

Supporting information

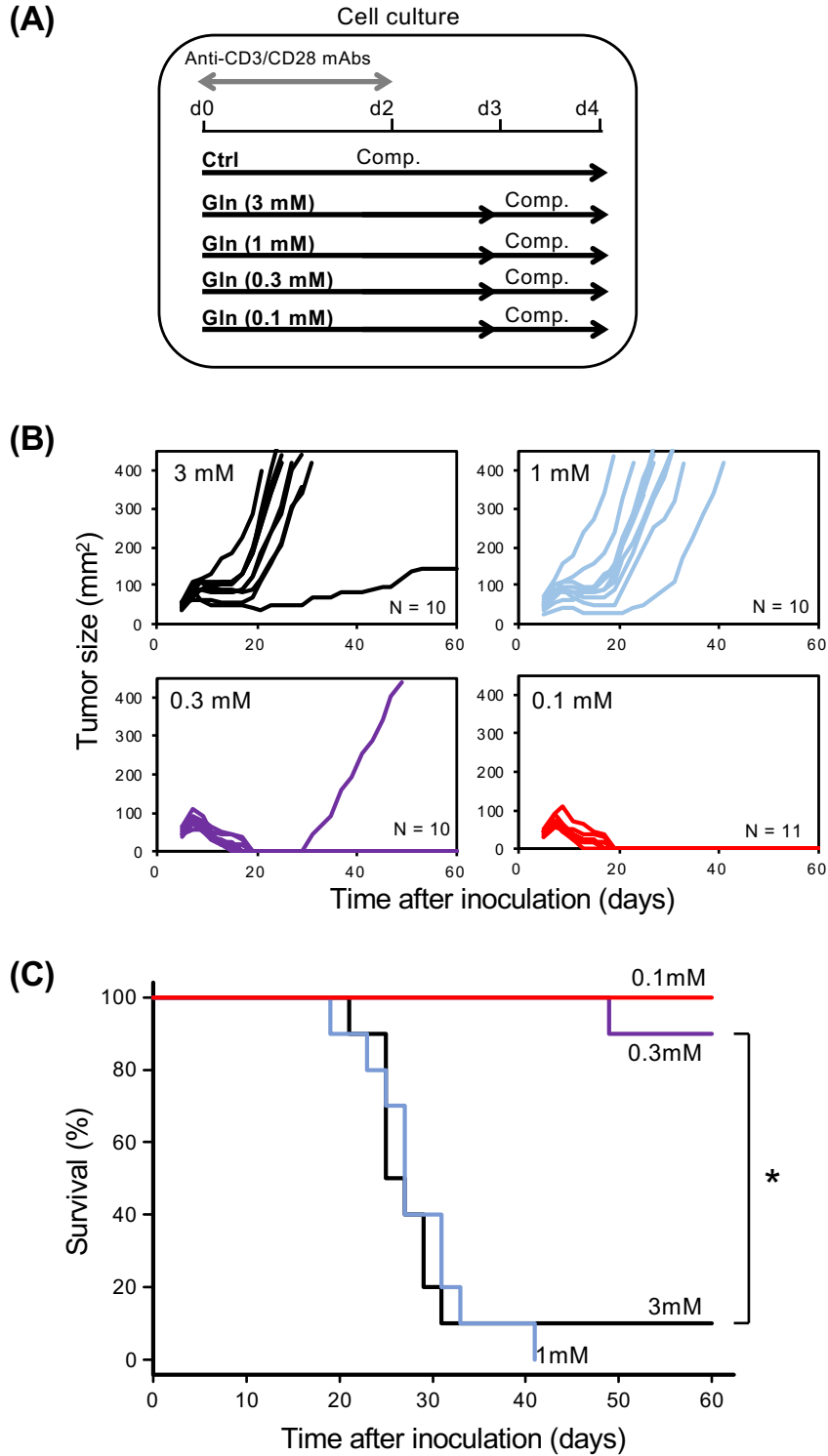


Fig S1. Comparison of antitumor activity of CD8⁺ T cells cultured with different doses of Gln. (A) The protocol for OT-1 CD8⁺ T-cell activation and culture. **(B)** Kinetics of the tumor sizes measured after tumor inoculation. **(C)** Kaplan-Meier's survival curve of tumor-inoculated mice. N = 10-11 per group, * $p < 0.01$ (Log-rank test).

