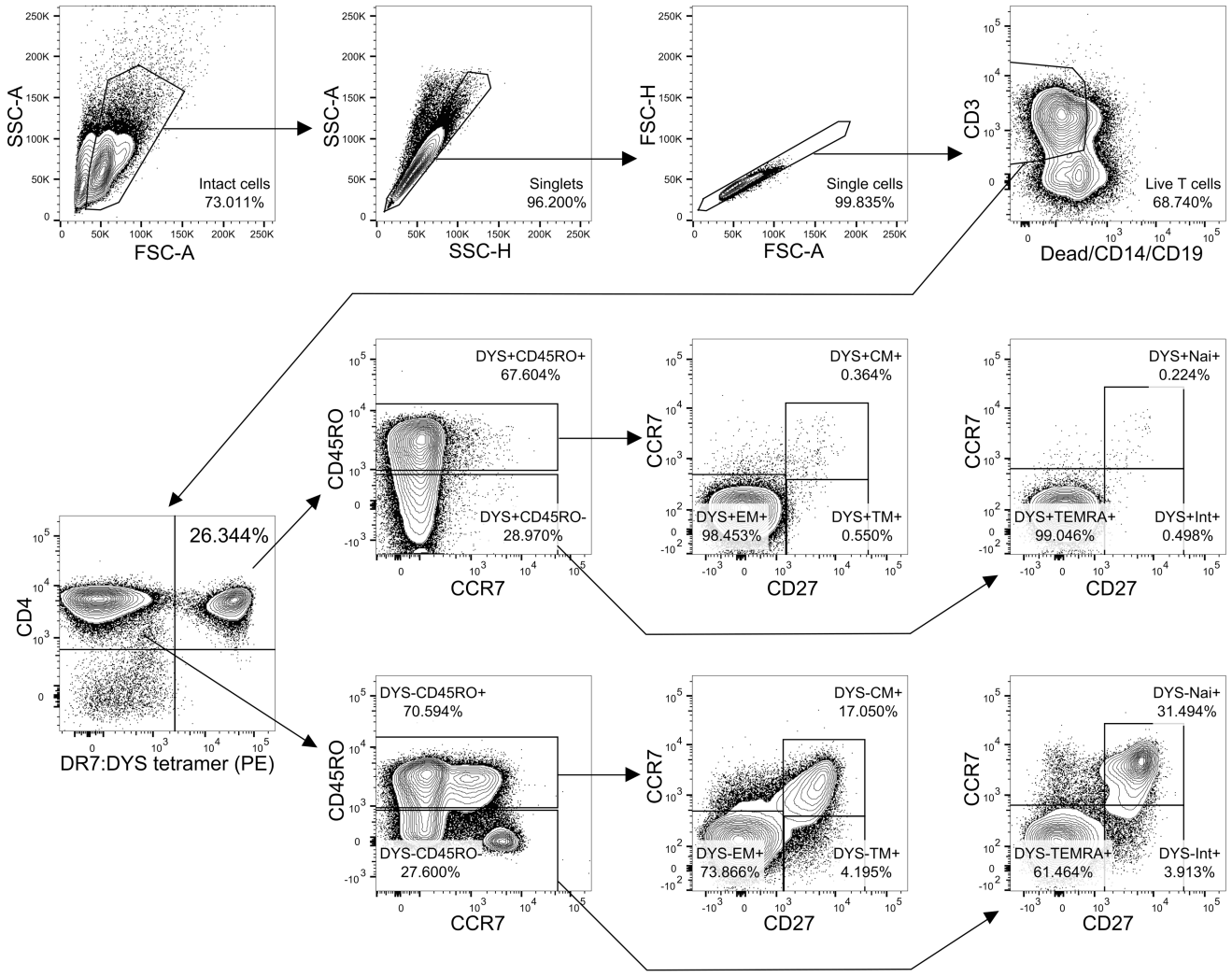
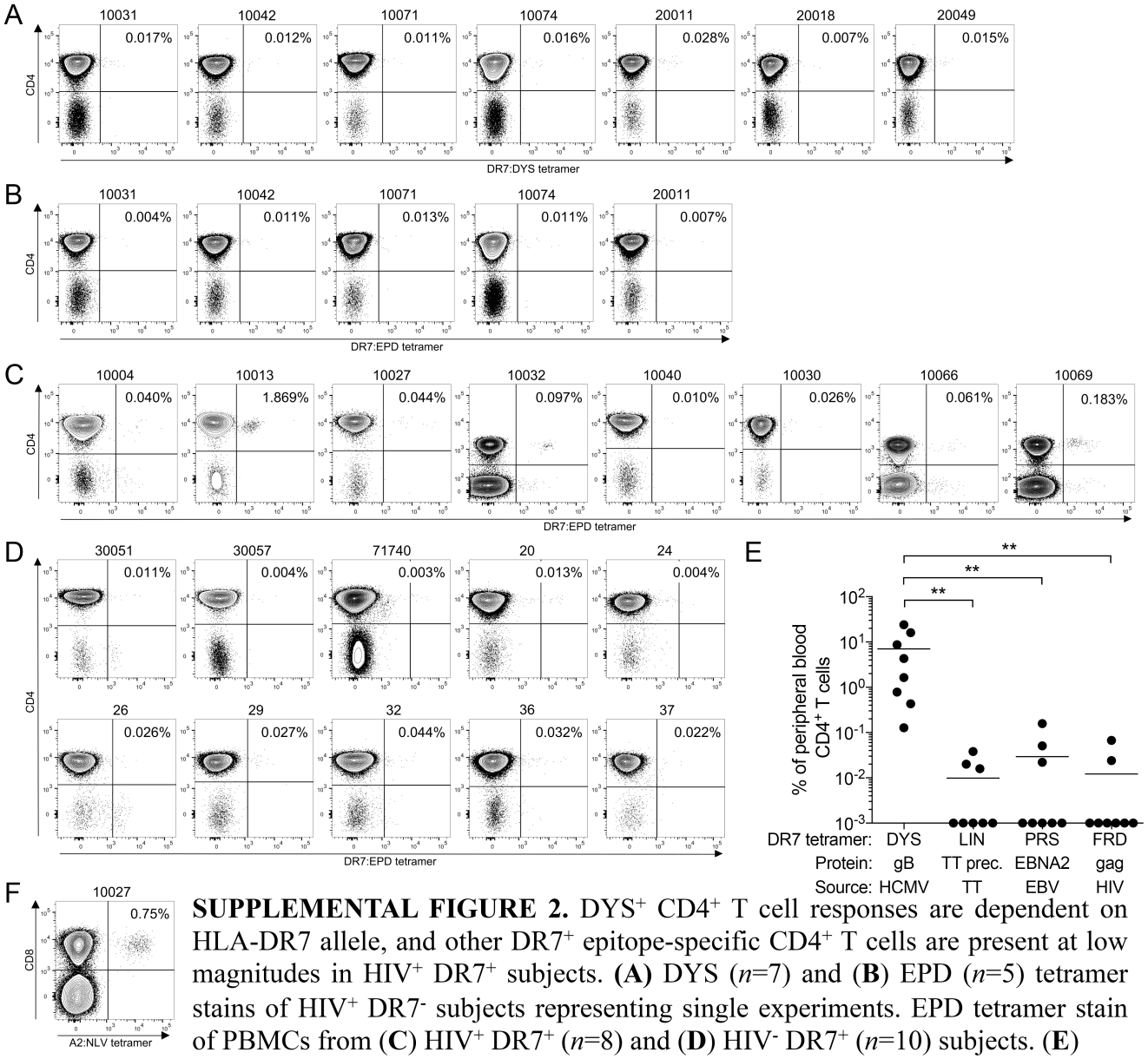
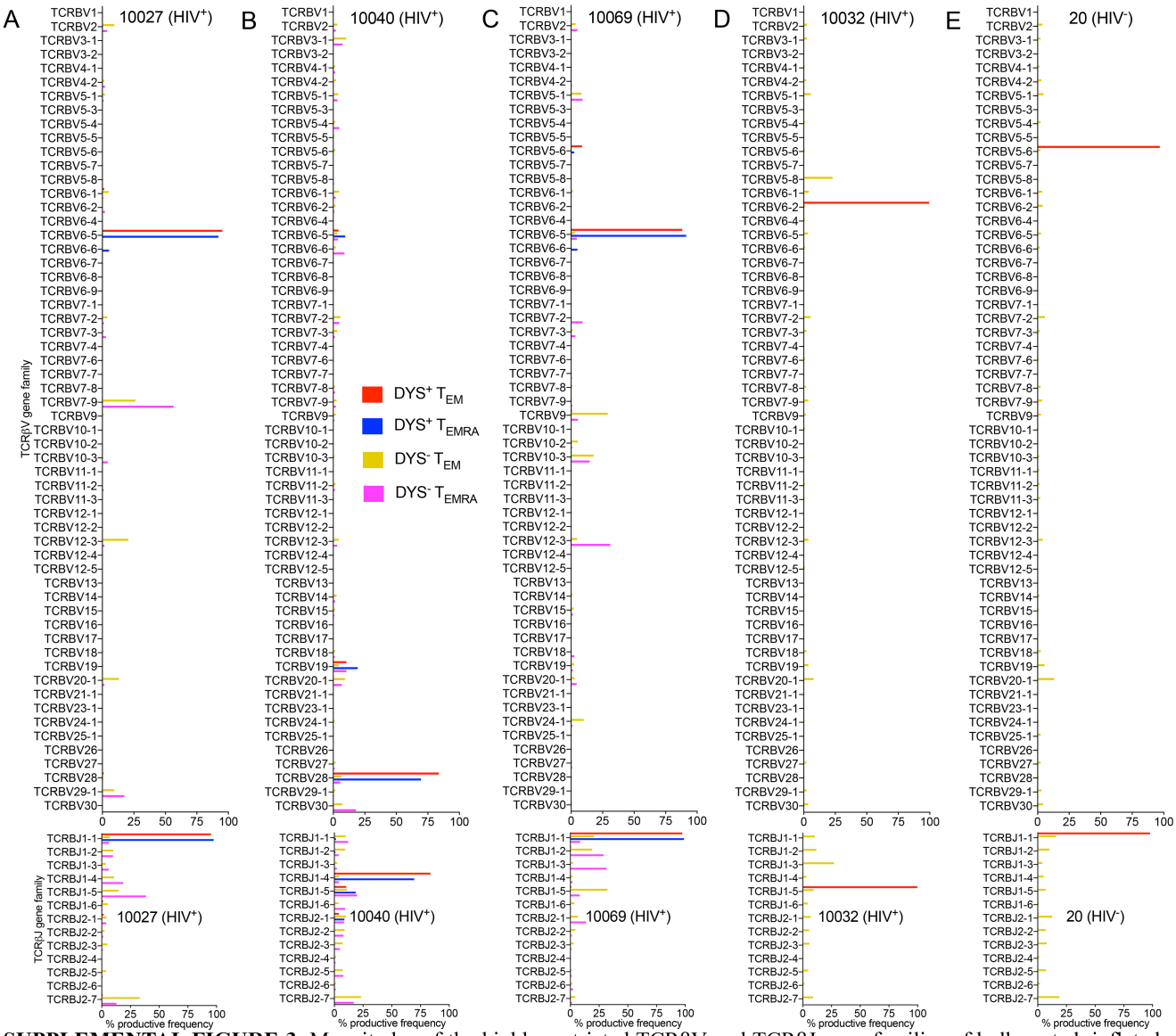
Supplemental data



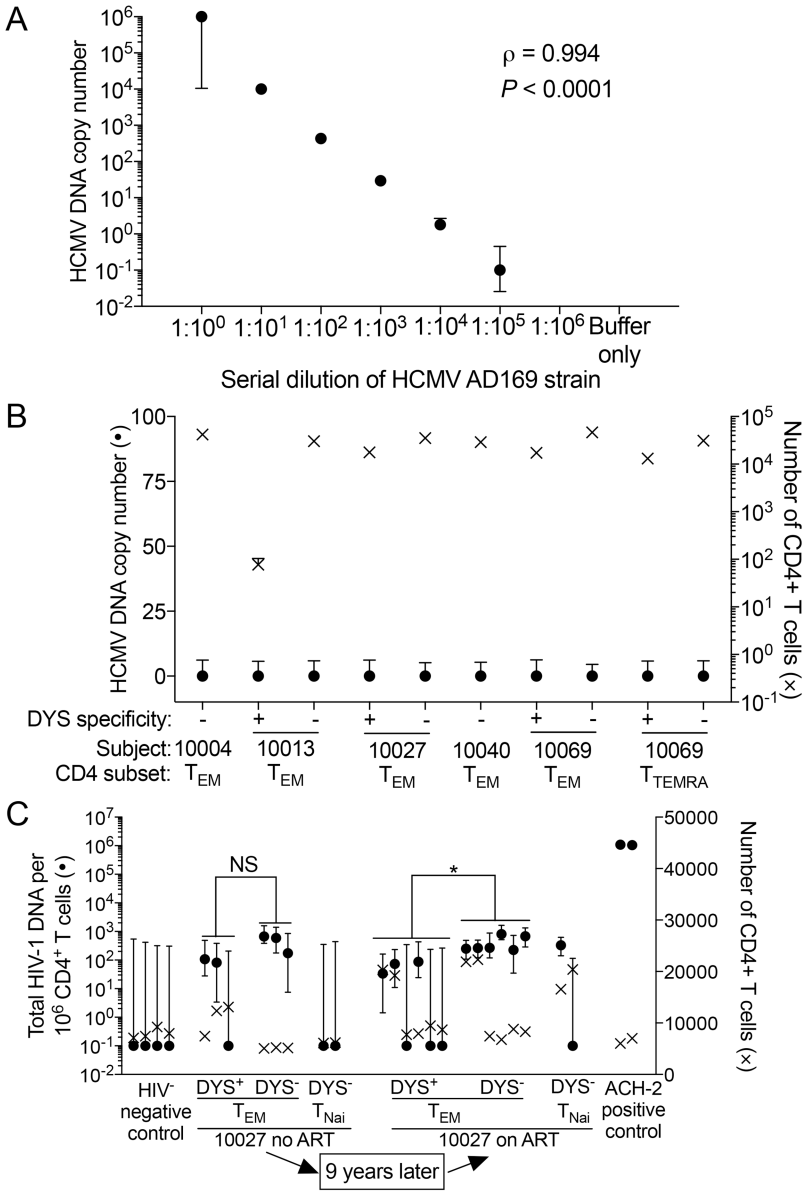
SUPPLEMENTAL FIGURE 1. Representative gating hierarchy for CD4$^+$ T cell tetramer staining. FlowJo plots were obtained from CD4-enriched PBMCs of subject 10027's tp2 using PE-conjugated DR7:DYS tetramer. DYS- and DYS+: DYS$^-$ and DYS$^+$ CD4$^+$ T cells, respectively; CM +, TM+, and EM+: central, transitional and effector memory T cells, respectively; Nai+, Int+ and TEMRA+: naïve, intermediate and T-effector memory-RA$^+$ T cells, respectively. Data represent ten biological replicates. The CD4 vs. DR7:DYS tetramer (PE) plot is also shown in fig. 1B.



