

Figure S2 Abrogation of surface CD7 expression on T-cells prevents CAR T cell fratricide without impacting T-cell function

(A) Schematic of the recombinant lentiviral vectors CD7 blockade containing an ER retention domain and CD19 CAR (ScFv derived from FMC63) with ICOS and 4-1BB costimulatory domains. (B) Surface CD7 expression in mature T-cells with or without CD7 blockade. Experiments repeated with cells from six donors. \*\*\*\*p < 0.0001; two-

tailed unpaired t-test. (C) Representative data of CD19 CAR T cell cytotoxicity against CCRF (CD19<sup>-</sup>) and Raji cells (CD19<sup>+</sup>), with or without CD7 blockade. Data are presented as the mean  $\pm$  SD; \*\*\*\*p < 0.0001; two-way ANOVA. (D) Cytokine assay performed on culture medium collected in experiment (C). Data are presented as the mean  $\pm$  SD. \*\*\*\*p < 0.0001; 2-way ANOVA.