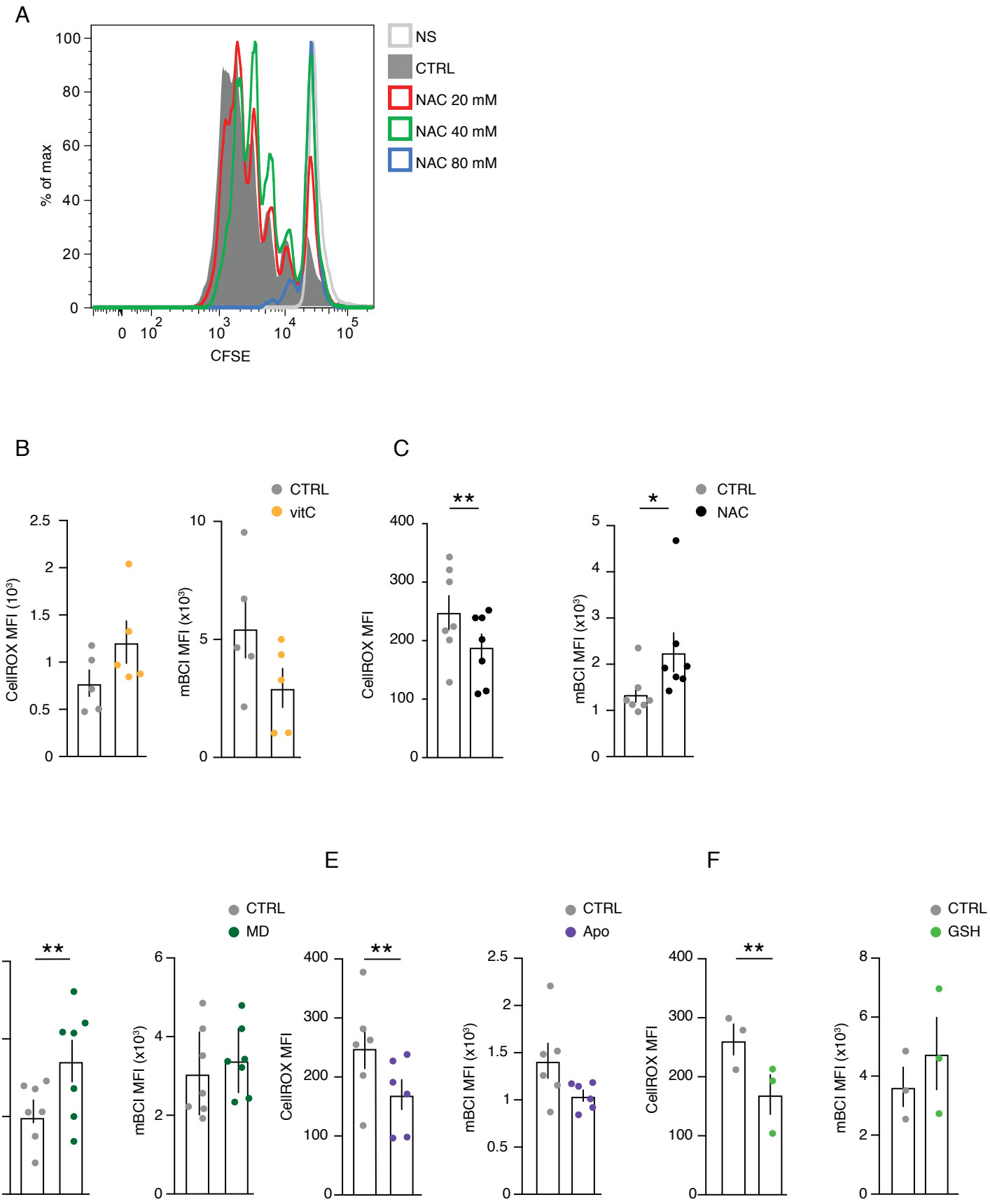
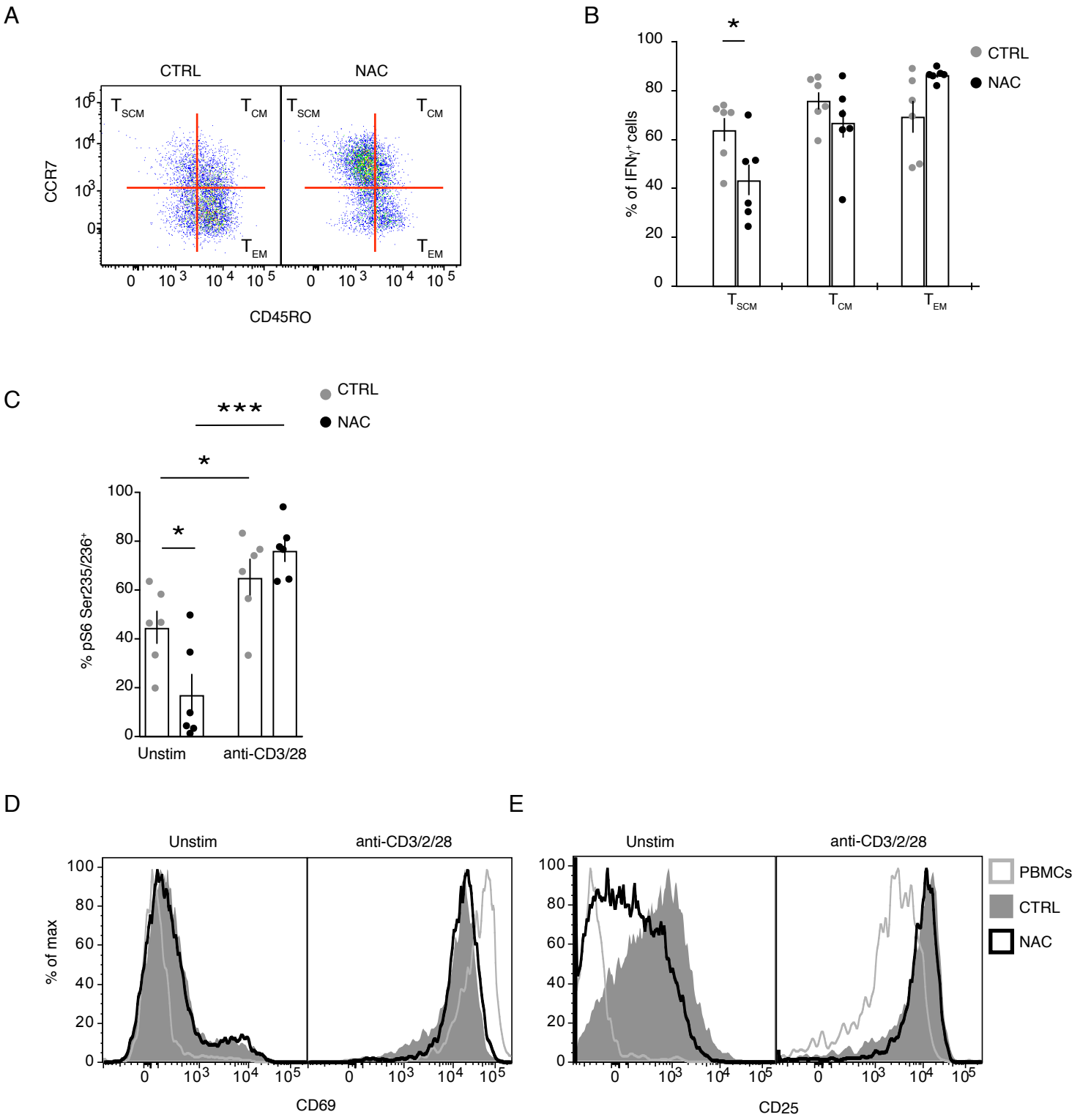


