

Supplementary Figure Legends

Supplementary Figure 1. α LMP1-specific CAR surface expression in primary human T cells. a. Expression was examined 8 days after transduction with the indicated CAR-encoding lentiviral by detecting Fc and scFv expression on cell surface using flow cytometry. b. ZsGreen expression of CART cell for cultured 6 weeks.

Supplementary Figure 2. LMP1 surface expression on human nasopharyngeal carcinoma and B cell lymphoma cell lines determined by flow cytometry. LMP1-specific F(ab)₂ and anti-Fab FITC were used to measure LMP1 expression in tumor cell lines (red line histogram) and were compared with anti-Fab FITC only as a control (blue line histogram).

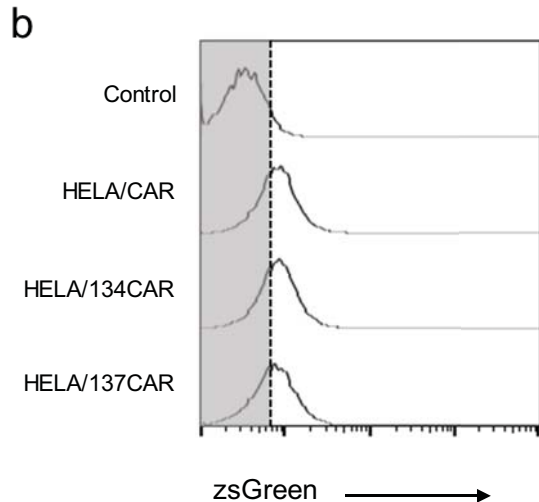
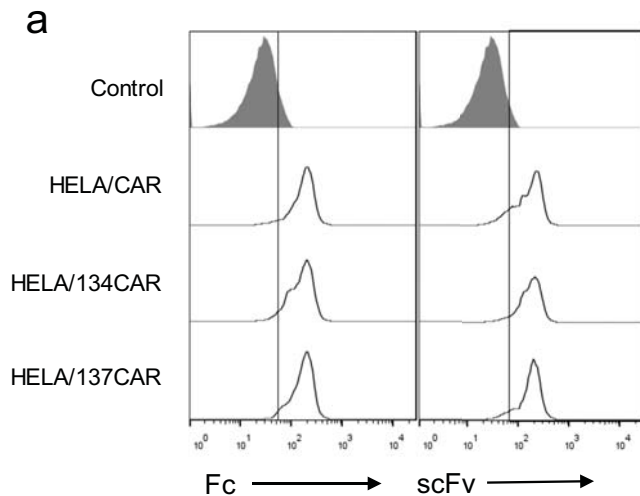
Supplementary Figure 3. Cytotoxic activity of HELA/CAR co-cultured with SUNE1 cells. On day 10, transduced cells were transferred into IL-2-free medium for 24 hours, the HELA/CAR T cells were incubated with SUNE1 cells at the indicated E:T ratio for 4 hours, and killing of target cells was quantified using a FACS-based cytotoxicity assay. Mean values \pm SEM calculated from three independent experiments are shown.

Supplementary Figure 4. CART cells produced IFN- γ and IL-2 co-culture with SUNE1 or LCL. a and c HELA/CAR T cells released significant

