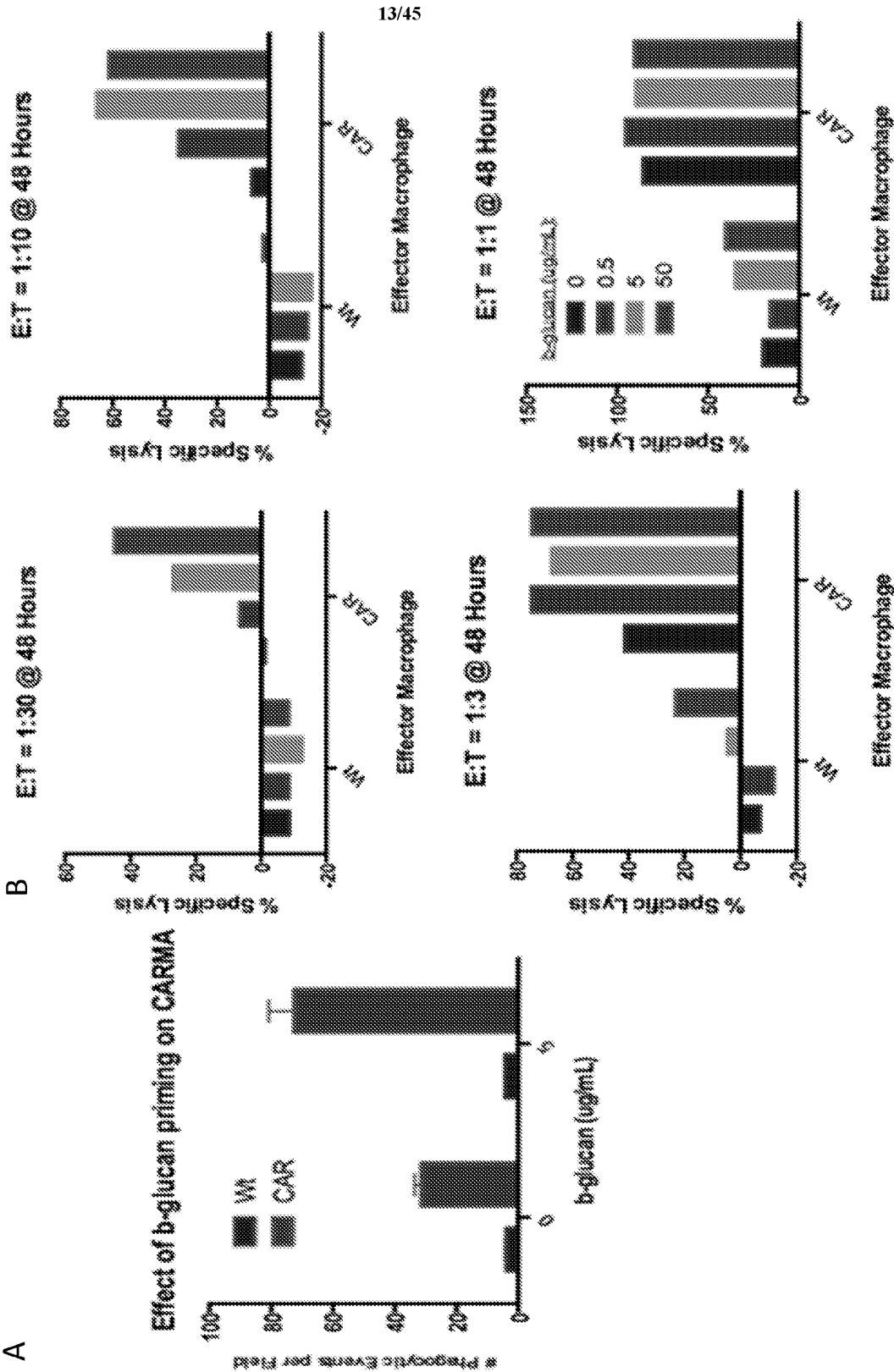
Figures 7B-7D



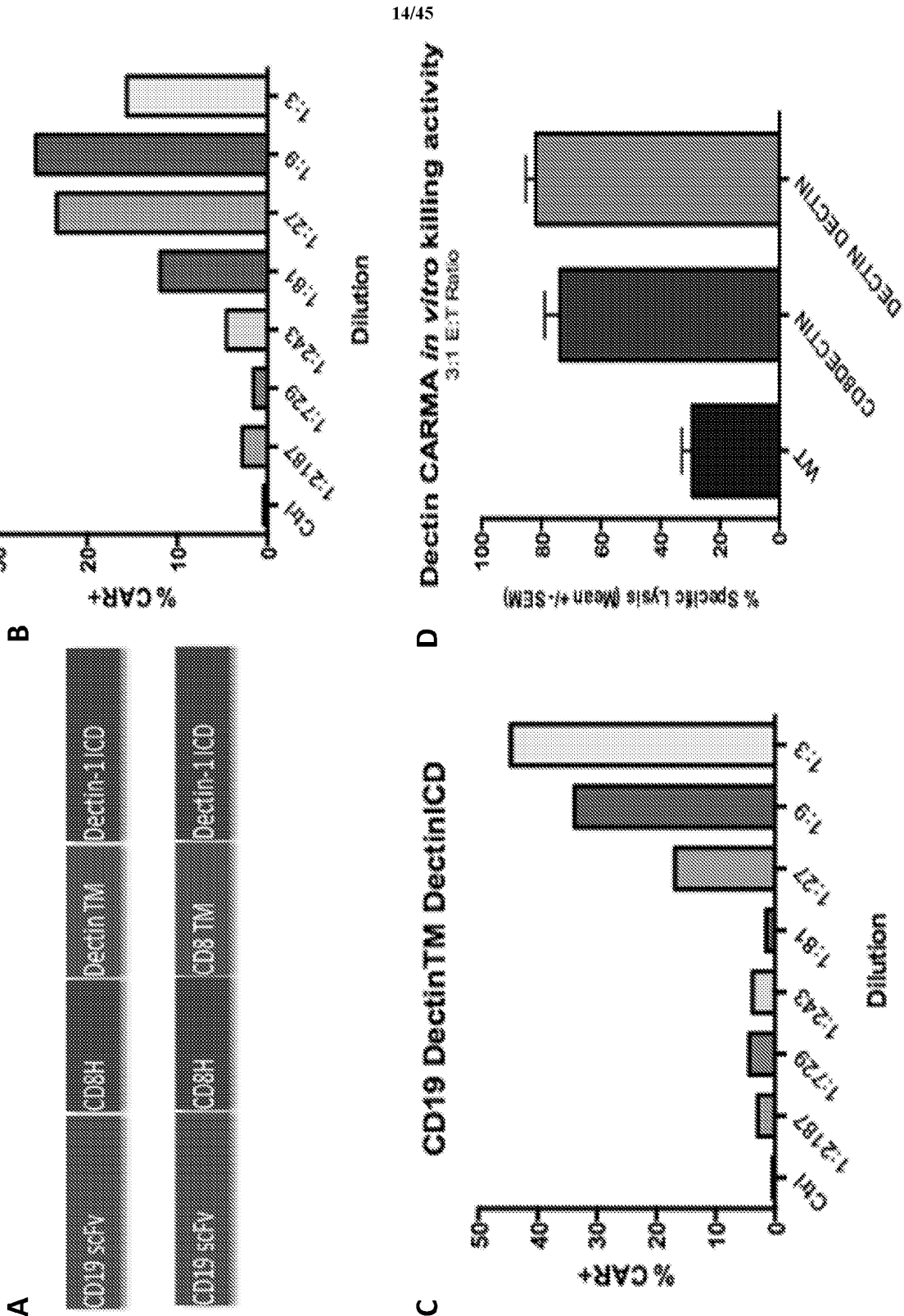
Figures 8A-8C



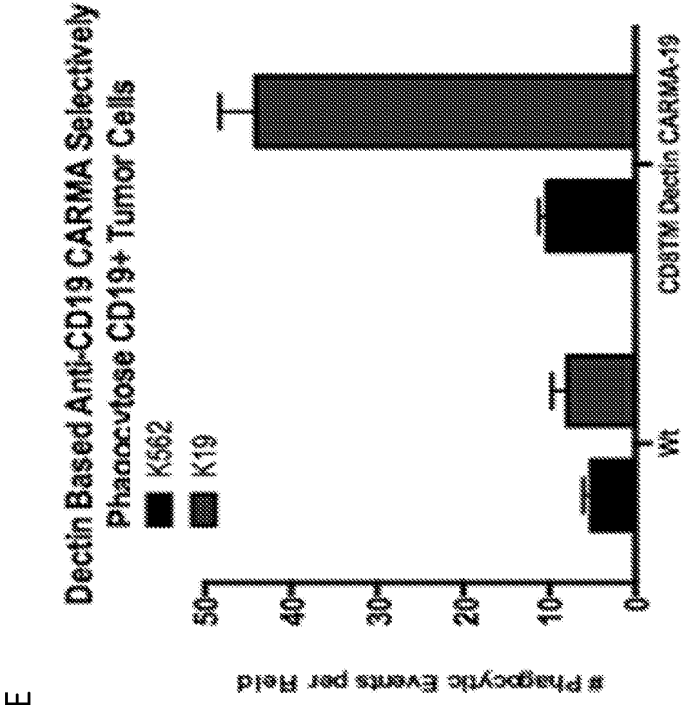
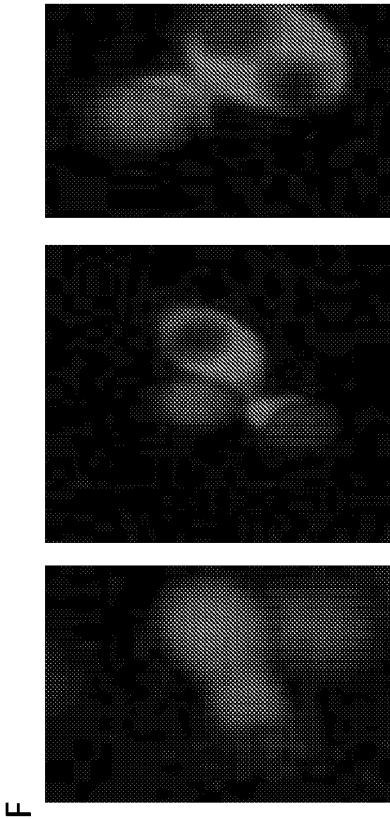
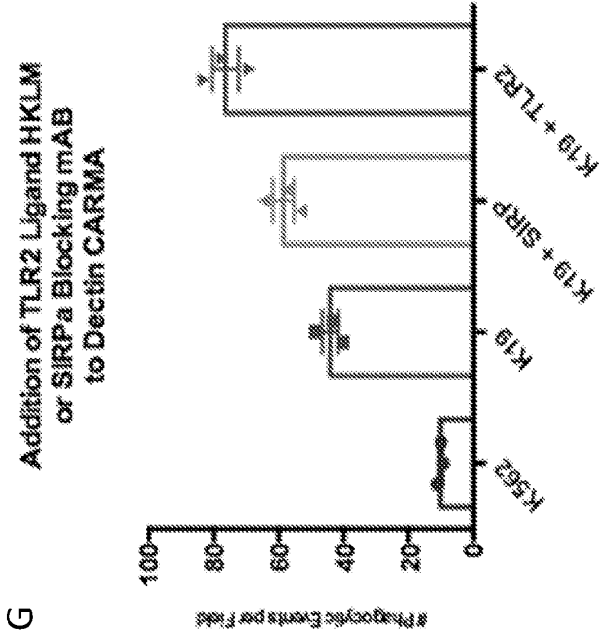
Figures 9A-9B



