Integrative Biology



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TECHNICAL INNOVATION

# Imaging of Genetically Engineered T Cells by PET using Gold Nanoparticle Complexed to Copper-64

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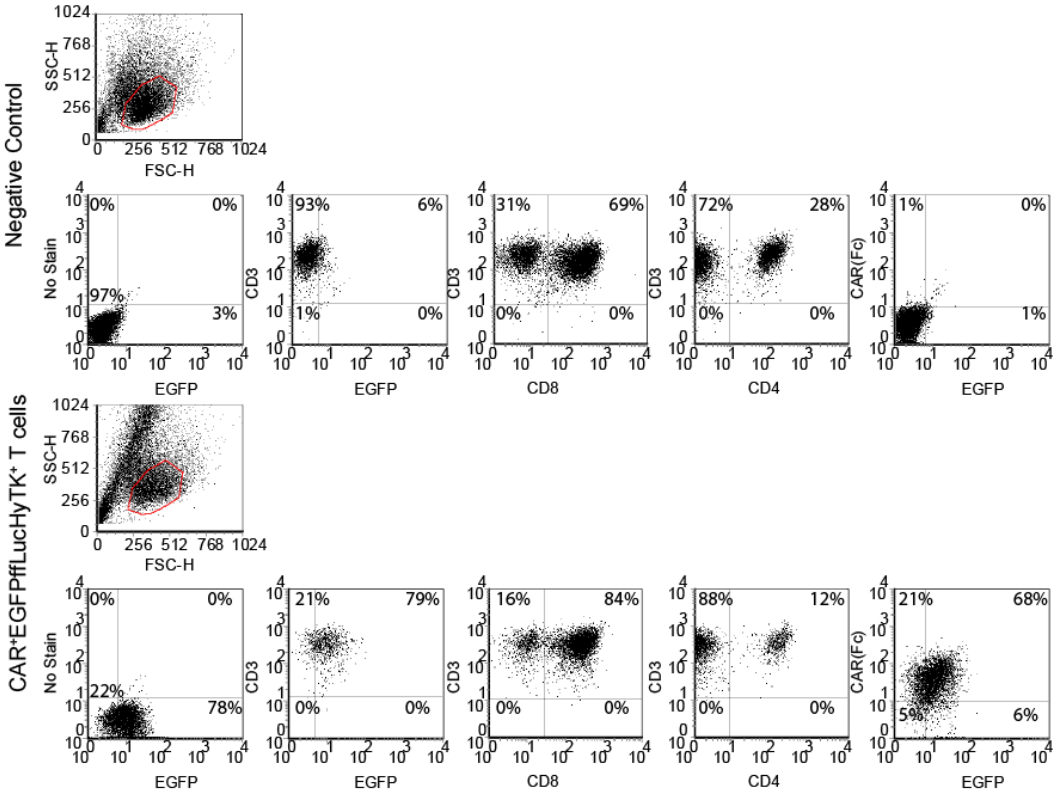


**Fig. S1.** Flow cytometry analyses of CD19-specific CAR$^+$EGFPffLucHyTK$^+$ T cells before cryopreservation 35 days after electro-transfer of SB plasmids. $10^6$ T cells in 100 µL volume were stained with fluorochrome-conjugated to antibody [phycoerythrin (PE), peridinin chlorophyll protein conjugated to cyanine dye (PerCPCy5.5), allophycocyanin (APC)]: anti–CD3 PE (Cat. # 347347, 2.5 µL, BD Biosciences), anti–CD4 APC (Cat. # 555349, 2.5 µL, BD Biosciences), anti–CD8 PerCPCy5.5 (Cat. # 341051, 4 µL, BD Biosciences), and PE-conjugated F(ab´)$_2$ fragment of goat anti-human Fcγ (Cat. # H10104, 2.5 µL, Invitrogen) ,used to detect cell surface expression of the CAR. EGFP expression was analyzed and used as marker for estimating ffLuc expression. Blocking of nonspecific antibody binding was achieved using wash buffer (2% FBS and 0.1% Sodium azide in PBS). Data acquisition was on a FACSCalibur (BD Biosciences) using CellQuest version 3.3 (BD Biosciences).

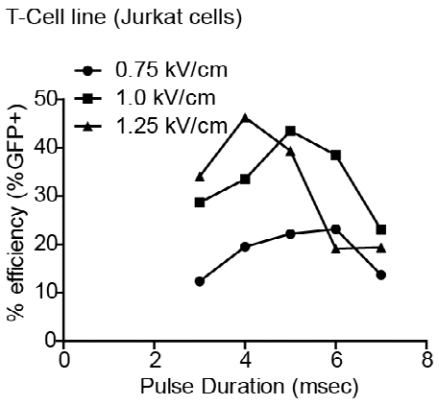


**Fig. S2.** Repeat of Figure 2A: Effect of electric field intensity and pulse duration on efficiency of electro-transfer of DNA plasmid (pmaxGFP) into T-cell lines (Jurkat cells).