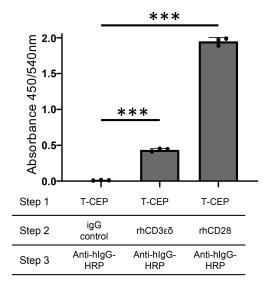
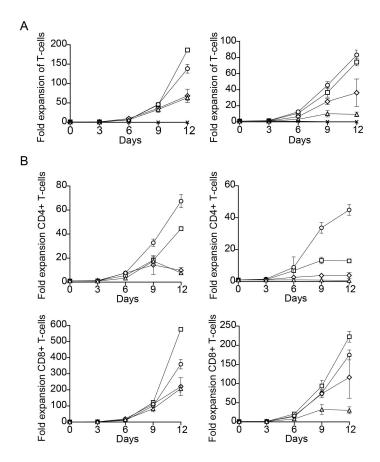
## **Supplemental Figures**

T-CEP binding to target antigens



**Supplemental Figure 1:** T-CEP binding to target antigens was demonstrated by enzymelinked immunosorbent assay (ELISA). A sandwich ELISA was carried out by coating T-CEP on high-binding wells (4μg/mL) and target antigens added to wells. The binding of recombinant human CD3εδ-Fc (4μg/mL), recombinant human CD28-Fc (4μg/mL) , and an Fc-matched control (4μg/mL) was detected using an anti-hlgG-HRP conjugate (n=3, one-way ANOVA with Dunnett's test). **Terms:** rhCD3εδ, recombinant human CD3εδ; rhCD28, recombinant human CD28; **Symbols:** \*\*\* P<0.001.



**Supplemental Figure 2**: The individual expansion profiles of PBMC Donors #4 (left) and #5 (right). For each donor, the number of viable cells were counted in duplicate samples using a hemocytometer following the staining of dead cells with trypan blue for each expansion method tested **(A)** 12-Day expansion using specified stimulation and low level of IL-2. **(B)** CD4<sup>+</sup> and CD8+ T-cell expansions of two donors. The fold expansion was calculated based on the starting number of CD4+ and CD8+ T-cells. **Terms:** TACs,Tetrameric antibody complexes; i  $\alpha$ CD3, Immobilized anti-CD3; s  $\alpha$ CD28, Soluble anti-CD28. **Symbols:**  $\Box$ , T-CEP;  $\circ$ , TACs;  $\diamondsuit$ , i  $\alpha$ CD3 + s  $\alpha$ CD28;  $\triangle$ , i  $\alpha$ CD3.