Figures 10A-10D



Figures 10E-10G



Figures 11A-11C

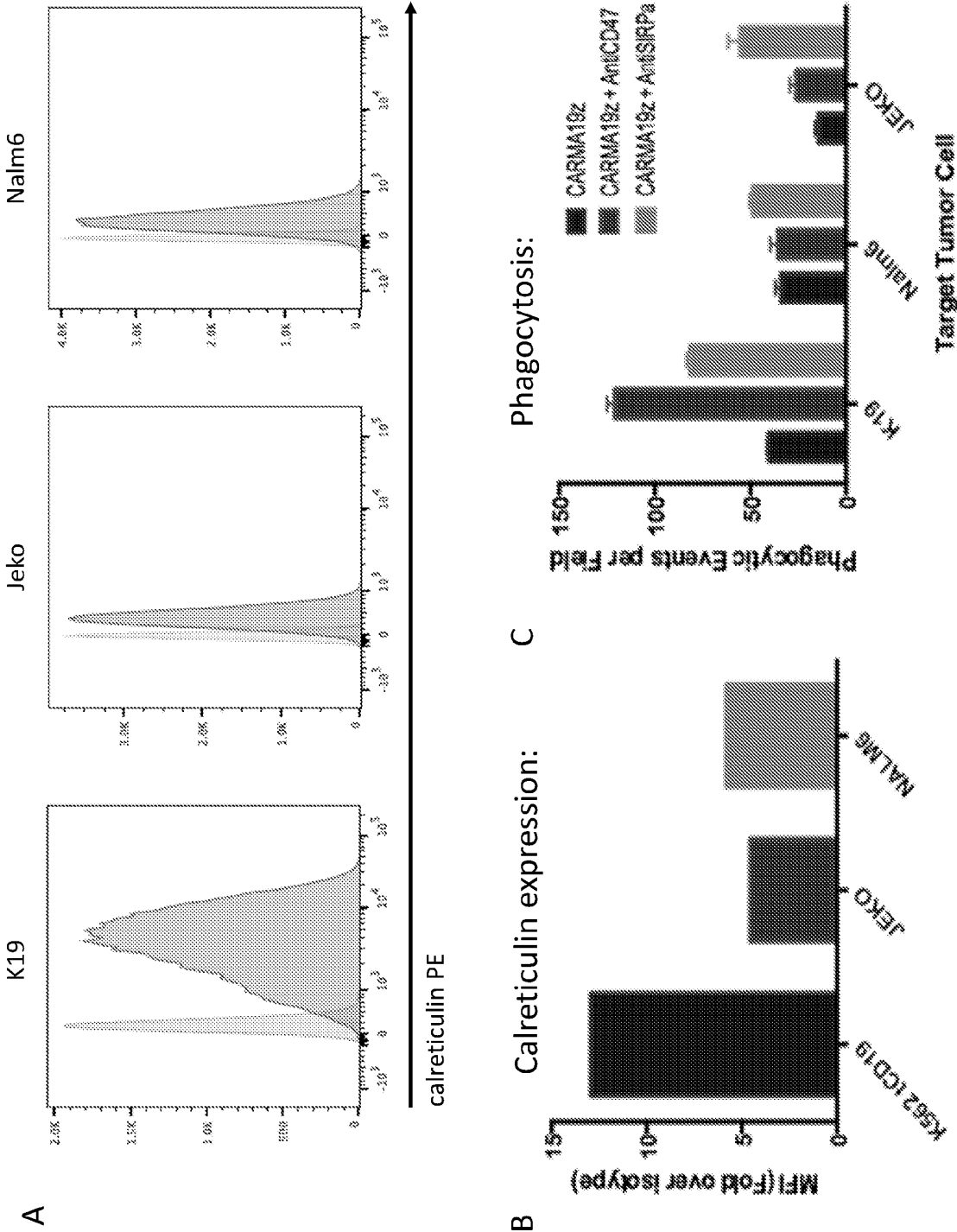


Figure 12A

Primary human monocyte gating strategy, viability, and anti-HER2 CAR expression

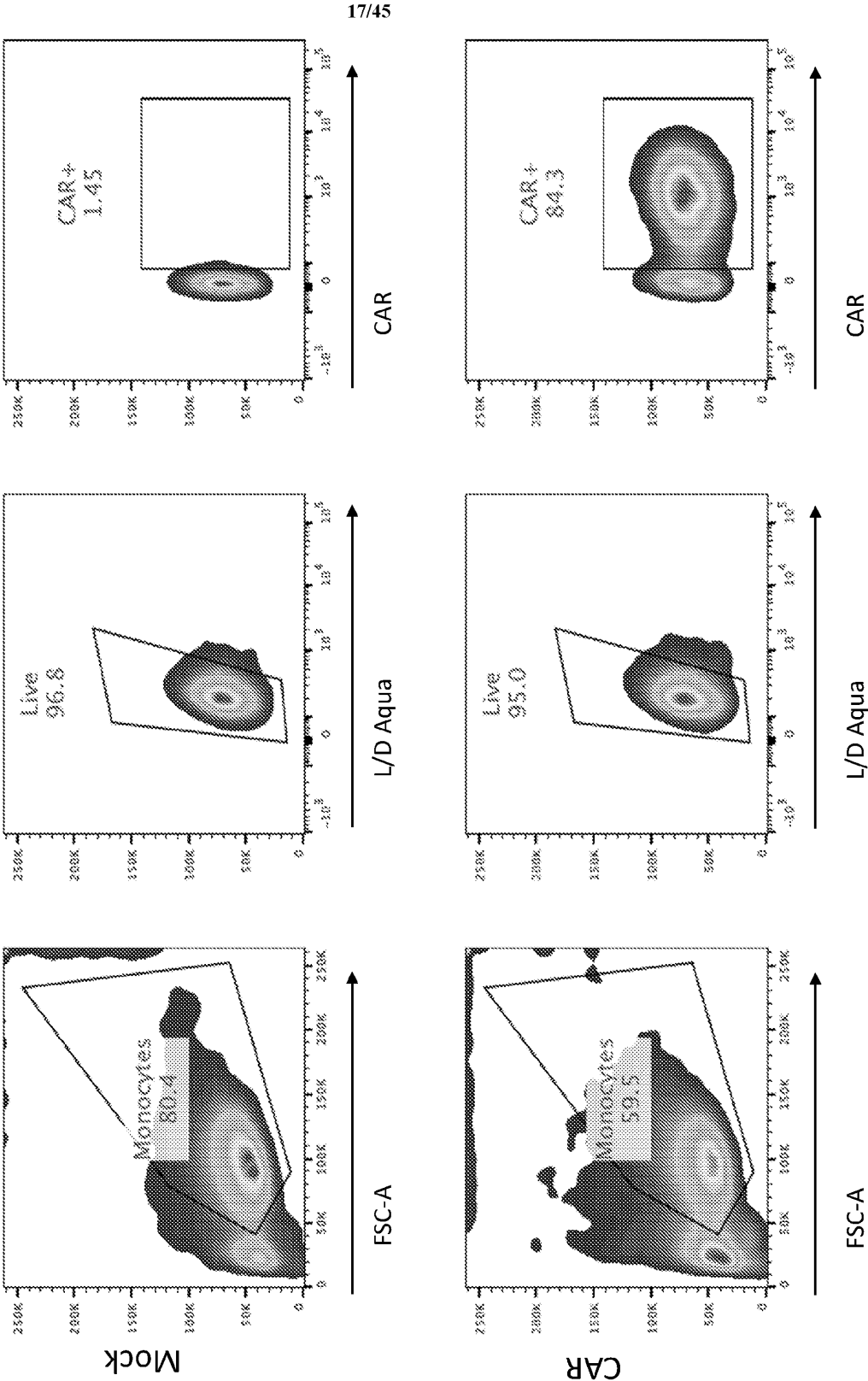
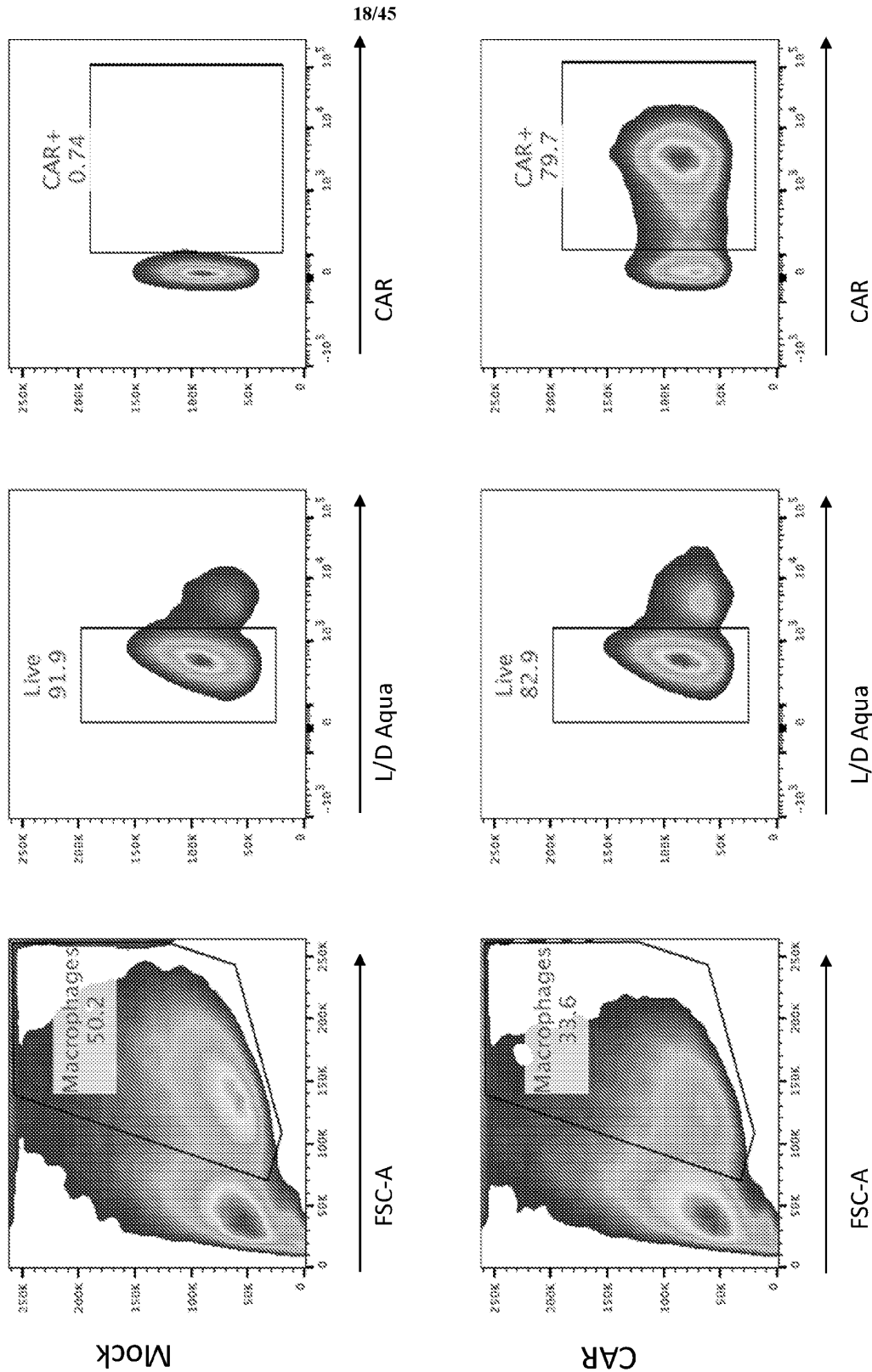


Figure 12B

Primary human macrophage gating strategy, viability, and anti-HER2 CAR expression