Supplementary Figure 1

Supplementary Figure 1. Total cellular reactive oxygen species (ROS) and reduced glutathione (GSH) levels in $CD8^+$ T cells activated in the absence or presence of different modulators of redox status. A) Representative histogram of CFSE dilution of NAC-treated and CTRL $CD8^+$ T cells evaluated at day 4. Different concentrations of NAC were tested. NS, CFSE-stained, non-proliferating control cells. Similar results were obtained from n=2 HD in n=1 exp. **B-F)** Mean±SEM MFI of CellROX and mBCI in $CD8^+$ T_N cells (n=3-7 HD) activated for different times with anti-CD3/CD28 Dynabeads and IL-2/IL-12 in the absence or presence of vitC (B; 48h), NAC (C; 18h), MD (D; 2h), Apo (E; 18h), GSH (F; 2h). Selected time points of a time course experiments involving measurements at 2, 18 and 48h after stimulation are shown for simplicity. Statistical analyses were performed with paired Student's t-test in all graphs except of mBCI staining of NAC where non-parametric Wilcoxon test was used. * $p<0.05$, ** $p<0.01$.



Supplementary Figure 2

Supplementary Figure 2. NAC-generated T_{SCM} cells undergo rapid activation following restimulation. A) Representative CD45RO and CCR7 expression in $CD8^+$ T cells treated as in Figure 2E and restimulated with PMA/ionomycin. **B)** Mean±SEM frequencies of $IFN\gamma^+$ cells with the indicated maturation phenotypes from CTRL and NAC-treated $CD8^+$ T cells (n=6 HD from n=2 exp.). * $p<0.05$, non-parametric paired Wilcoxon test. **C)** Mean±SEM frequencies of Ser235/236 $pS6^+$ in CTRL and NAC-generated $CD8^+$ T_{SCM} cells at day 8 left unstimulated (unstim) or restimulated with anti-CD3/28 for 30 minutes (n=6 HD from n=2 exp.). * $p<0.05$, *** $p<0.001$, parametric paired Student's t-test. **D, E)** Representative histograms of CD69 (D) and CD25 (E) in CTRL and NAC-generated $CD8^+$ T_{SCM} cells at day 8 left unstimulated (unstim) or restimulated with anti-CD3/2/28 antibody-conjugated beads. PBMCs from a HD are depicted as an additional control. Similar results were obtained from n=2 additional individuals from n=2 exp.