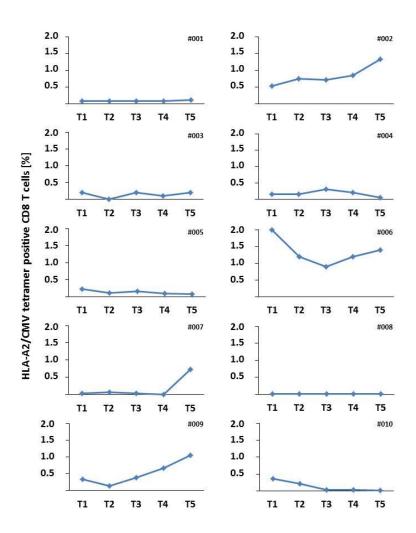
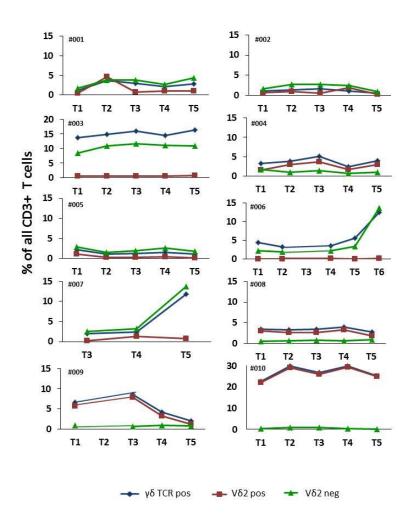
## **Supplementary Materials**

**Figure S1**. CMV-specific  $\alpha\beta$  T cell frequencies during vaccination.



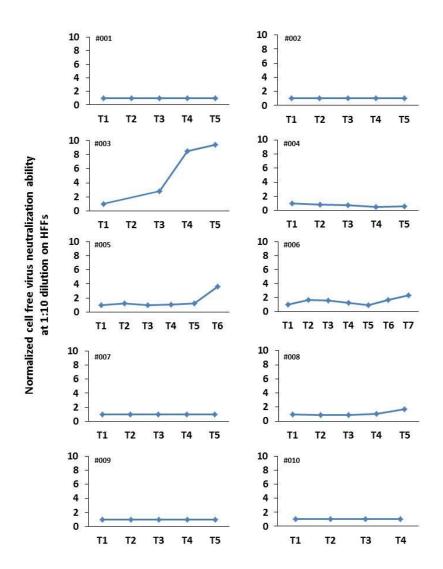
Multiparametric flow cytometry revealed an increase of CD8<sup>+</sup> / HLA-A2 CMVpp65-specific tetramer positive T lymphocytes over the course of repetitive CMVpp65 vaccinations in patients #002, #007 and #009 corresponding to a clearance of CMV.

**Figure S2.** γδ T cell frequencies during vaccination.



The frequency of CD3<sup>+</sup>  $\gamma\delta$  T cells as well as V $\delta$ 2 negative and V $\delta$ 2 positive subpopulations were assessed over the course of CMV peptide vaccination as described in the online methods section. The V $\delta$ 2 negative subpopulation of particular importance for the clearance of the CMV load increased significantly in patients #001, #003, #006 and #007.

Figure S3. CMV neutralizing antibodies.



CMV neutralizing antibody titers were assessed over the course of CMV peptide vaccination as described in the online methods section. Time points of assessment: T1 – before  $1^{st}$  vaccination; T2/T3/T4/T5 – after  $1^{st}/2^{nd}/3^{rd}/4^{th}$  vaccination; T6/T7 – approximately one or three months after  $4^{th}$  vaccination. (HFFs = Human Foreskin Fibroblast Cells).