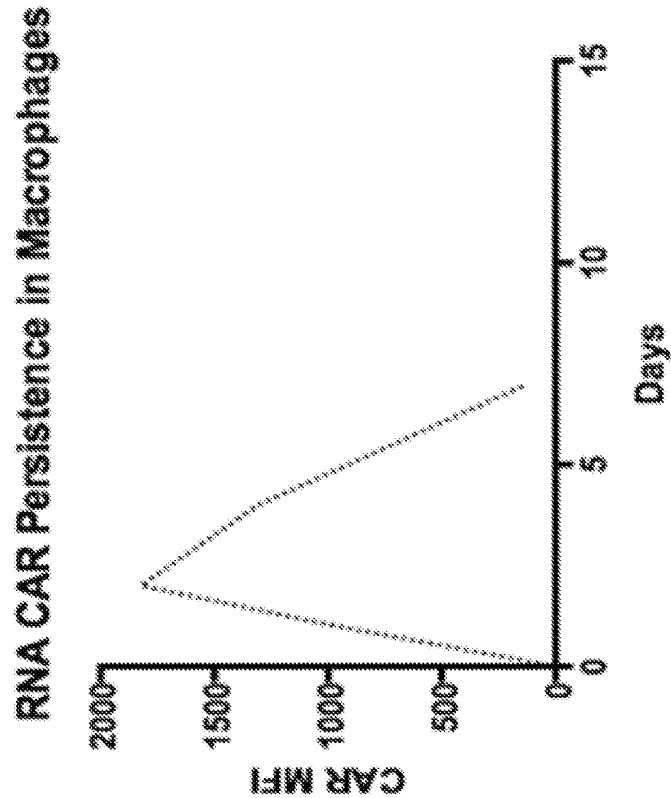


Figure 12C

Figures 13A-13B

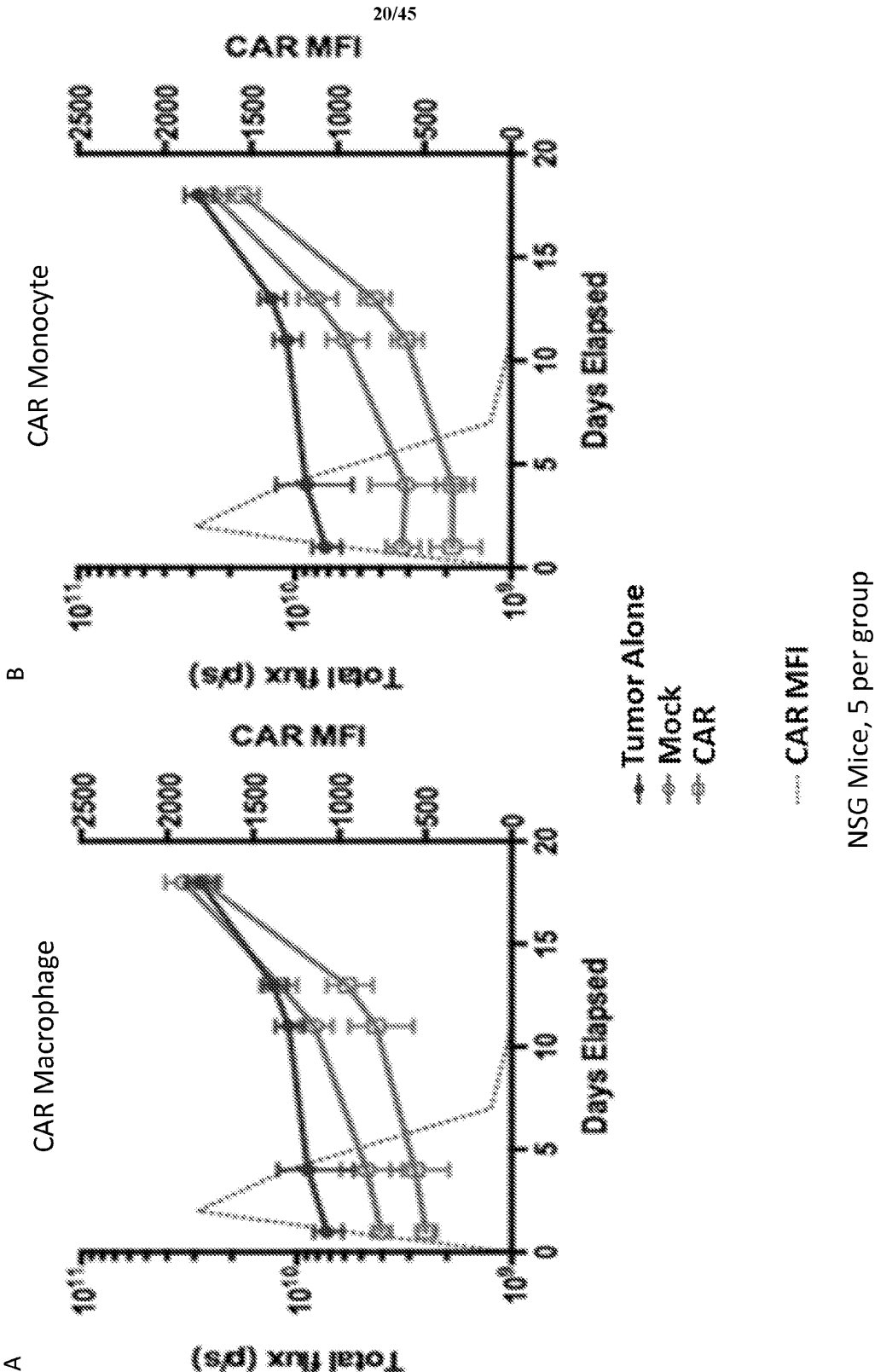


Figure 14A

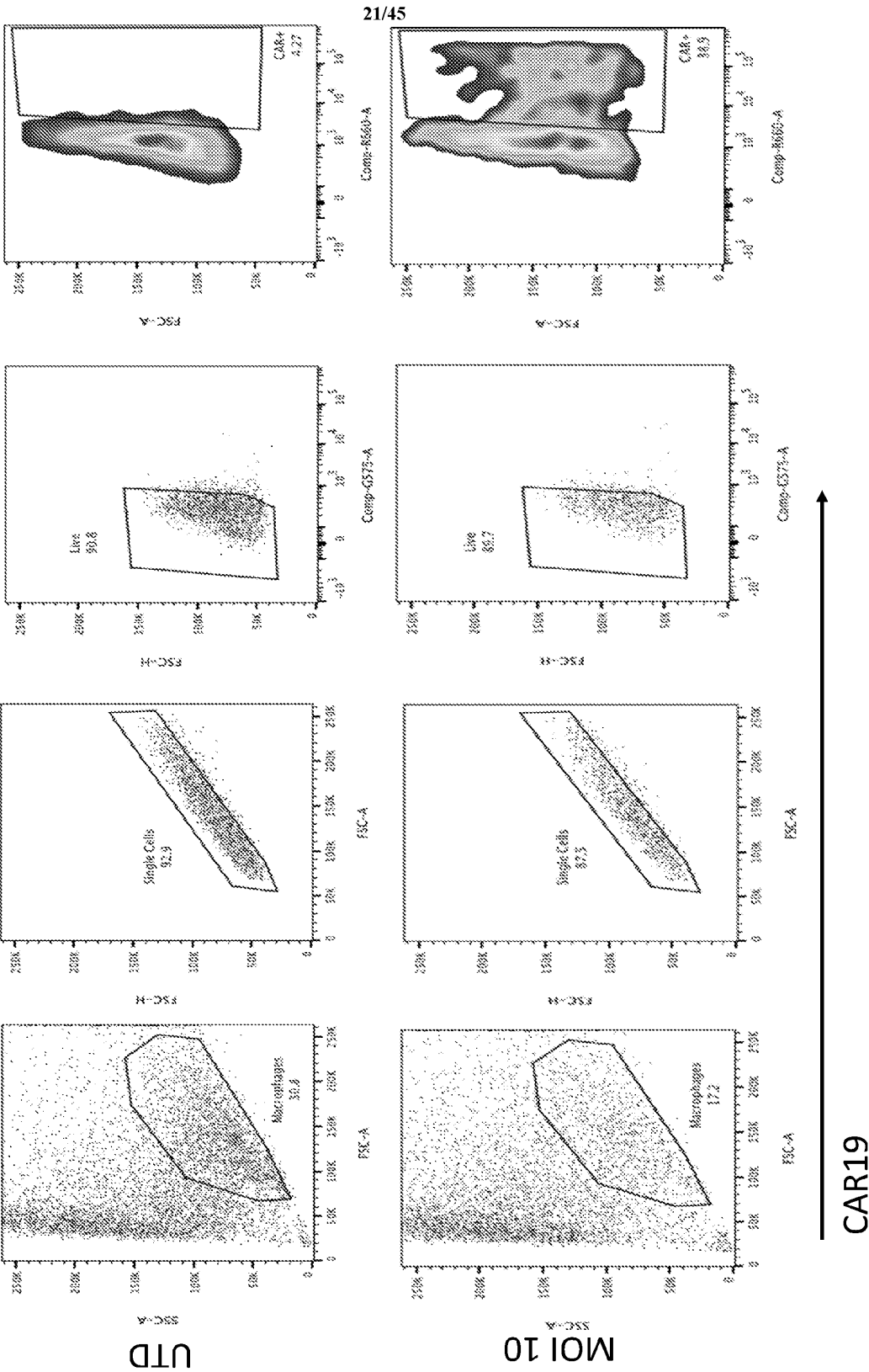


Figure 14B

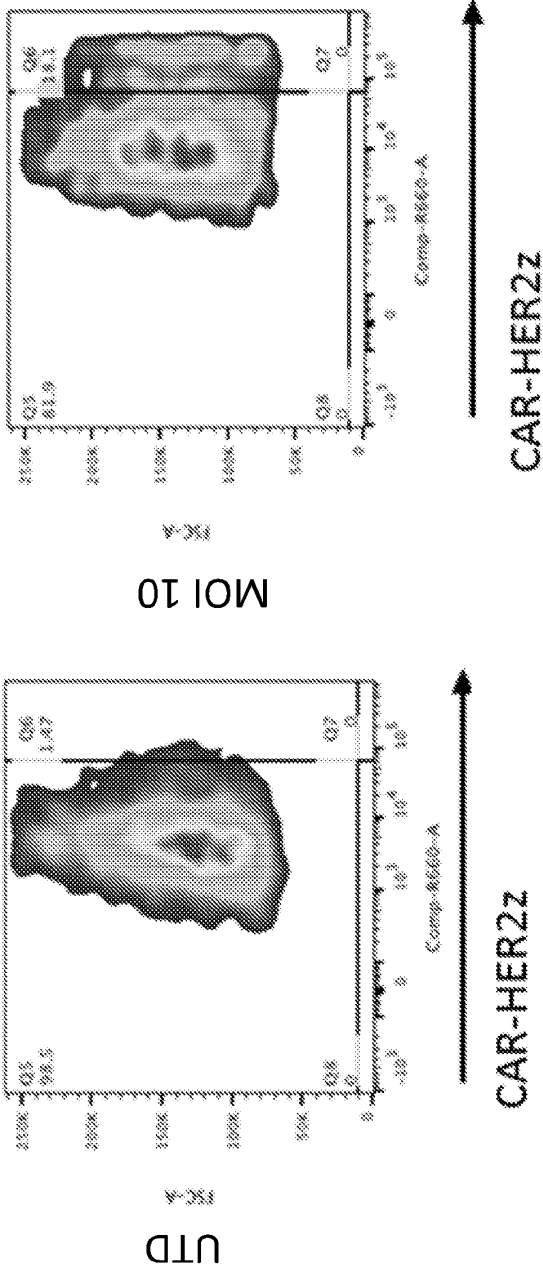
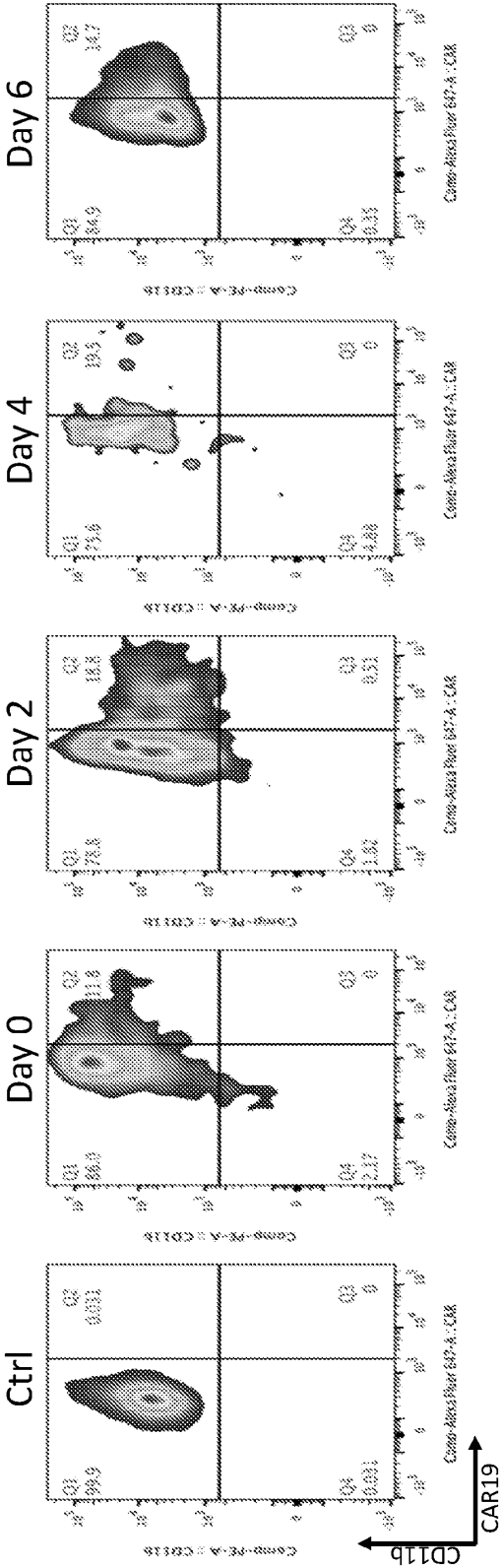
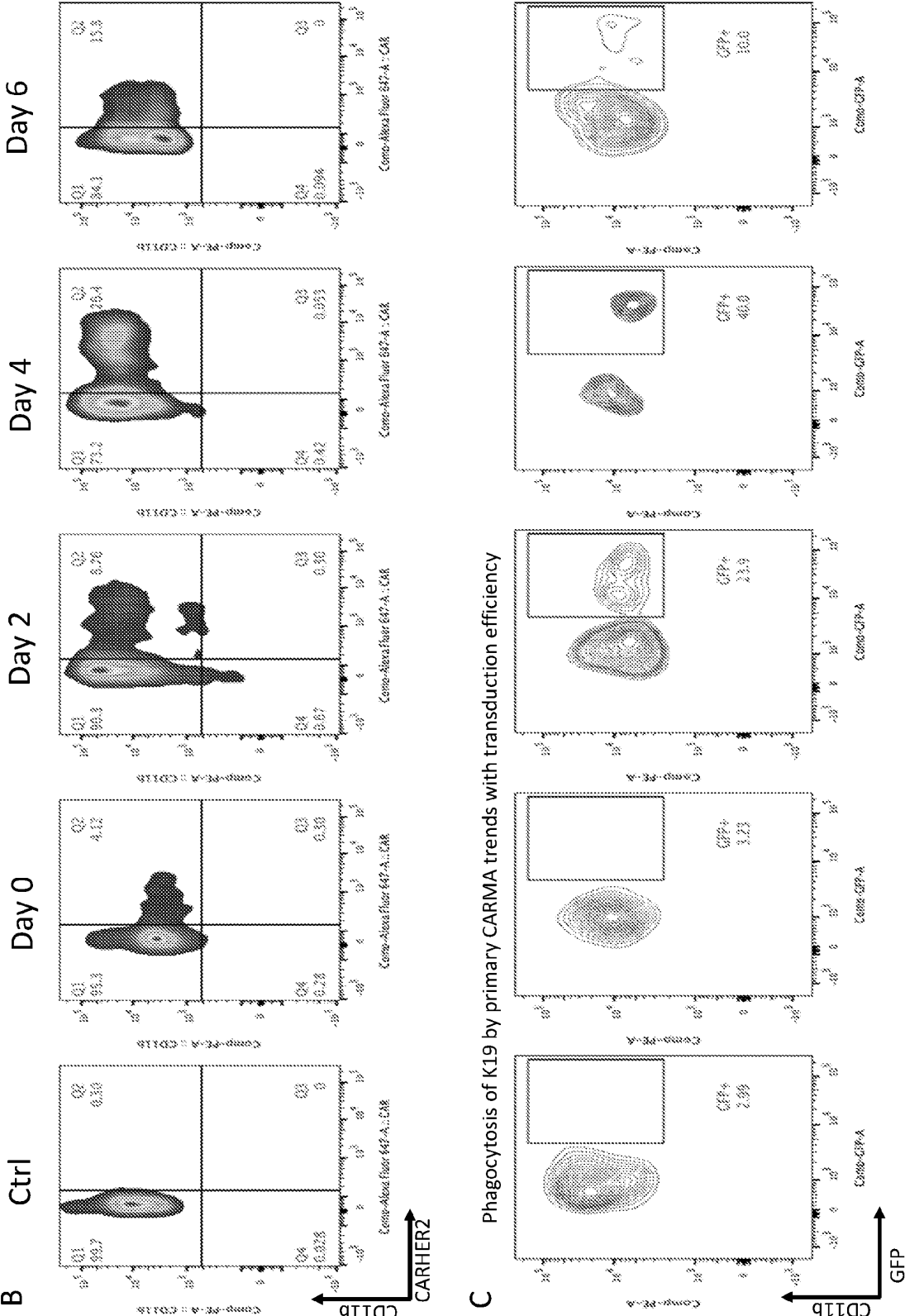


