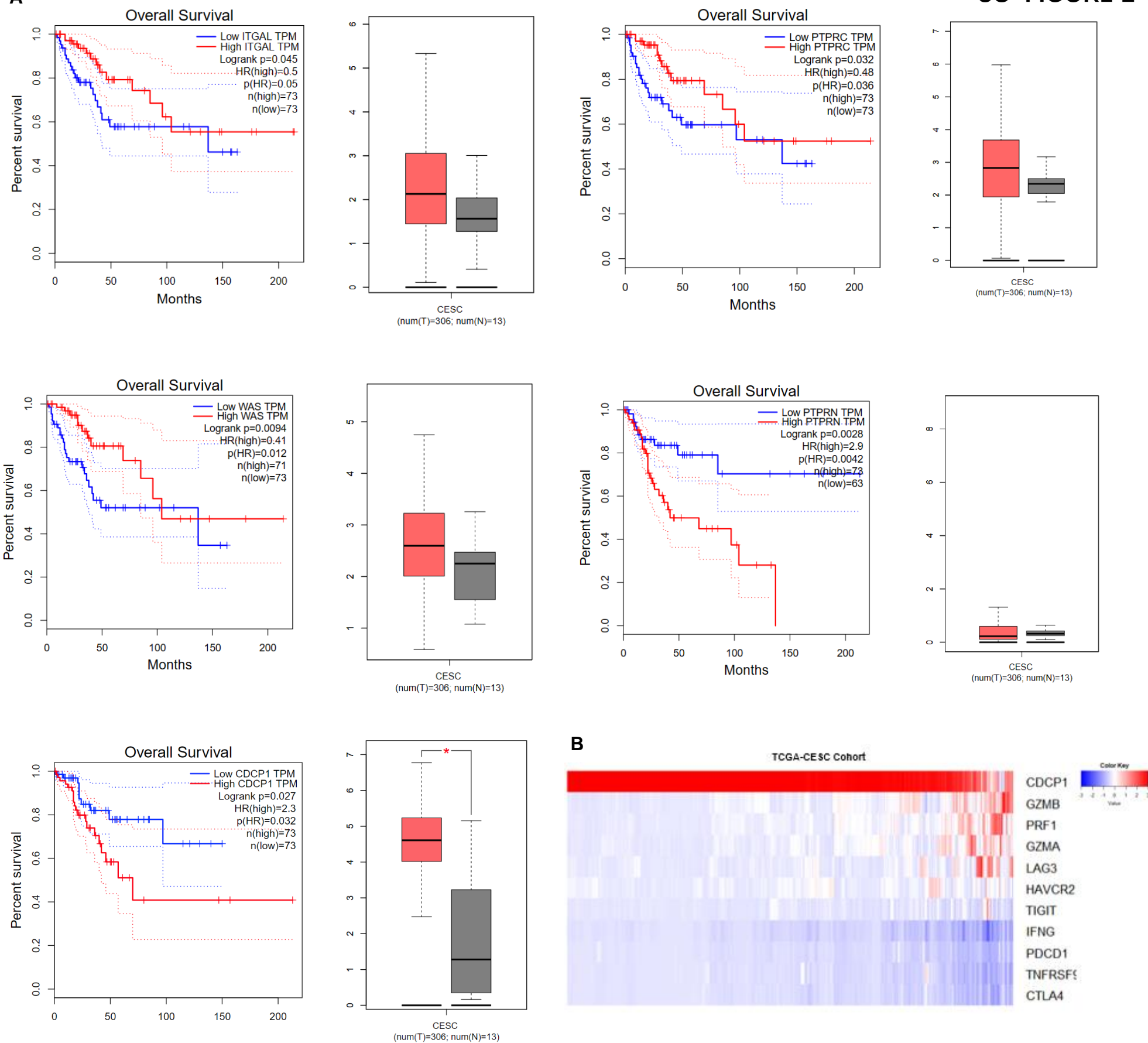**Supplementary Figure 1. Survival analysis and expression levels of potential cervical cancer immunotherapy targets in TCGA database.**

A. Survival analysis and expression levels of ITGAL, PTPRC, PTPRN, WAS, and CDCP1 in the TCGA cervical cancer database. ∗:$P < 0.05$.