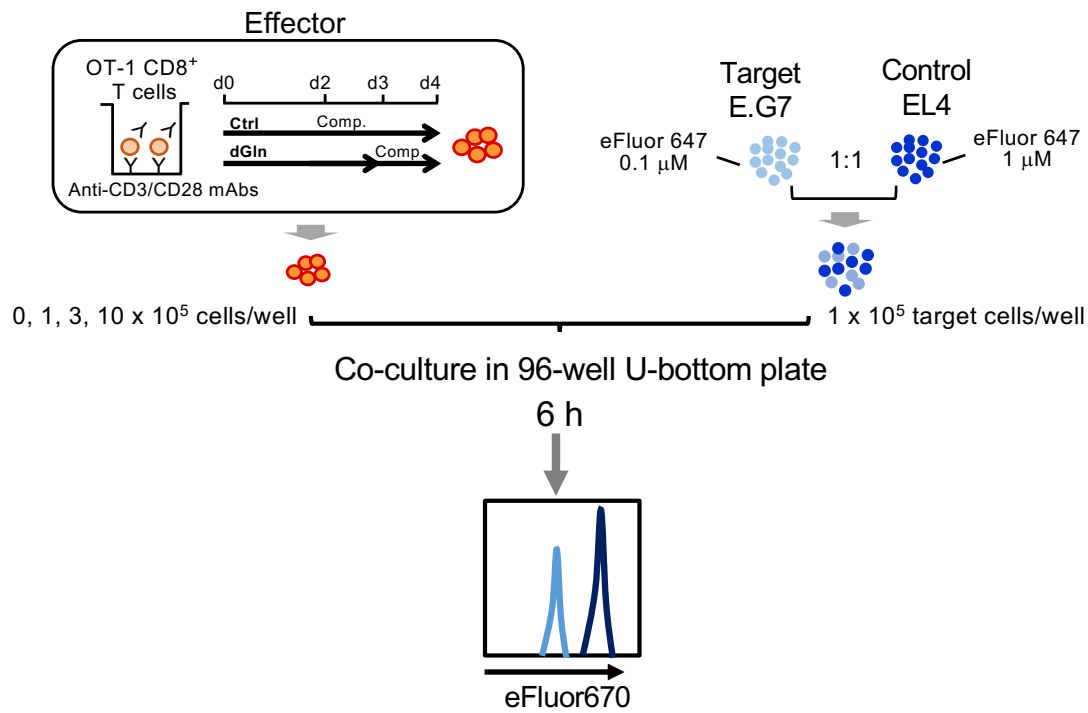


Fig S2. Schematic outline of an *in vitro* cytotoxic assay of activated OT-1 CD8⁺ T cells. Tumor cells were prepared using a 1:1 mixture of target E.G7 cells and control EL4 cells labeled with different concentration of eFluor 670. The effector OT-1 CD8⁺ T cells and tumor cells were then co-cultured in 96-well U-bottom plate for 6 h. Next, a ratio of target and control cells were analyzed by flow cytometry.

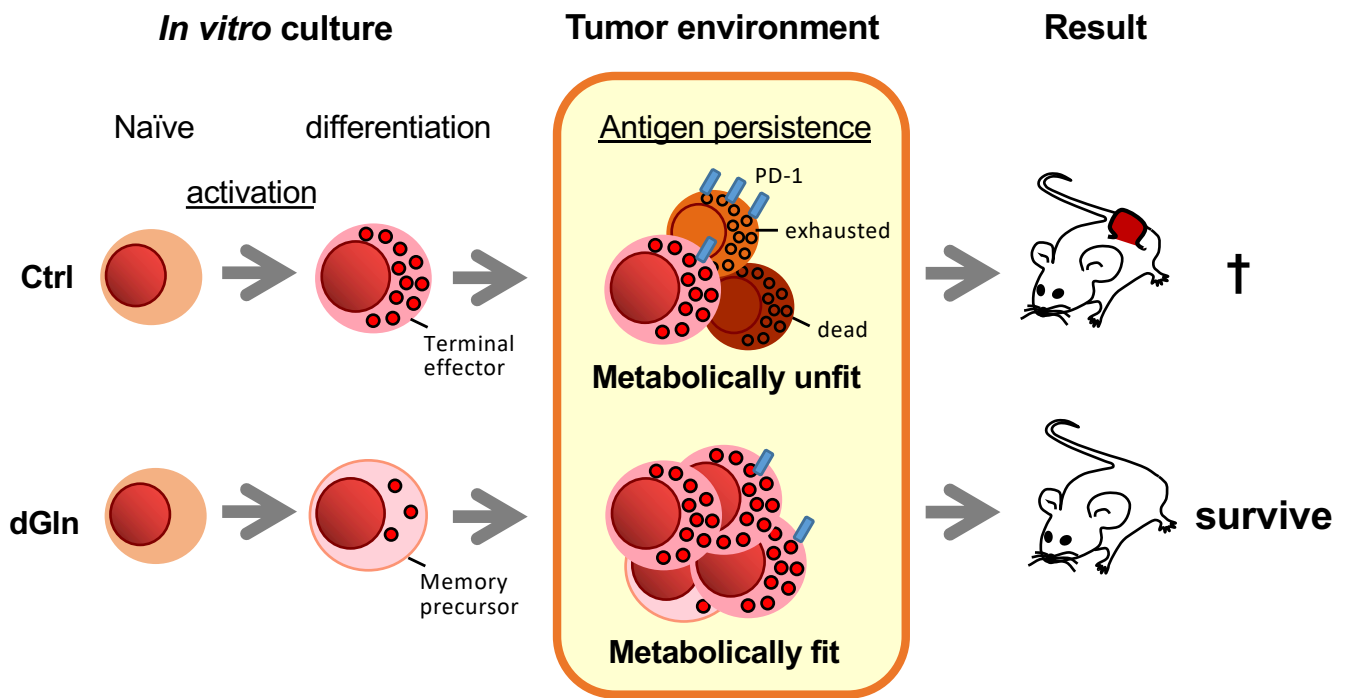


Fig S3. A schematic model of antitumor activity of tumor-specific CD8⁺ T cell cultured in Ctrl or dGln conditions. dGln culture enhances differentiation into memory and antitumor activity reducing T-cell exhaustion. †, Death of mouse.