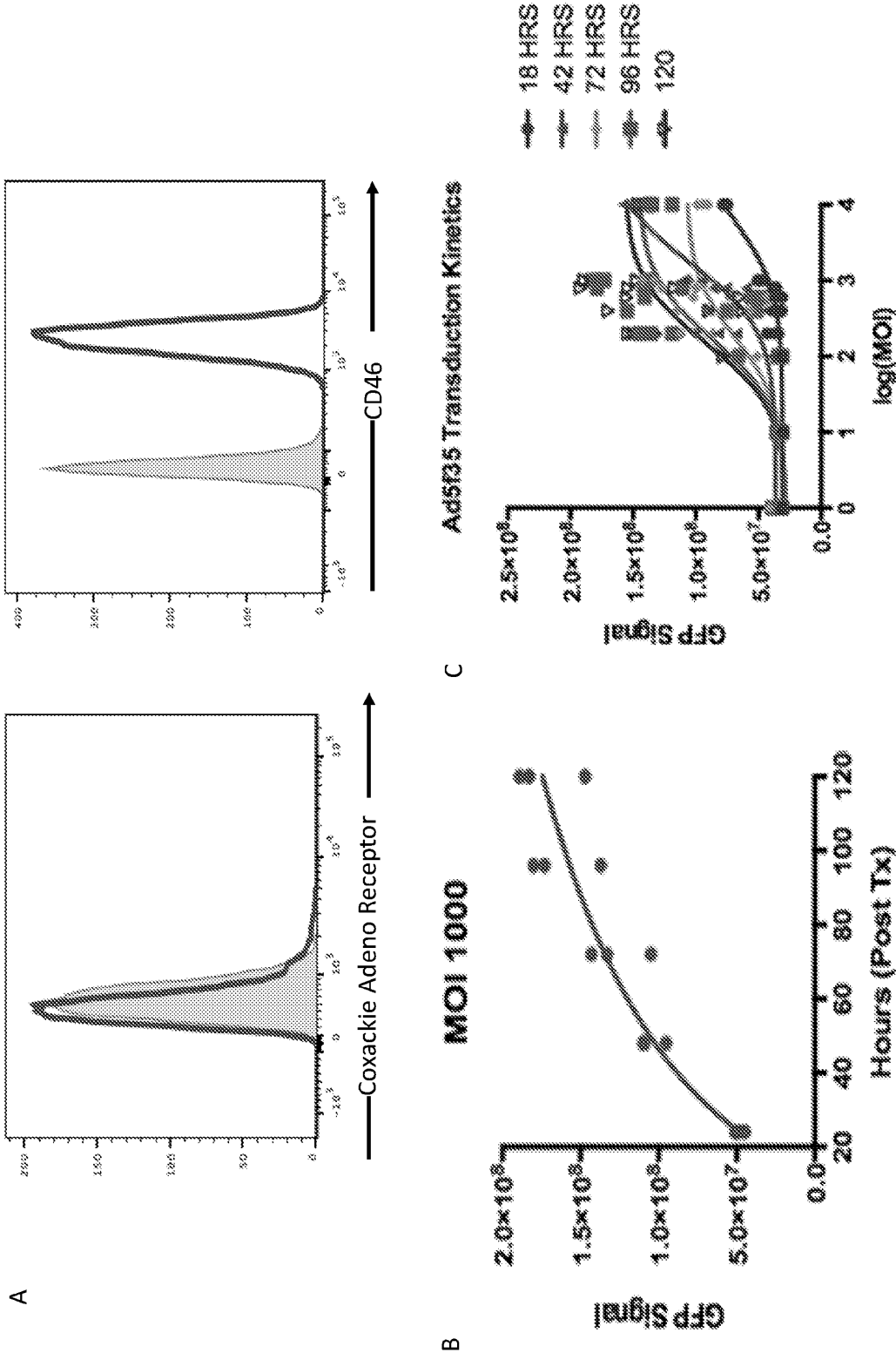
Figure 15A



Figures 15B-15C



Figures 16A-16C



Figures 16D-16E

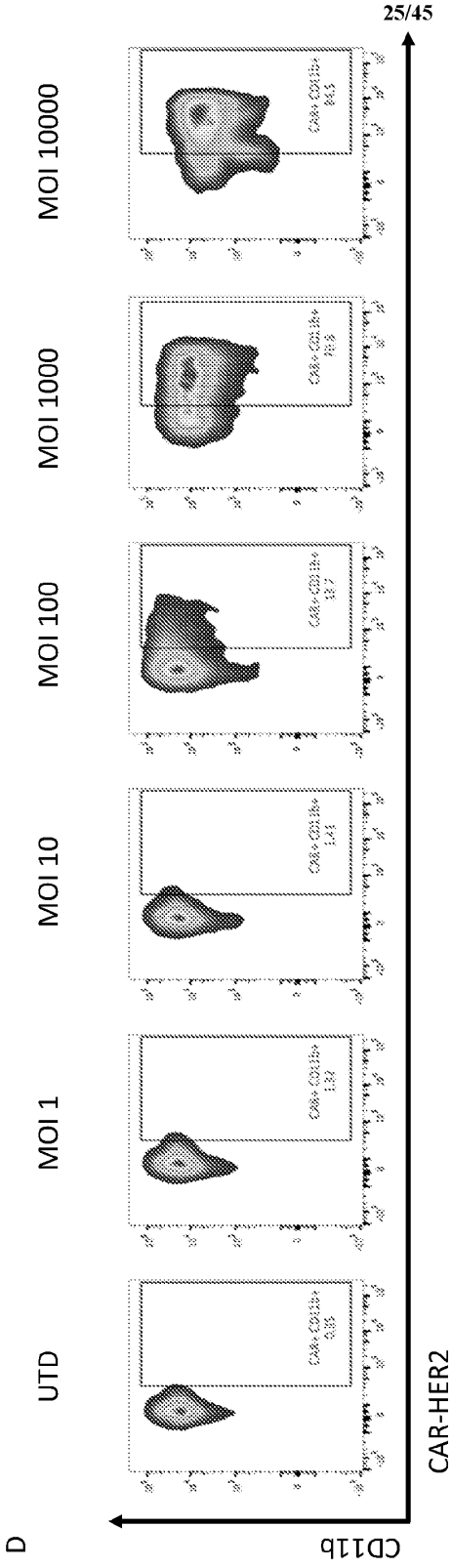
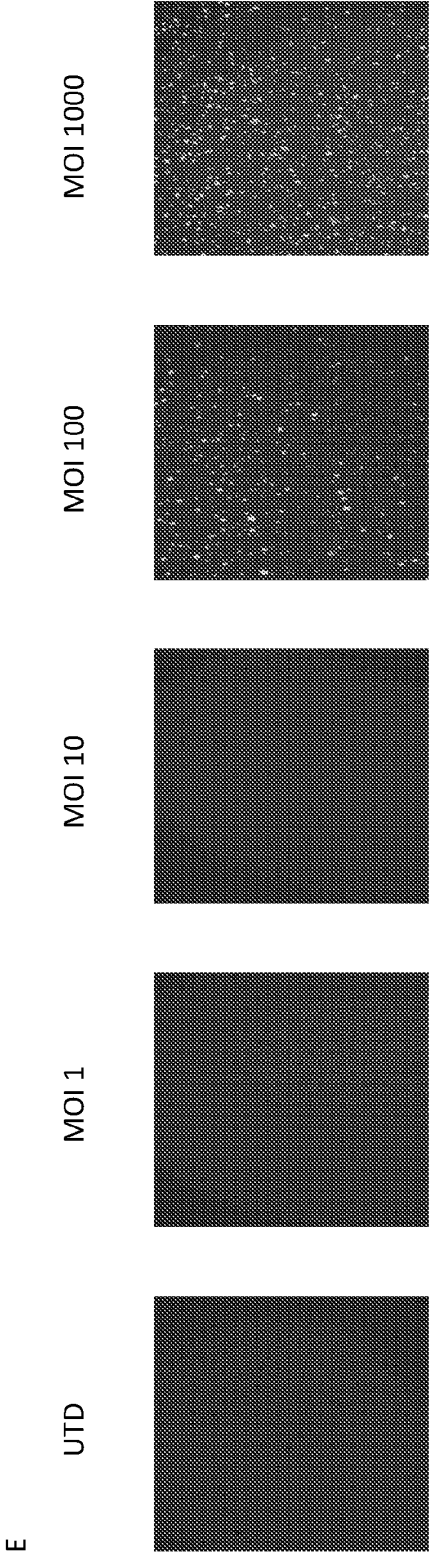
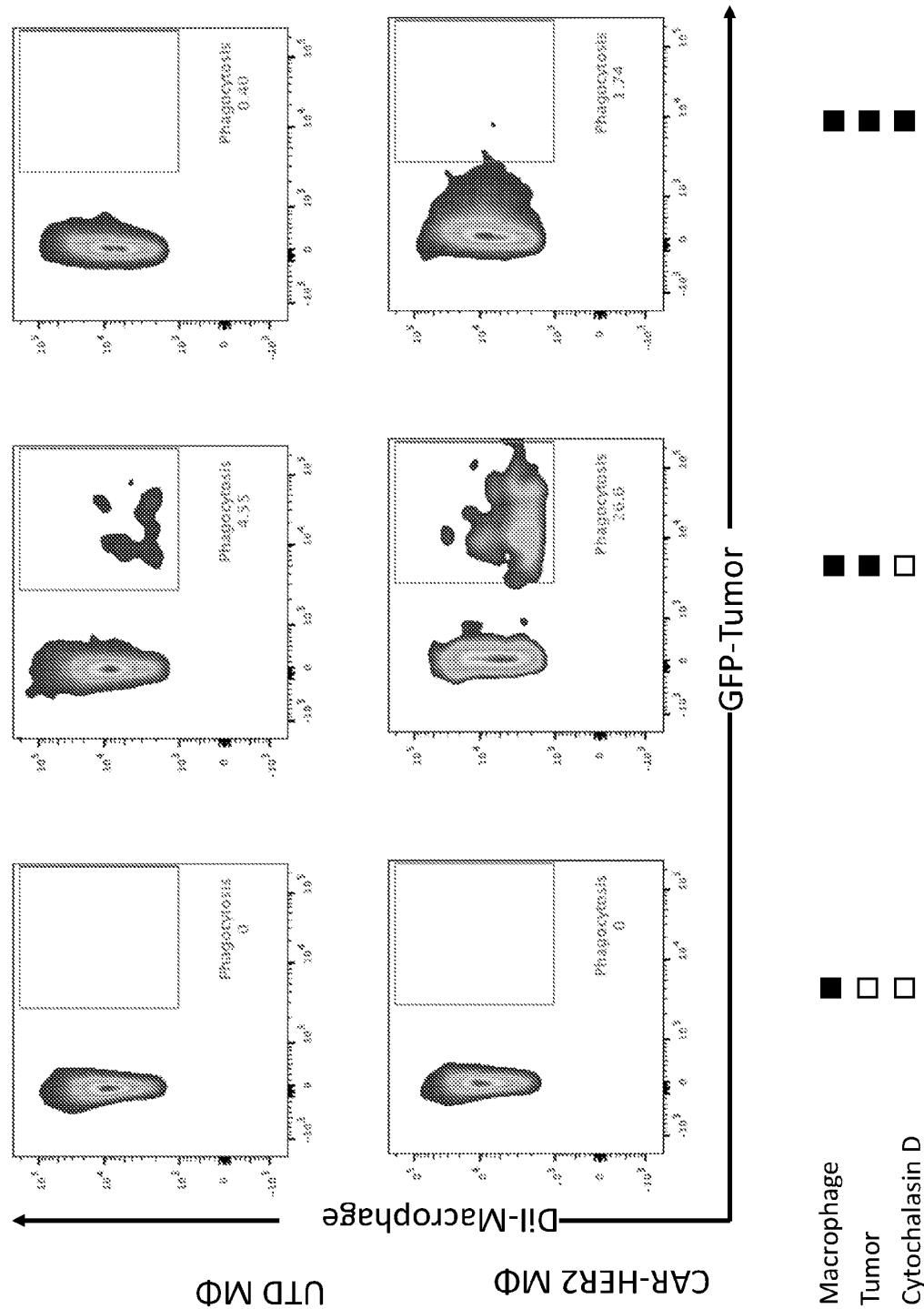
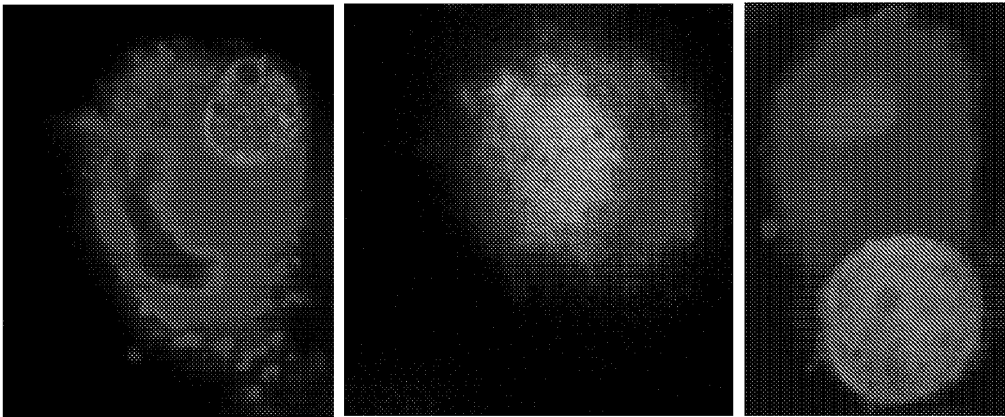
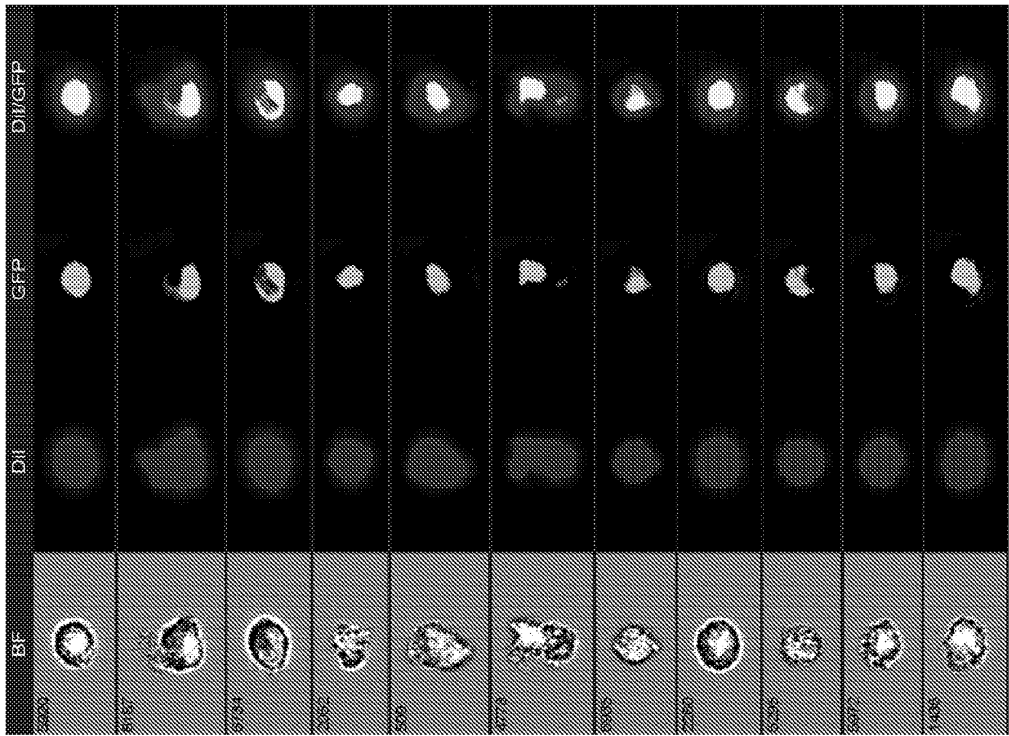


Figure 17A





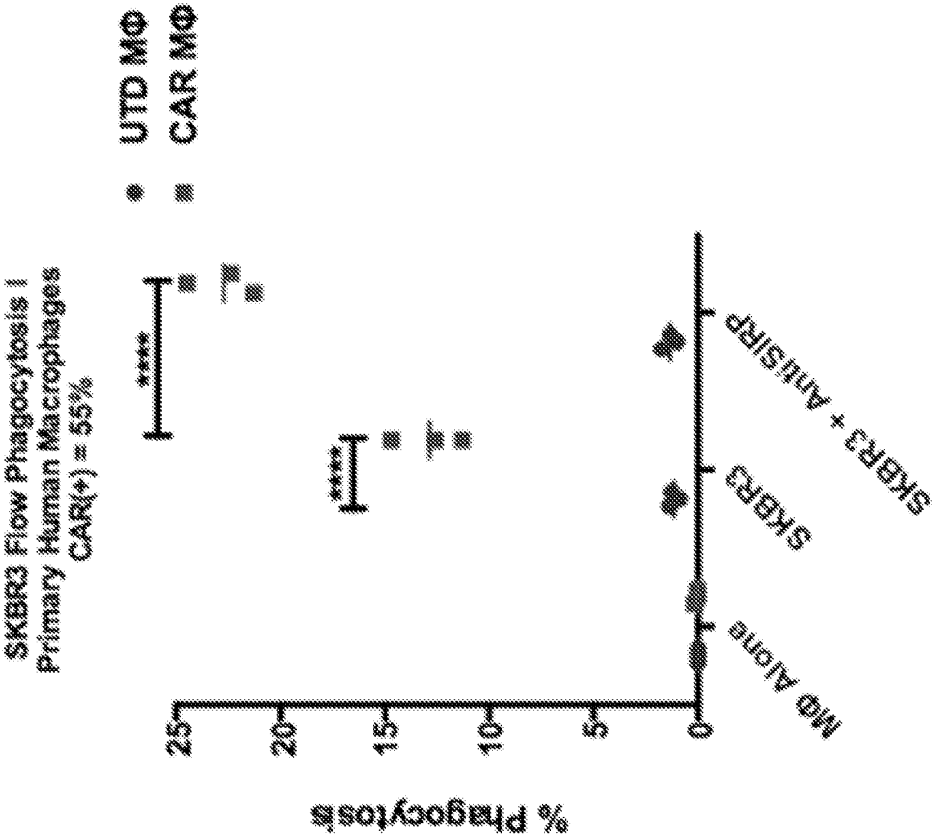
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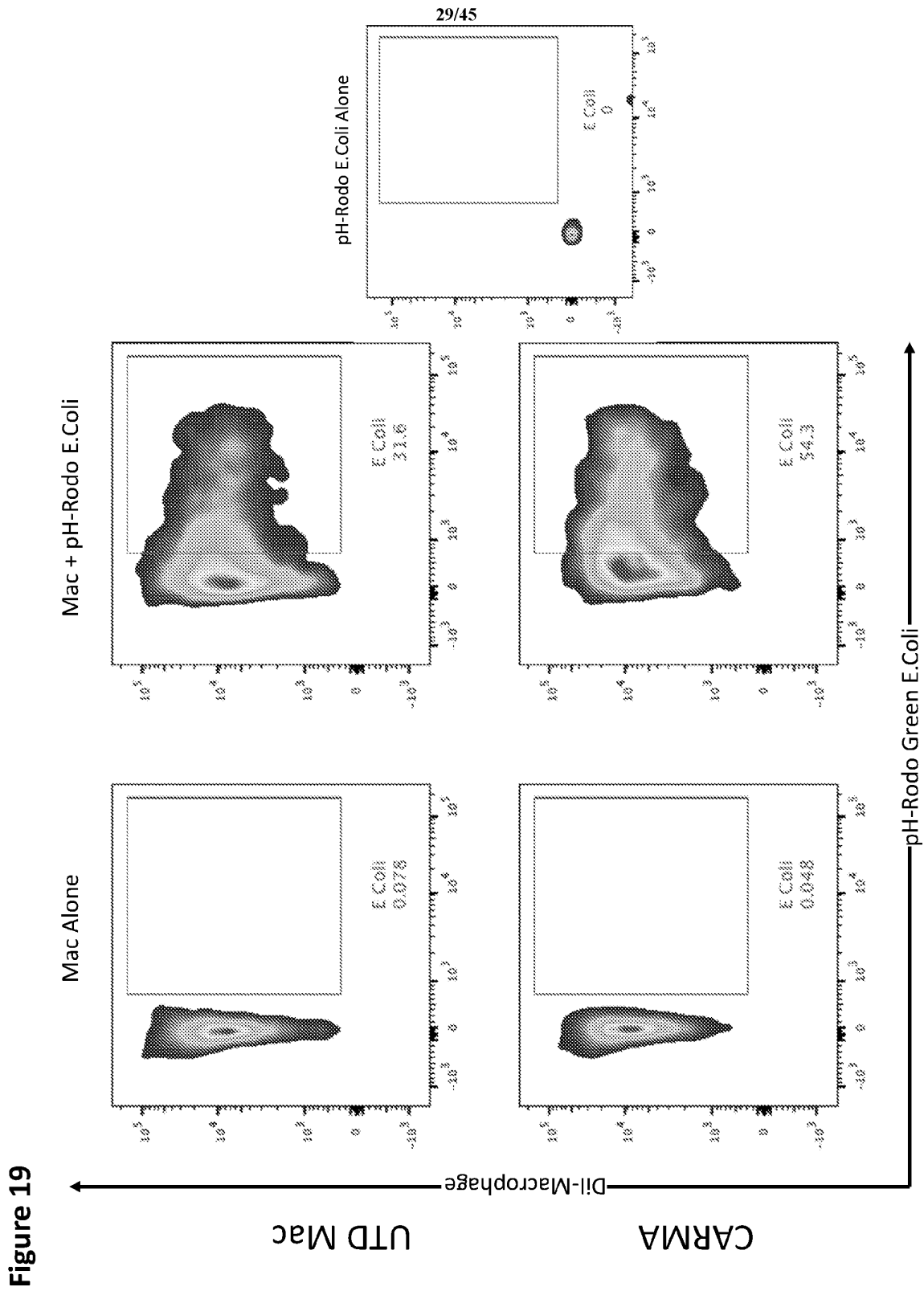