SUPPLEMENTAL FIGURE 2. DYS^{+} CD4^{+} T cell responses are dependent on HLA-DR7 allele, and other DR7^{+} epitope-specific CD4^{+} T cells are present at low magnitudes in HIV^{+} DR7^{+} subjects. **(A)** DYS (*n*=7) and (**B**) EPD (*n*=5) tetramer stains of HIV^{+} DR7^{-} subjects representing single experiments. EPD tetramer stain of PBMCs from (**C**) HIV^{+} DR7^{+} (*n*=8) and (**D**) HIV^{-} DR7^{+} (*n*=10) subjects. (**E**) Response magnitude comparisons of DR7-restricted CD4^{+} T cells from the HIV^{+} HCMV^{+} DR7^{+} cohort that are specific for DYS, tetanus toxoid precursor LIN, EBV EBNA2 PRS or HIV gag FRD epitopes (n=8; tp1 of Subject 10004, and tp2 of Subjects 10013, 10027 and 10032). (**F**) CD8 A2:NLV tetramer stain of Subject 10027's tp2 PBMCs. Data represent at least two biological replicates except Subject 10032's EPD tetramer stain due to insufficient cells and panel (**E**). PBMCs were CD4-enriched or left untouched.



SUPPLEMENTAL FIGURE 3. Magnitudes of the highly restricted TCRβV and TCRβJ gene families of bulk-sorted, inflated DYS$^+$ CD4$^+$ T cells. Data represent single experiments for Subjects (**A**) 10027, (**B**) 10040, (**C**) 10069, (**D**) 10032, and (**E**) 20, which complement fig. 3. Top row: TCRβV; bottom row: TCRβJ.



SUPPLEMENTAL FIGURE 4. Inflated DYS$^+$ CD4$^+$ T cells serve as latent HIV but not HCMV reservoirs. **A**–**B**: Droplet digital PCR (ddPCR) HCMV DNA quantitation in single experiments of (**A**) HCMV AD169 strain serial dilutions, and (**B**) DYS$^+$ and DYS$^-$ CD4$^+$ T cells from HIV$^+$ HCMV$^+$ DR7$^+$ subjects (n=6). (**C**) ddPCR HIV DNA quantitation comparison between DYS$^+$ and DYS$^-$ CD4$^+$ T_{EM} from Subject 10027's tp1 (no ART) and tp2 (on ART). Data represent 3 technical replicates except tp2 with two biological replicates containing 3 technical replicates each. Data points at 10^{-1} indicate undetected HIV DNA. All graphs show 95% CI.