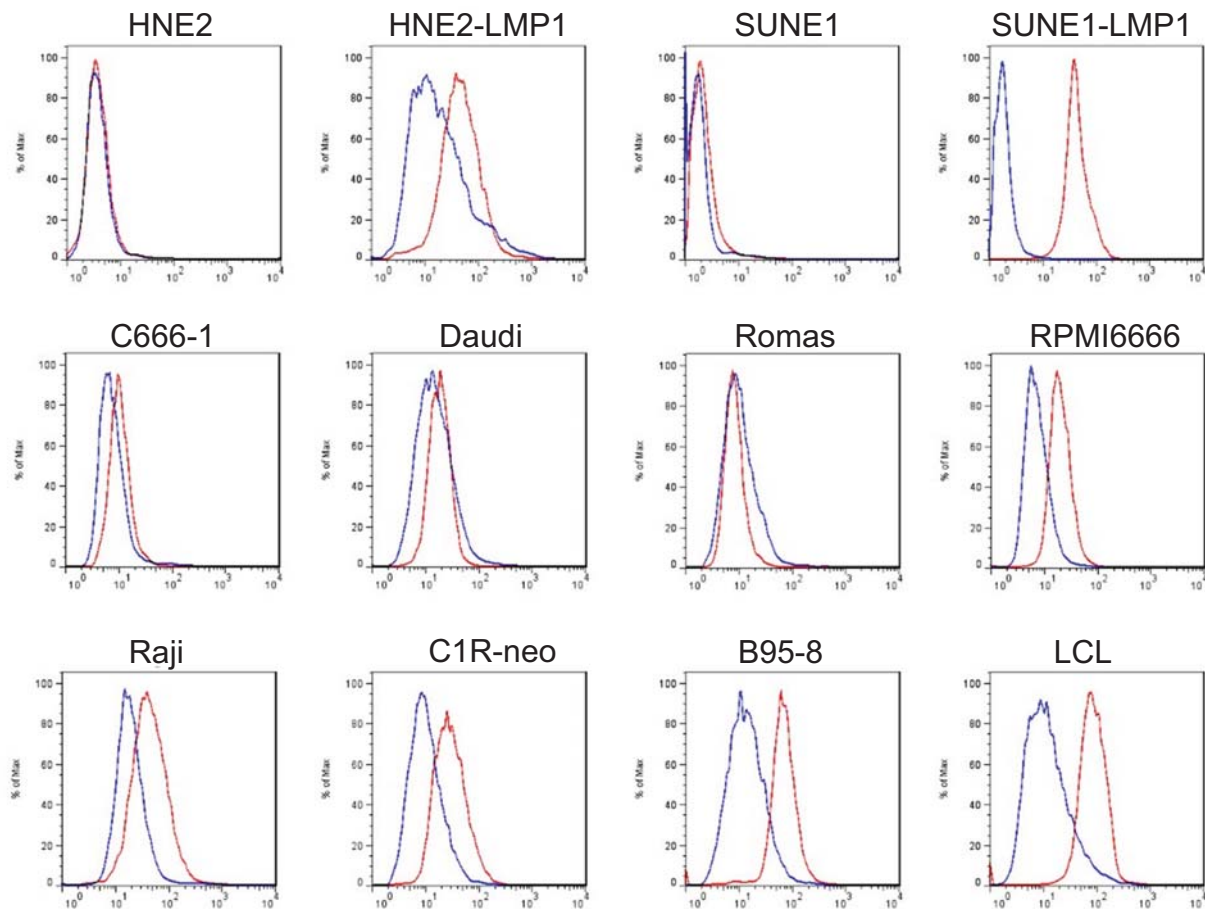
23 amounts of IFN- γ when co-cultured with SUNE1 and LCL cells. The
24 results are expressed as the mean \pm SEM and reflect data from three
25 biological replicates. The x-axis indicates the concentration of IFN- γ . b and
26 d. HELA/CAR T cells released significant amounts of IL-2 when co-
27 cultured with SUNE1 and LCL cells. The results are expressed as the
28 mean \pm SEM and reflect data from three biological replicates. The x-axis
29 indicates the concentration of IL-2. ** $p < 0.01$.

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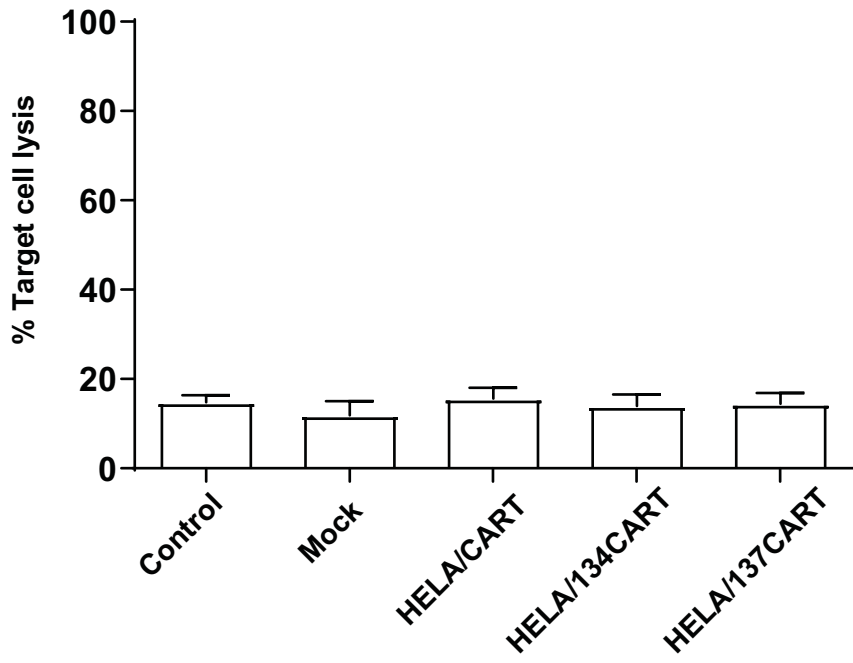
Supplementary Fig.1



Supplementary Fig.2



Supplementary Fig.3



Supplementary Fig.4