B

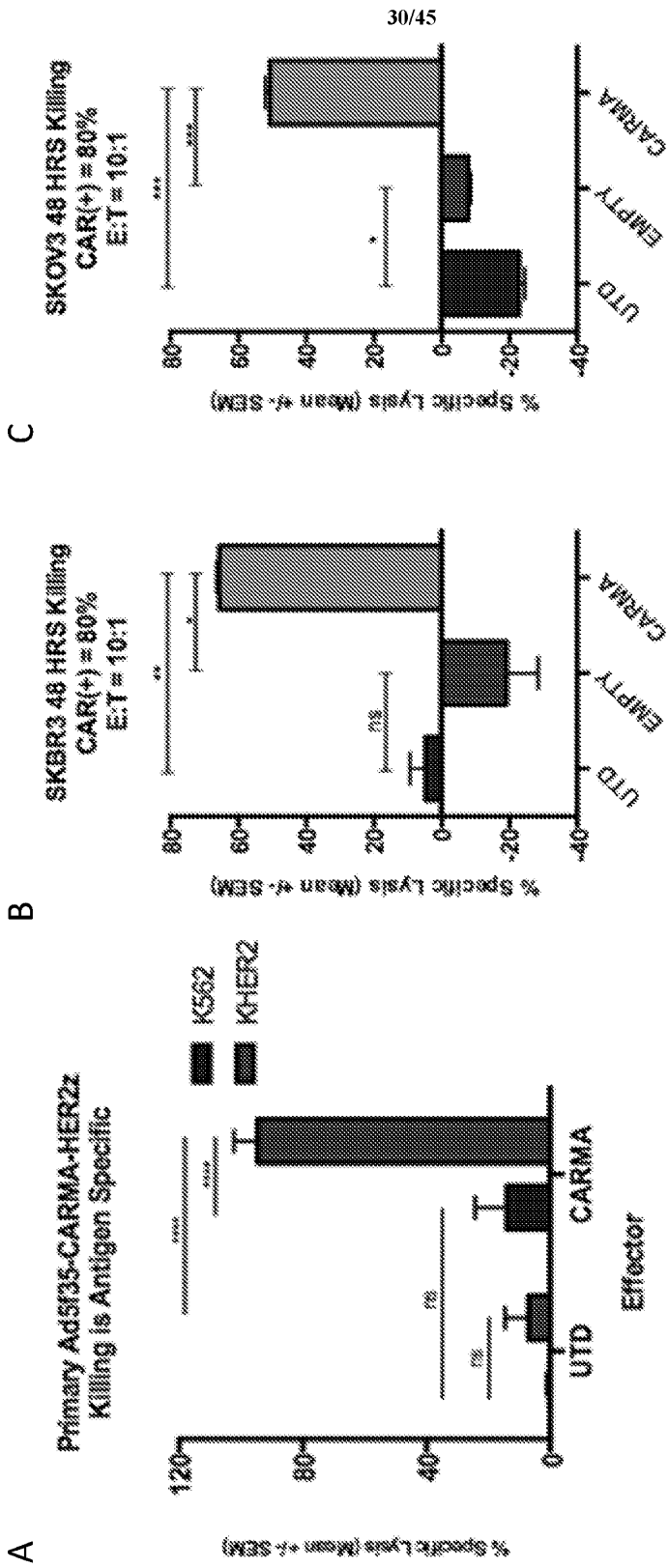
Figures 17B- 17C

Figure 18





Figures 20A-20C



Figures 20D-20F

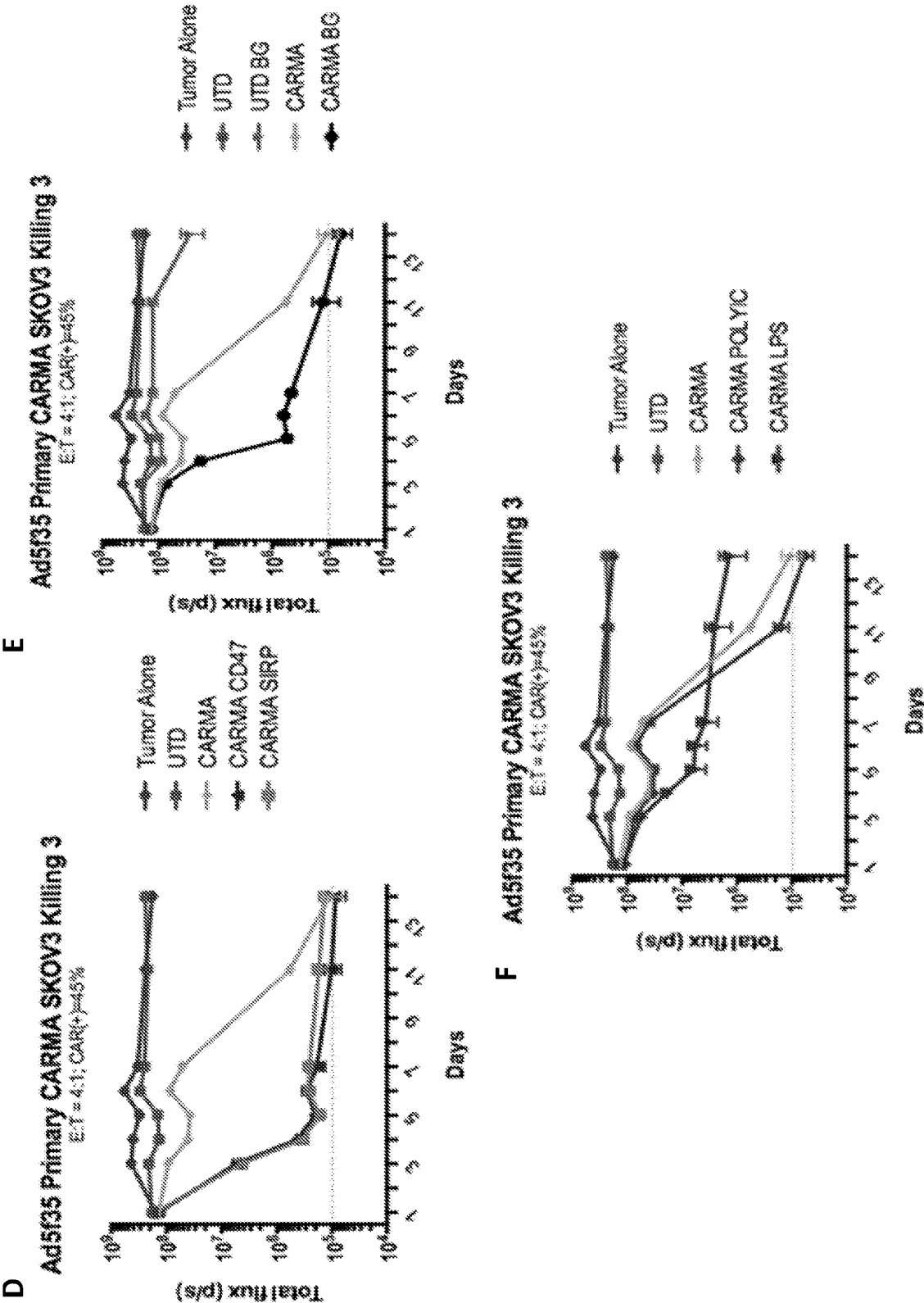
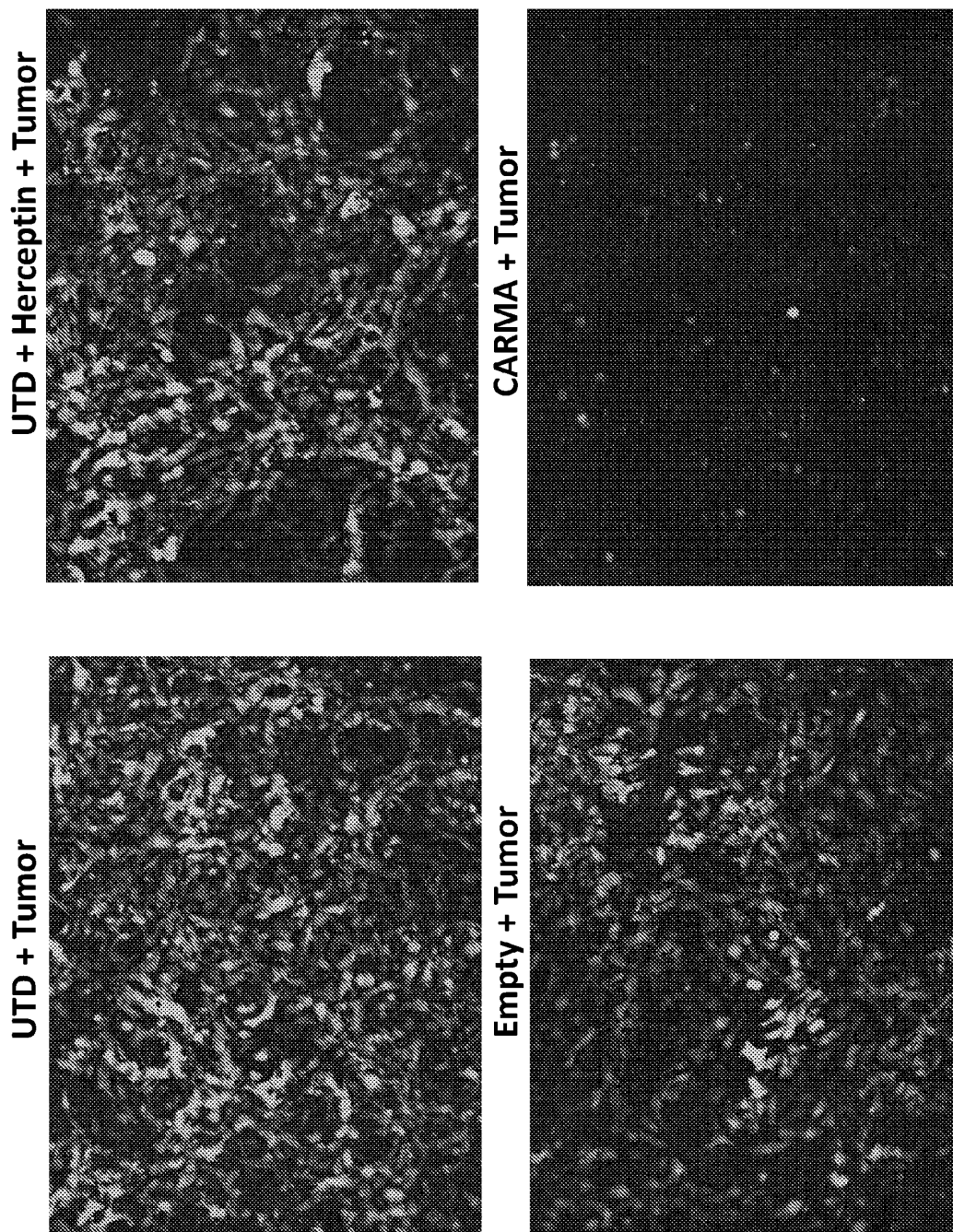
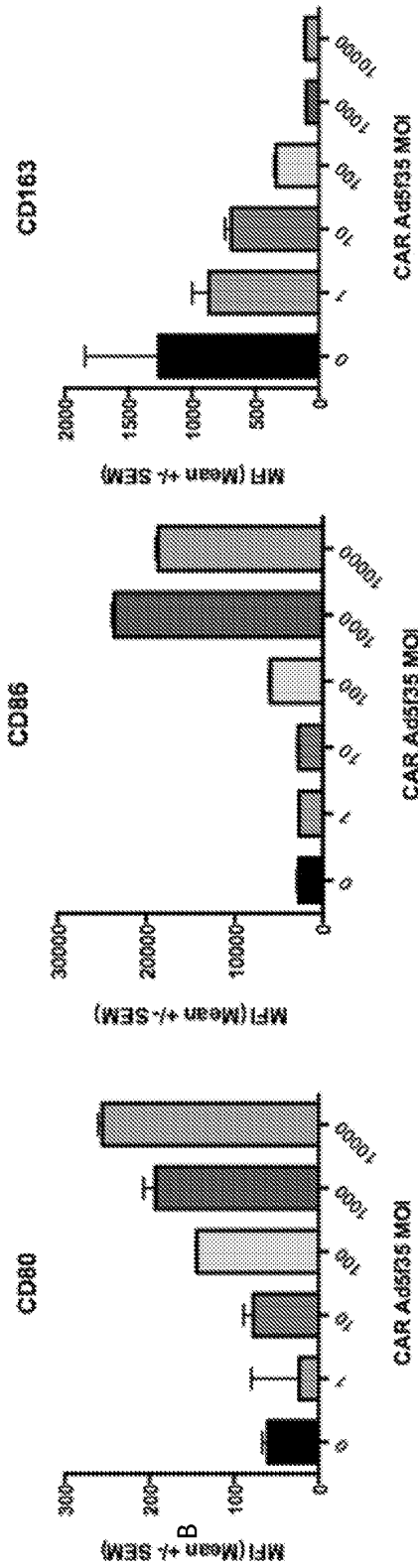