B. Heatmap of the correlation between CDCP1 and functional and exhaustion markers of T cells CDCP1 in the TCGA cervical cancer database.
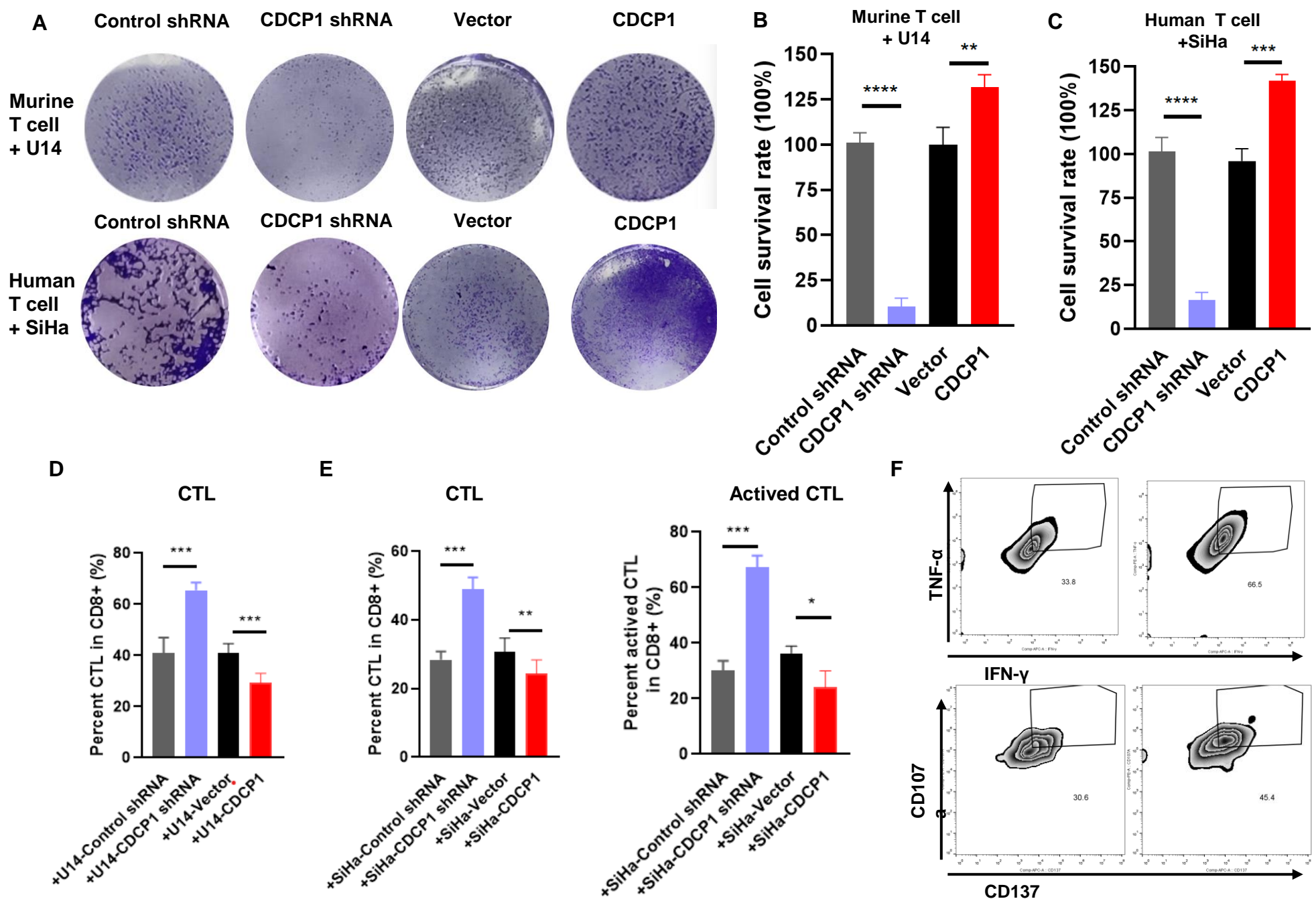
Supplementary Figure 2. Different expression level of CDCP1 affected T cell specific killing effort in vitro.

A-C. Murine U14 cells and Human SiHa cells with different CDCP1 level were co-cultured with activated T cells. Cells were subjected to crystal violet staining. Relative fold ratios of surviving tumor cell intensities are shown in (B) Murine U14 cell & (C) Human SiHa cell.

D. T cell co-culture assay. Murine T cells were co-cultured with different CDCP1 levels of U14 cells. Analysis with flow Cytometry. Frequencies of IFNγ+ and GZMB+ CTLs were quantified.

E&F: T cell co-culture assay. Human T cells were co-cultured with different levels of SiHa cells. Analysis with flow Cytometry. Frequencies of IFNγ+ GZMB+ CTLs and CD107a+CD137+ actived CTL were quantified. (F) showed Representative Flow Cytometry Images Frequencies of IFNγ+ GZMB+ CTLs and CD107a+CD137+ actived CTL. . Data represent at least three independent experiments. statistical significance of the difference was performed using Student's t test between groups. ns, not significant, $*P < 0.05$, $**P < 0.01$, $***P < 0.001$ and $****P < 0.0001$.