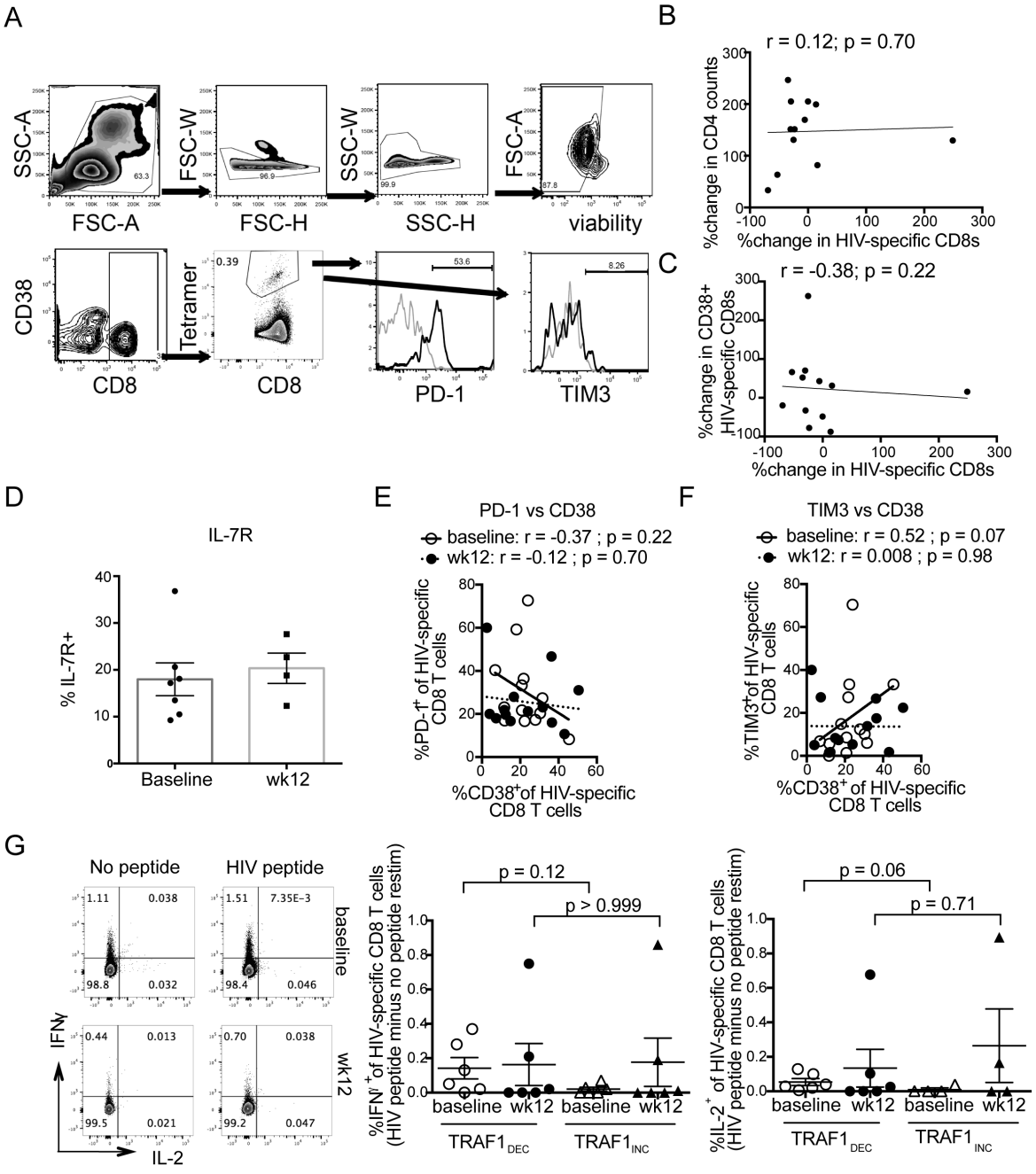
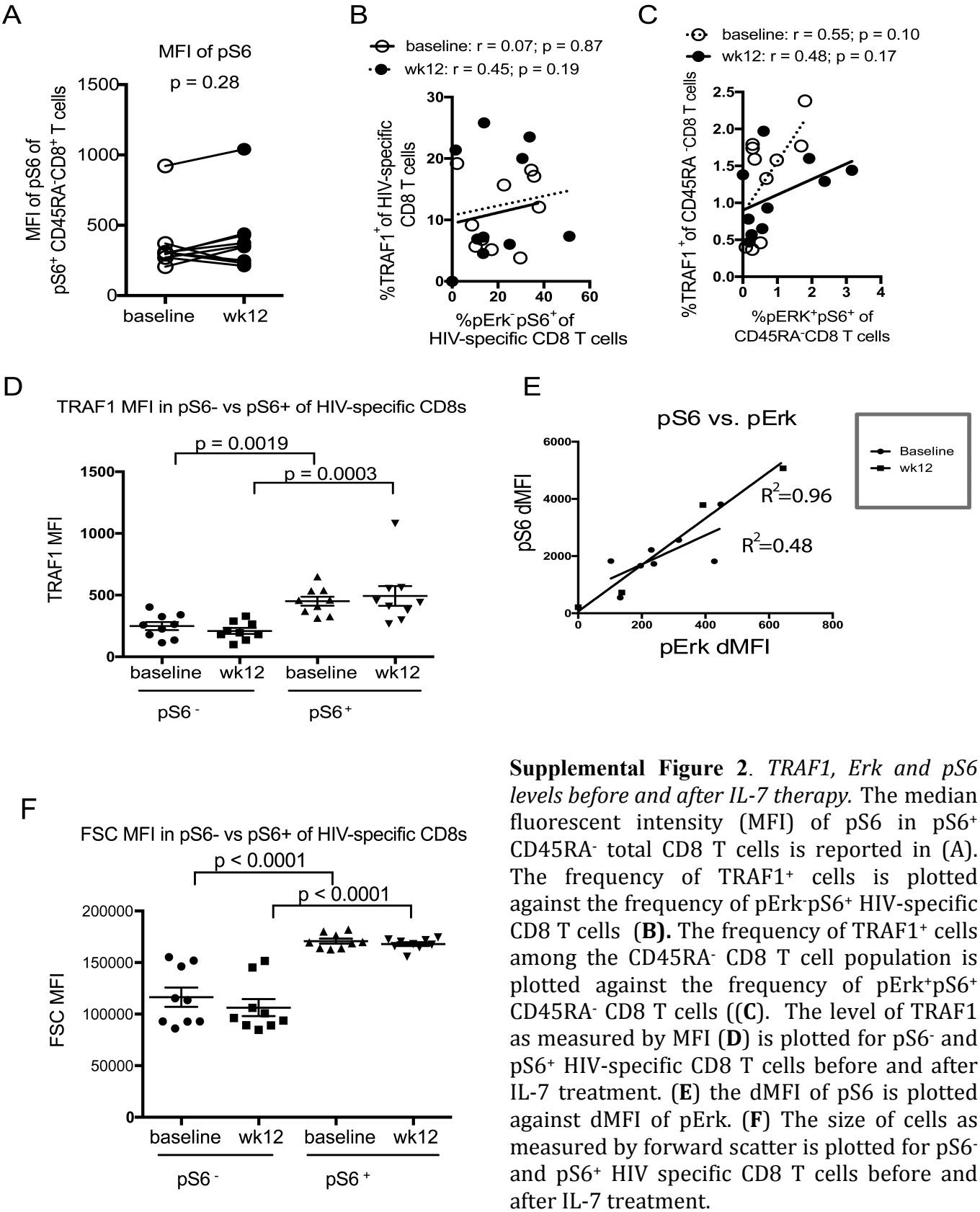


Supplemental Figure 1. *Flow cytometry analysis of HIV-specific CD8 T cells before and after IL-7 therapy.* Gating strategy for flow cytometry is shown in (**A**). The change in frequency of HIV-specific CD8 T cells is plotted against the change in CD4 counts (**B**) and the change in the cellular activation as measured by the frequency of $CD38^+$ cells (**C**). The frequencies of $IL\text{-}7R^+$ HIV-specific T cells (**D**). The frequency of $PD\text{-}1^+$ (**E**) or $TIM3^+$ (**F**) HIV-specific CD8 T cells are plotted against cellular activation as measured by the frequency of $CD38^+$ cells. Linear regression is shown for baseline (solid line) and week 12 (dotted line). The frequencies of IFNγ and $IL\text{-}2^+$ CD8 T cells in response to HIV-peptide as compared to no-peptide are reported for $TRAF1_{INC}$ and $TRAF1_{DEC}$ T cell populations at baseline and wk12 **(G).** Left: representative flow cytometry plots; right summary panels. Statistical analysis was performed as described in materials and methods.



Supplemental Figure 2. *TRAF1, Erk and pS6 levels before and after IL-7 therapy.* The median fluorescent intensity (MFI) of pS6 in pS6$^+$ CD45RA$^-$ total CD8 T cells is reported in (A). The frequency of TRAF1$^+$ cells is plotted against the frequency of pErk$^-$pS6$^+$ HIV-specific CD8 T cells (**B).** The frequency of TRAF1$^+$ cells among the CD45RA$^-$ CD8 T cell population is plotted against the frequency of pErk$^+$pS6$^+$ CD45RA$^-$ CD8 T cells ((**C**). The level of TRAF1 as measured by MFI (**D**) is plotted for pS6$^-$ and pS6$^+$ HIV-specific CD8 T cells before and after IL-7 treatment. (**E**) the dMFI of pS6 is plotted against dMFI of pErk. (**F**) The size of cells as measured by forward scatter is plotted for pS6$^-$ and pS6$^+$ HIV specific CD8 T cells before and after IL-7 treatment.