Figure 21

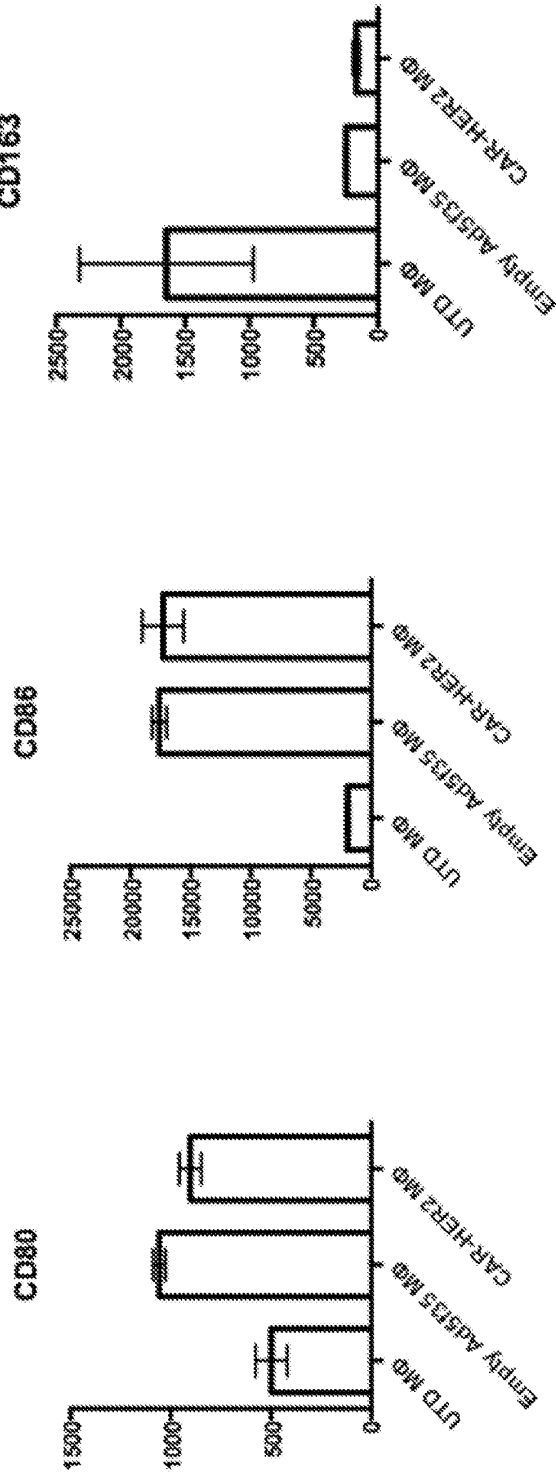


Figures 22A-22B

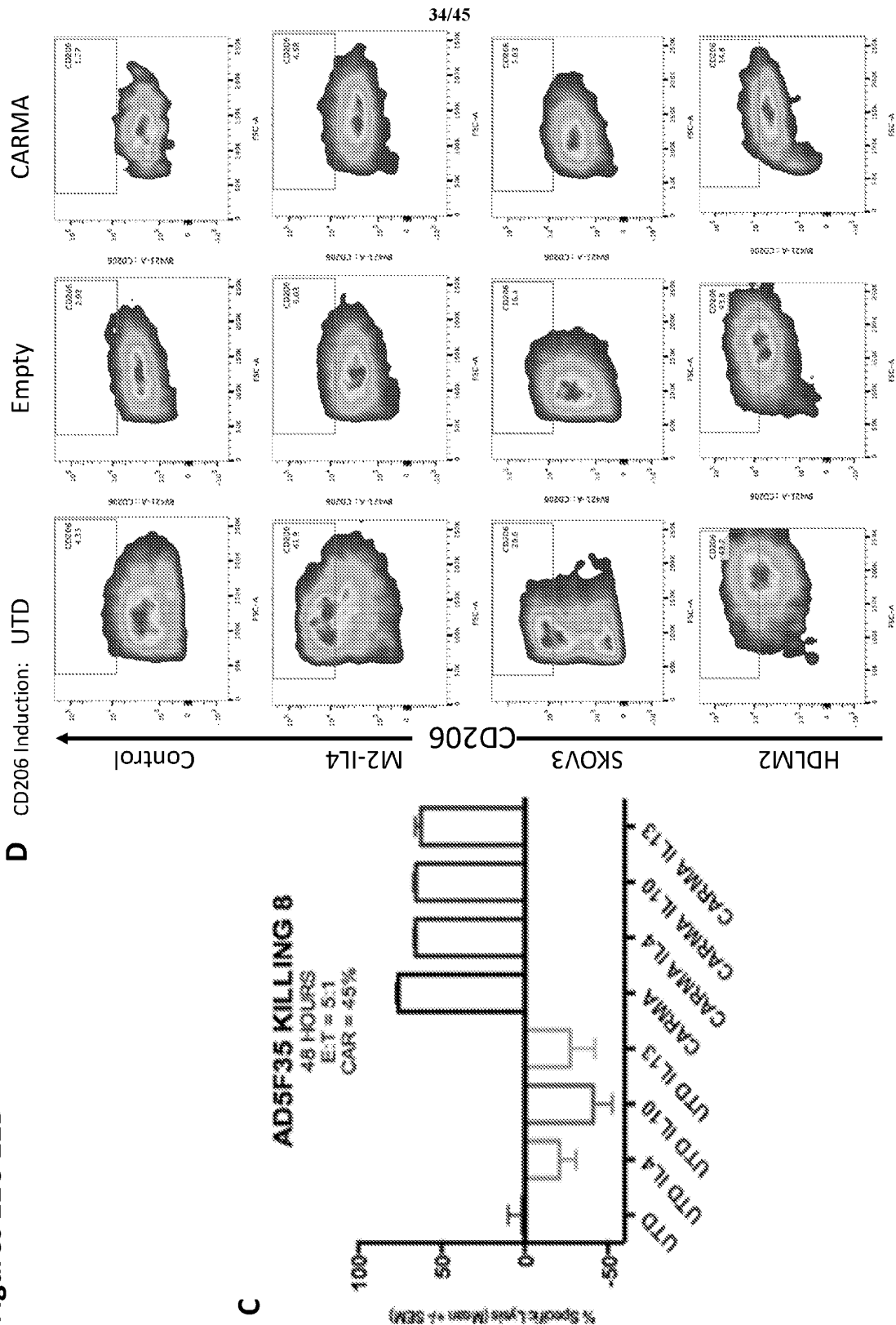
A



B



Figures 22C-22D



Figures 22E-22F

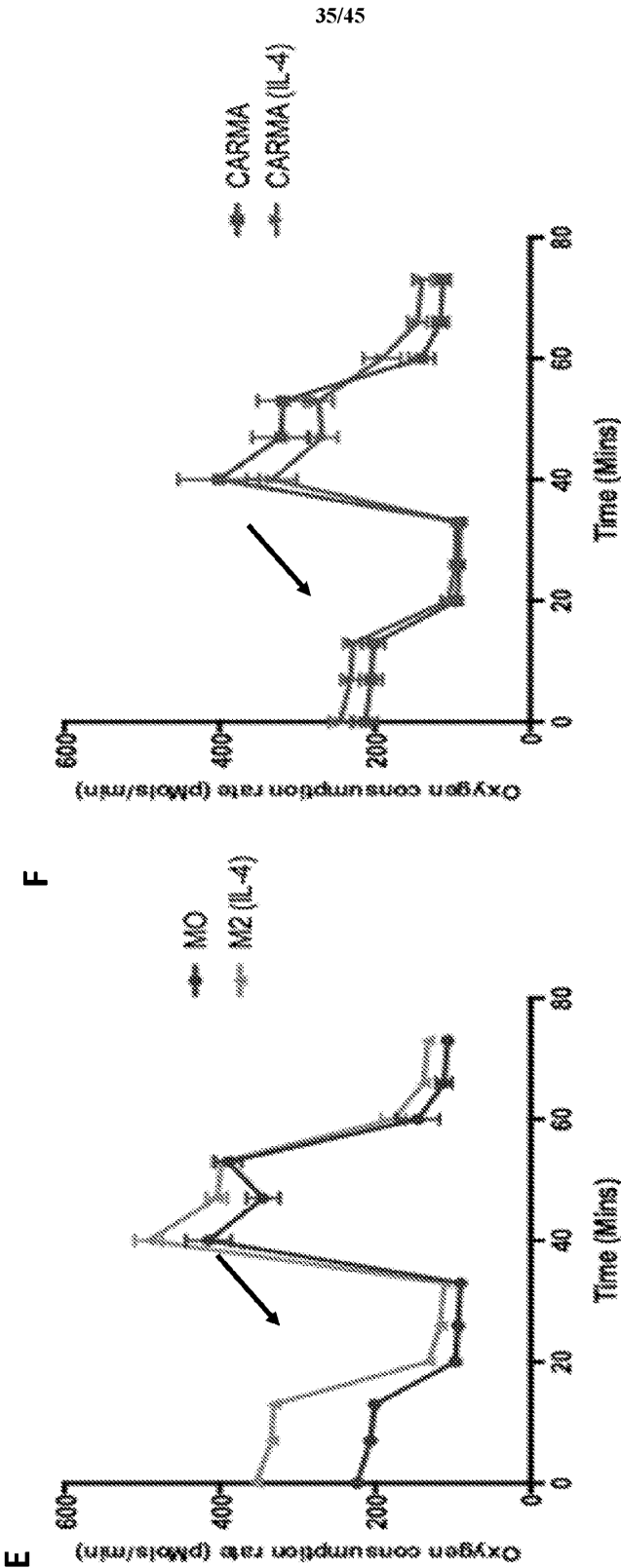
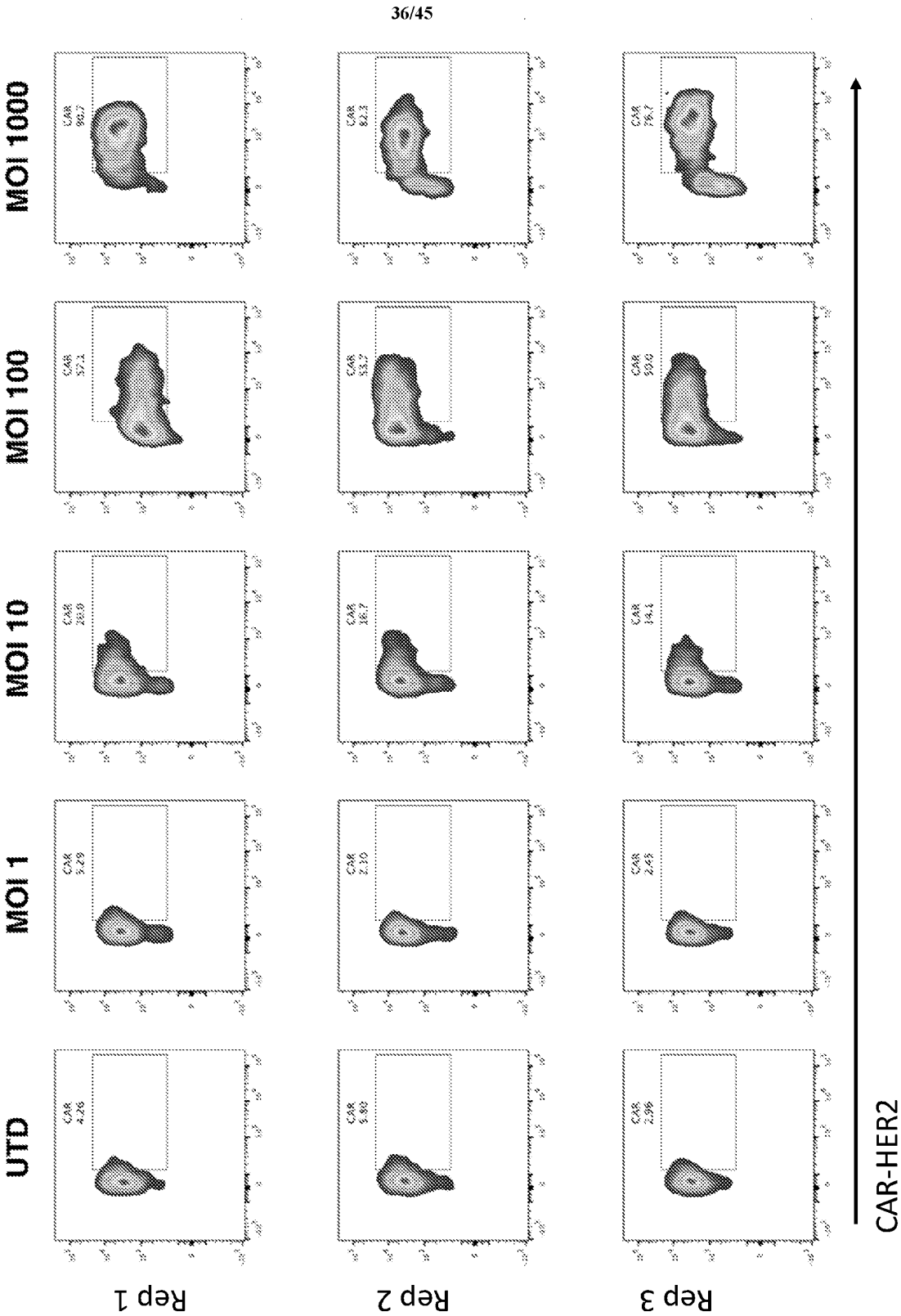
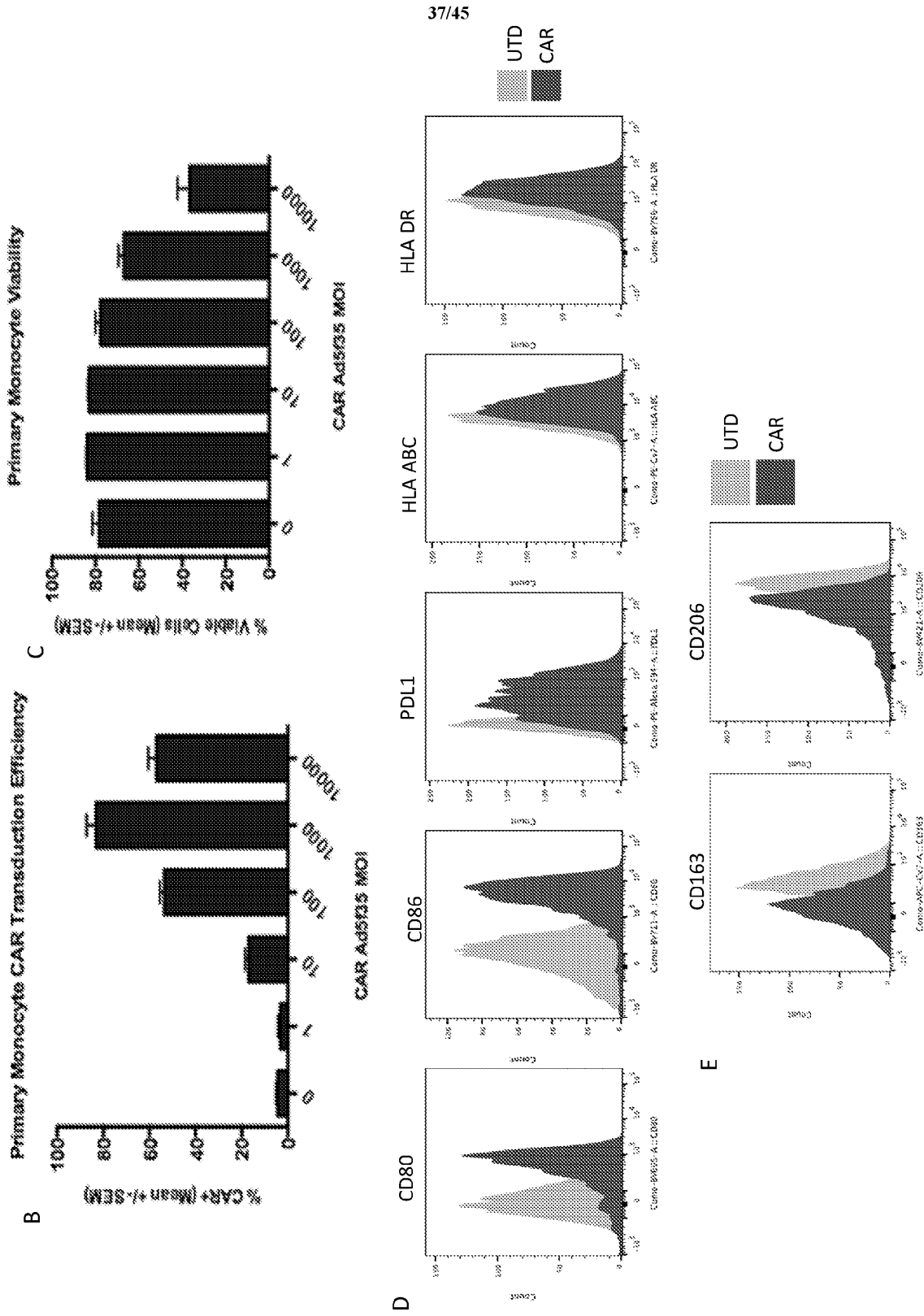


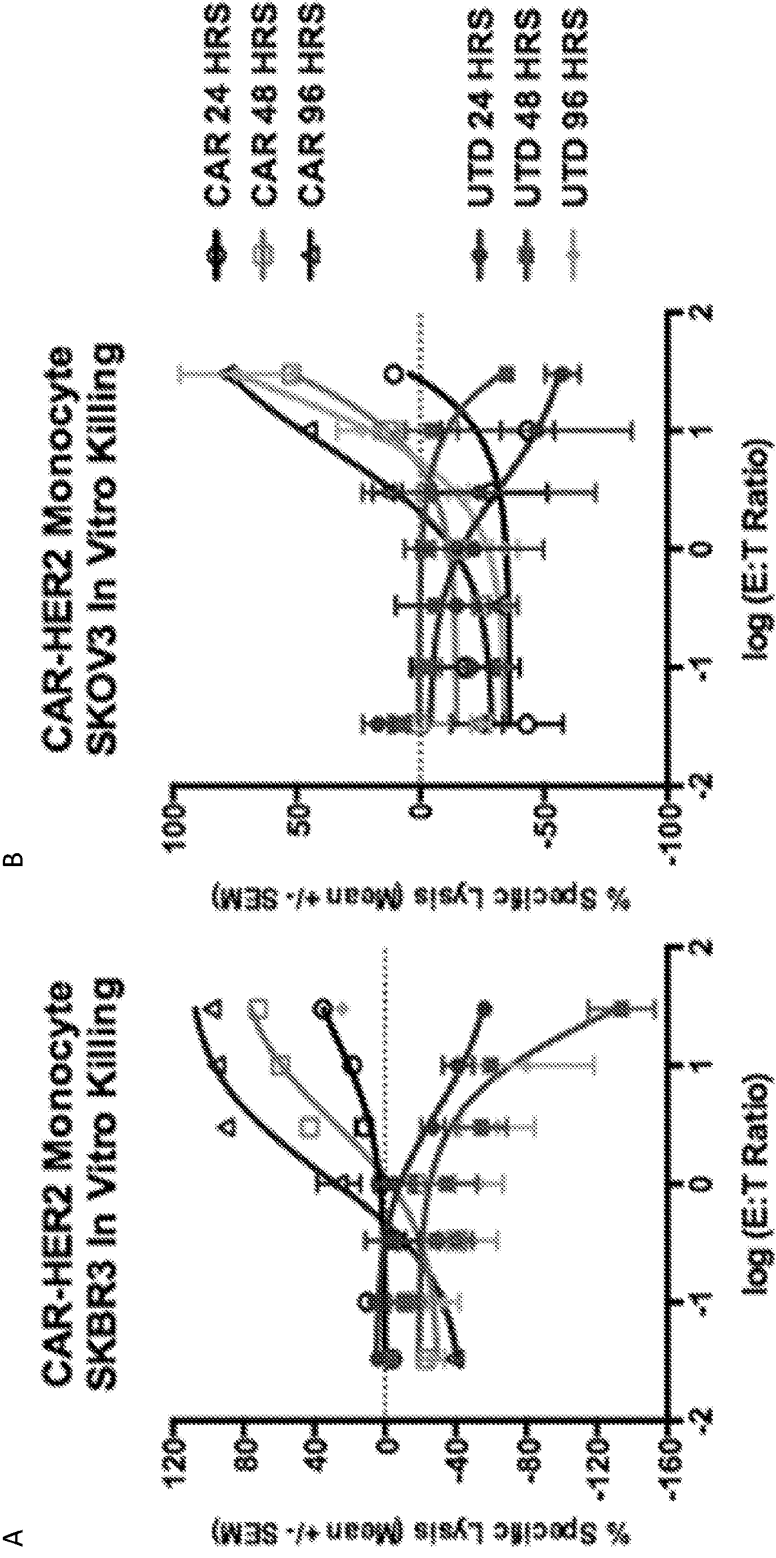
Figure 23A



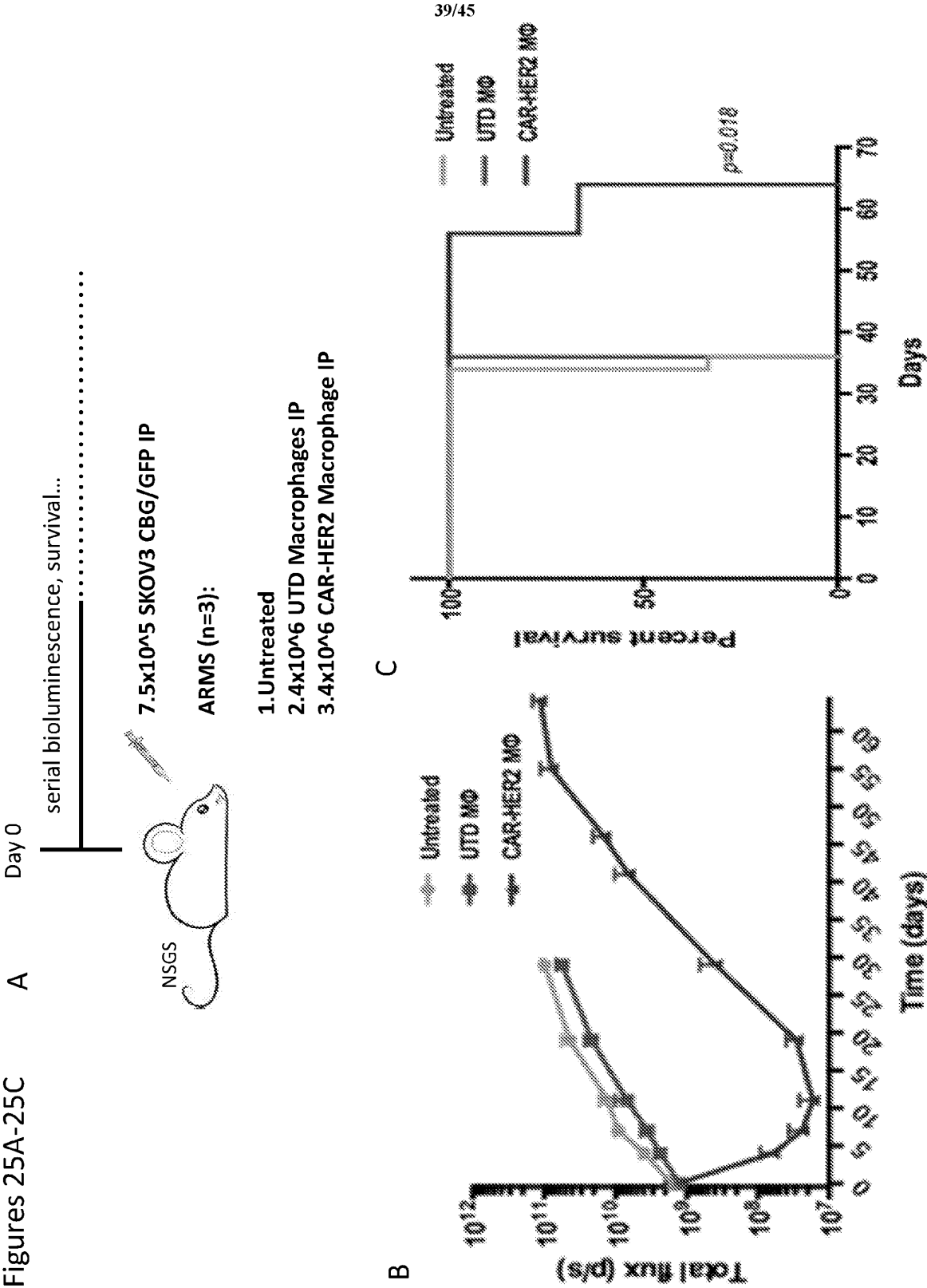
Figures 23B-23E



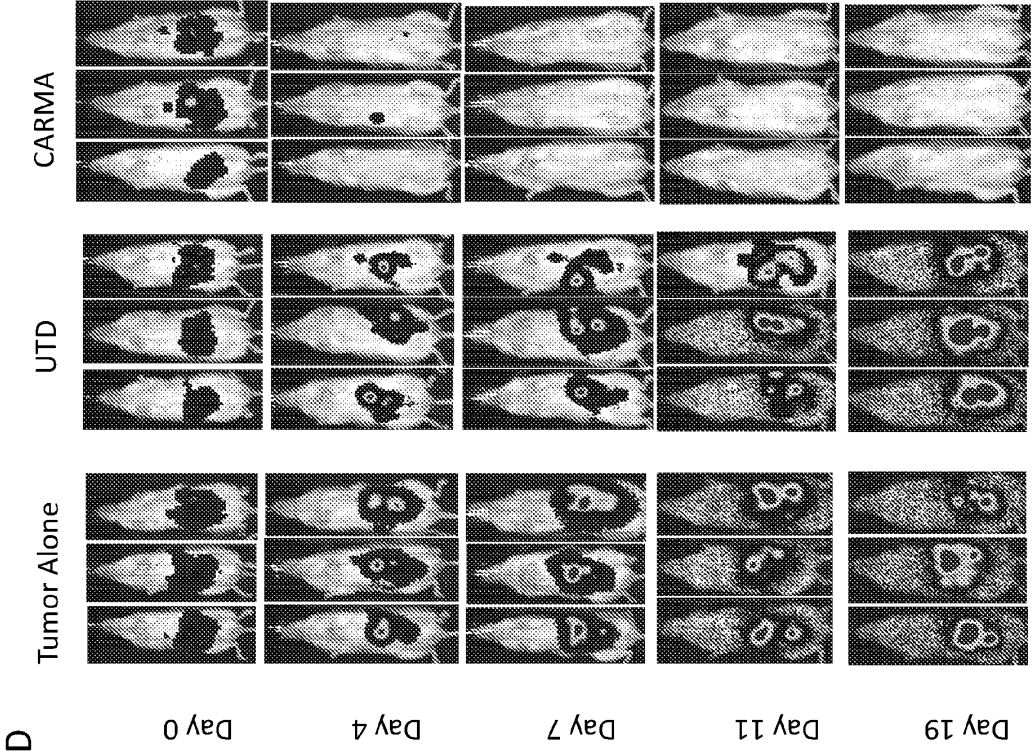
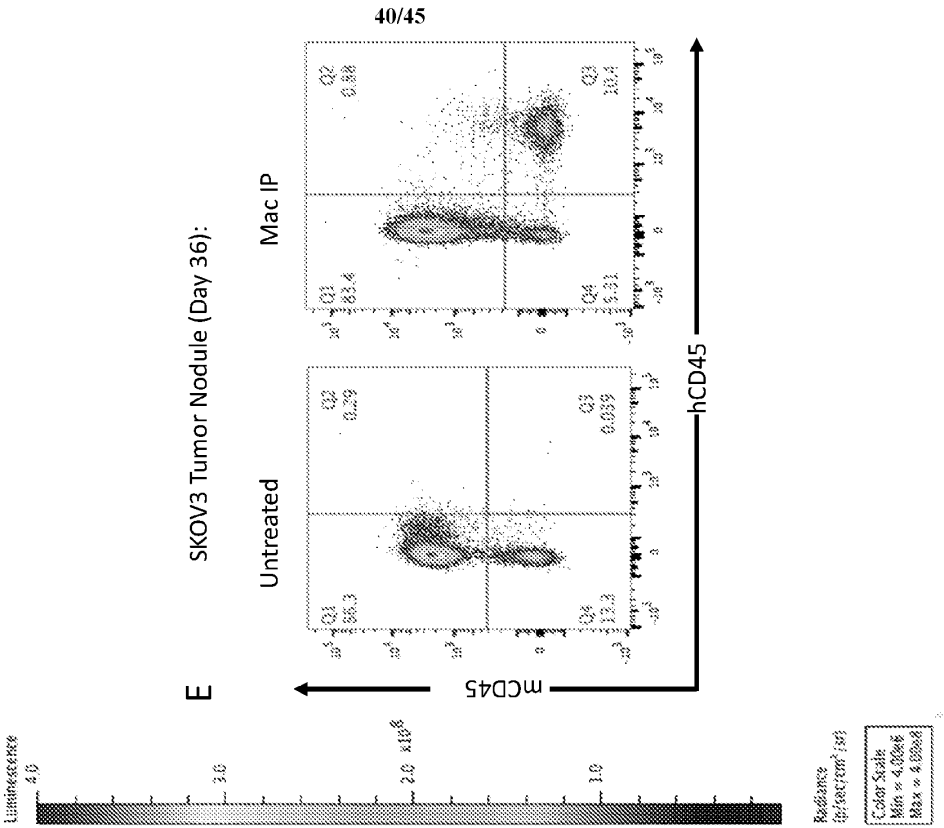
Figures 24A-24B

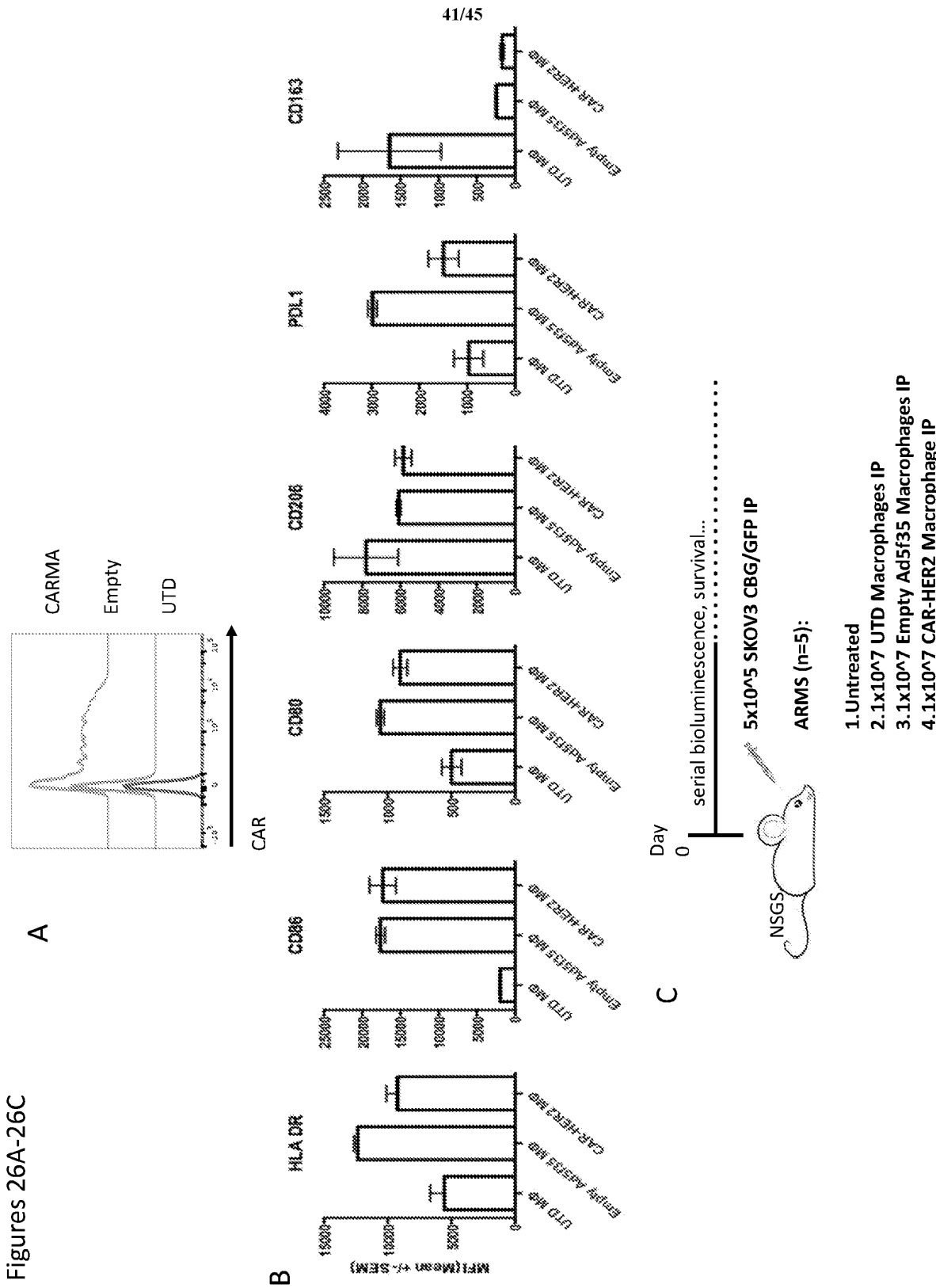


Figures 25A-25C



Figures 25D-25E





Figures 26A-26C

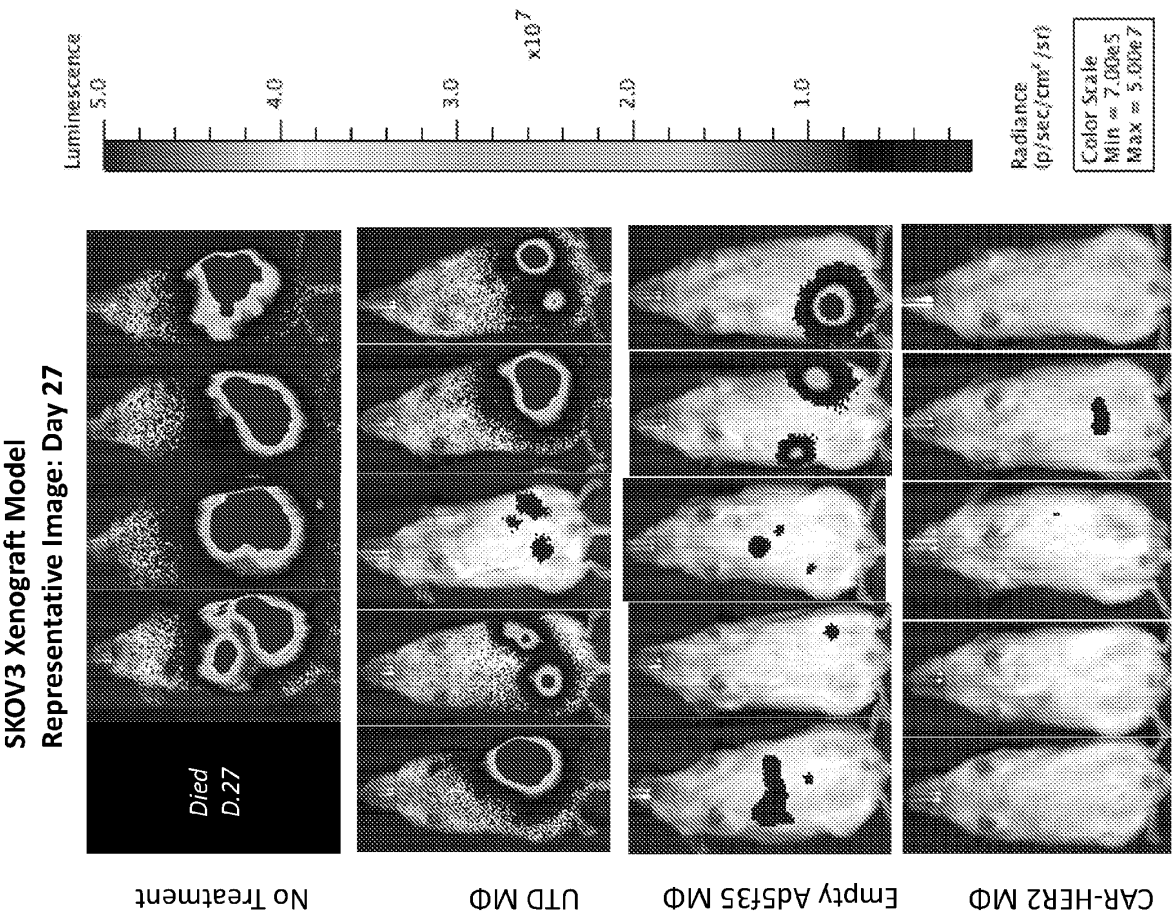


Figure 26D

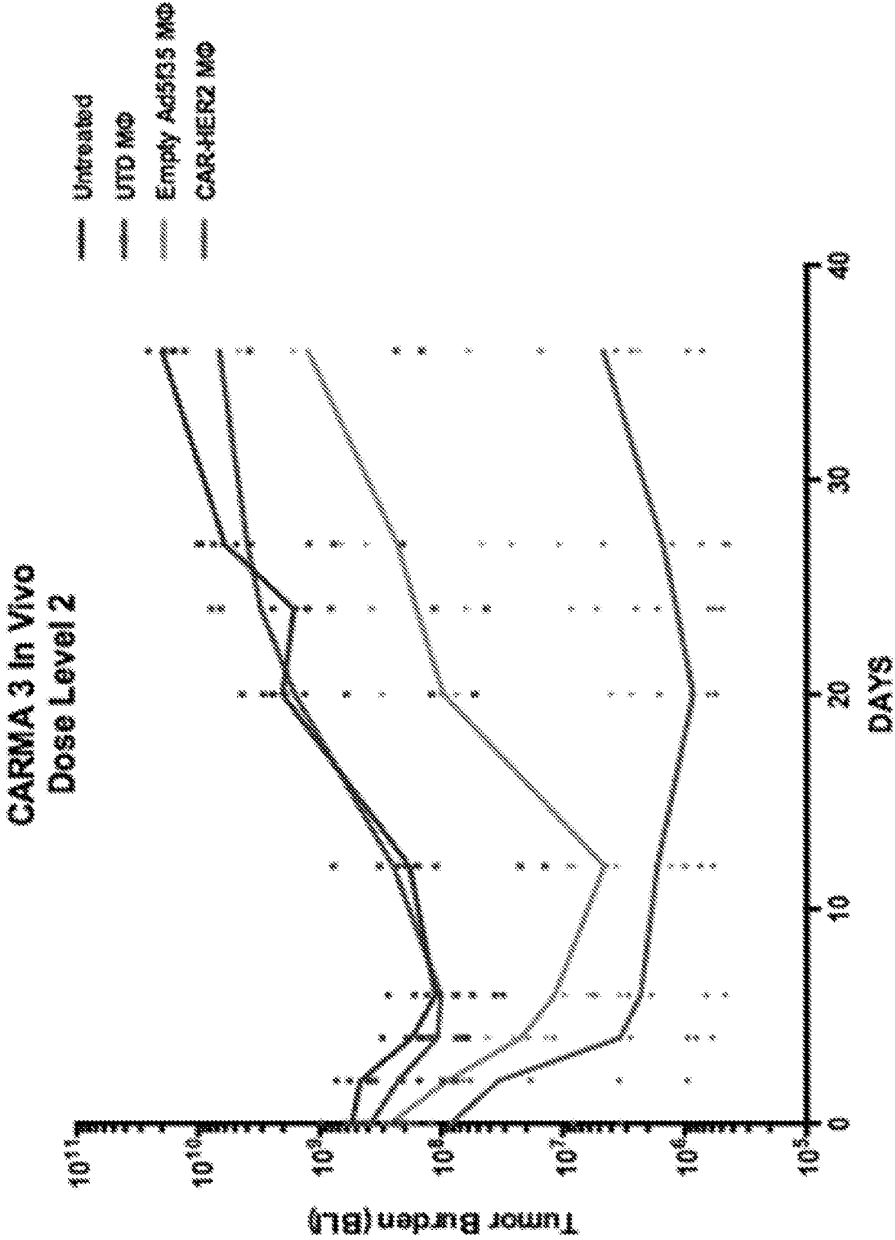
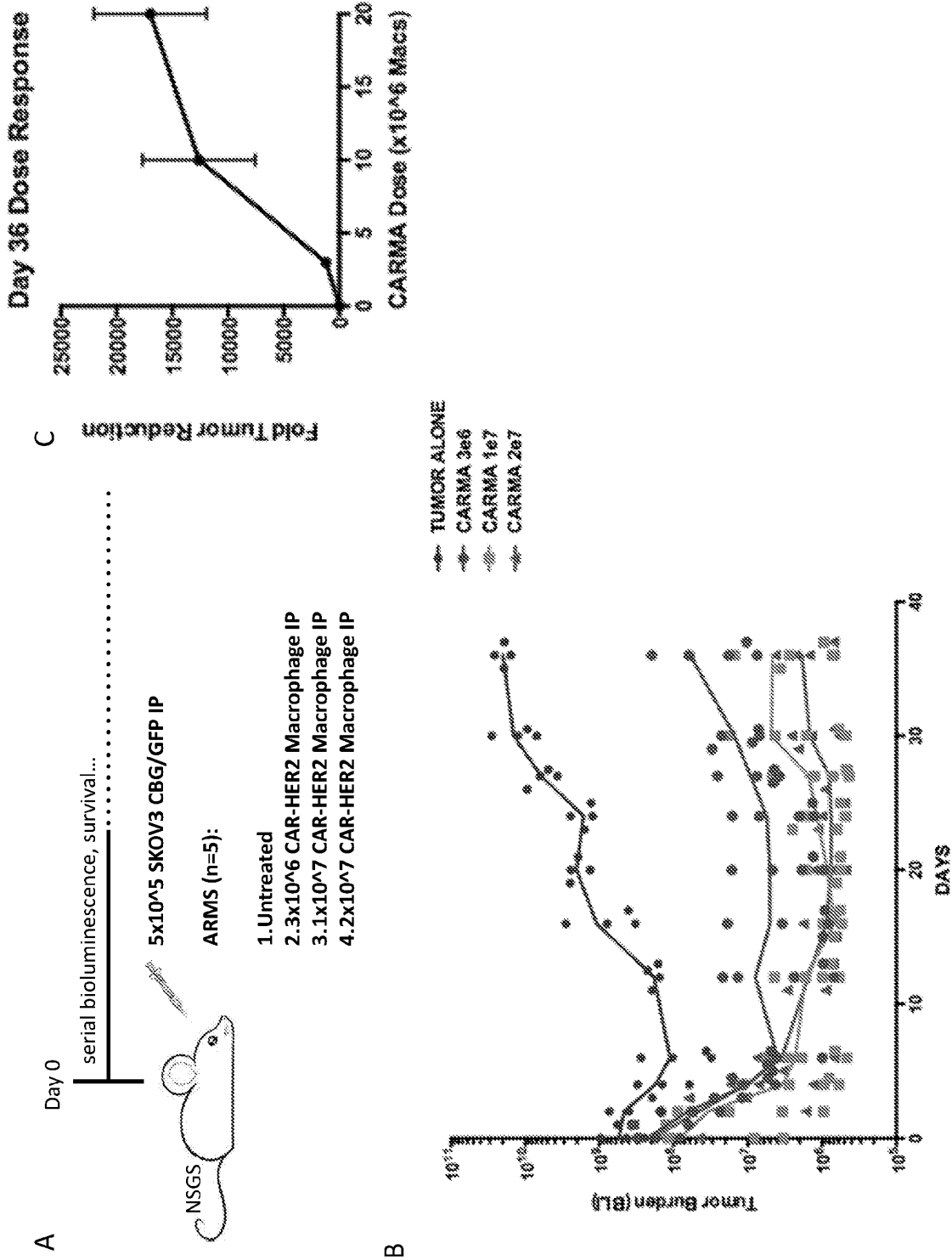


Figure 26E

Figures 27A-27C



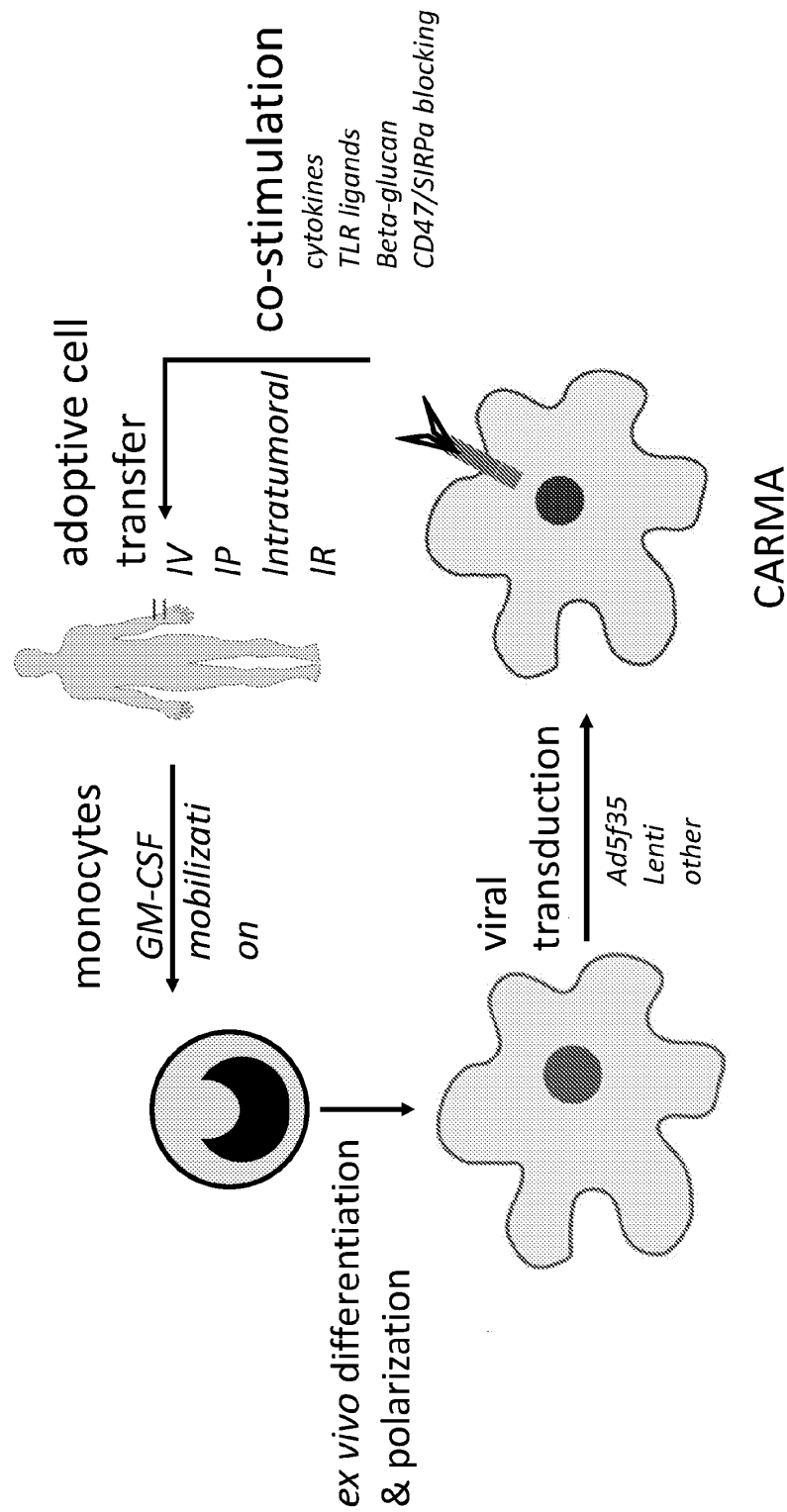


Figure 28