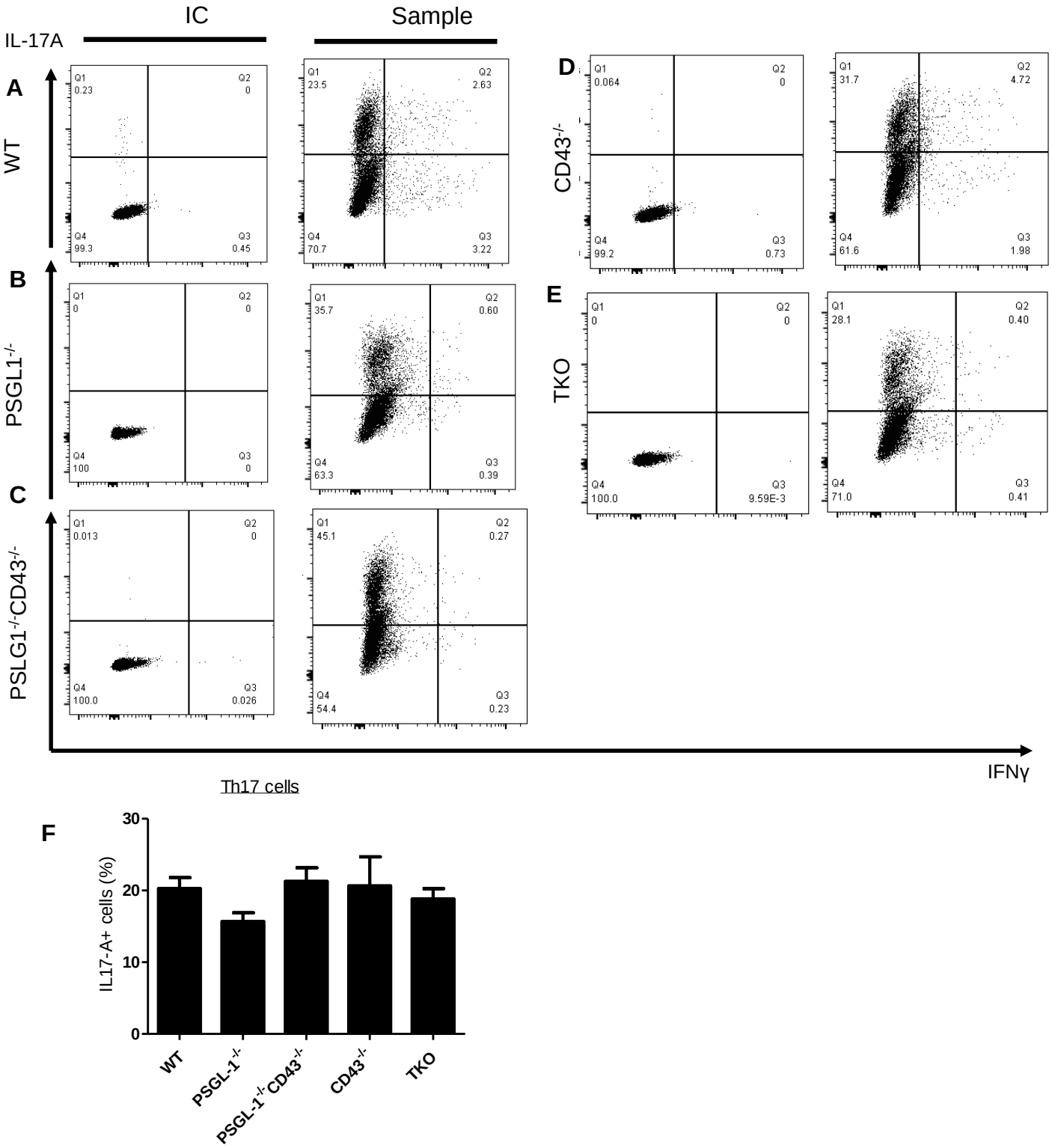
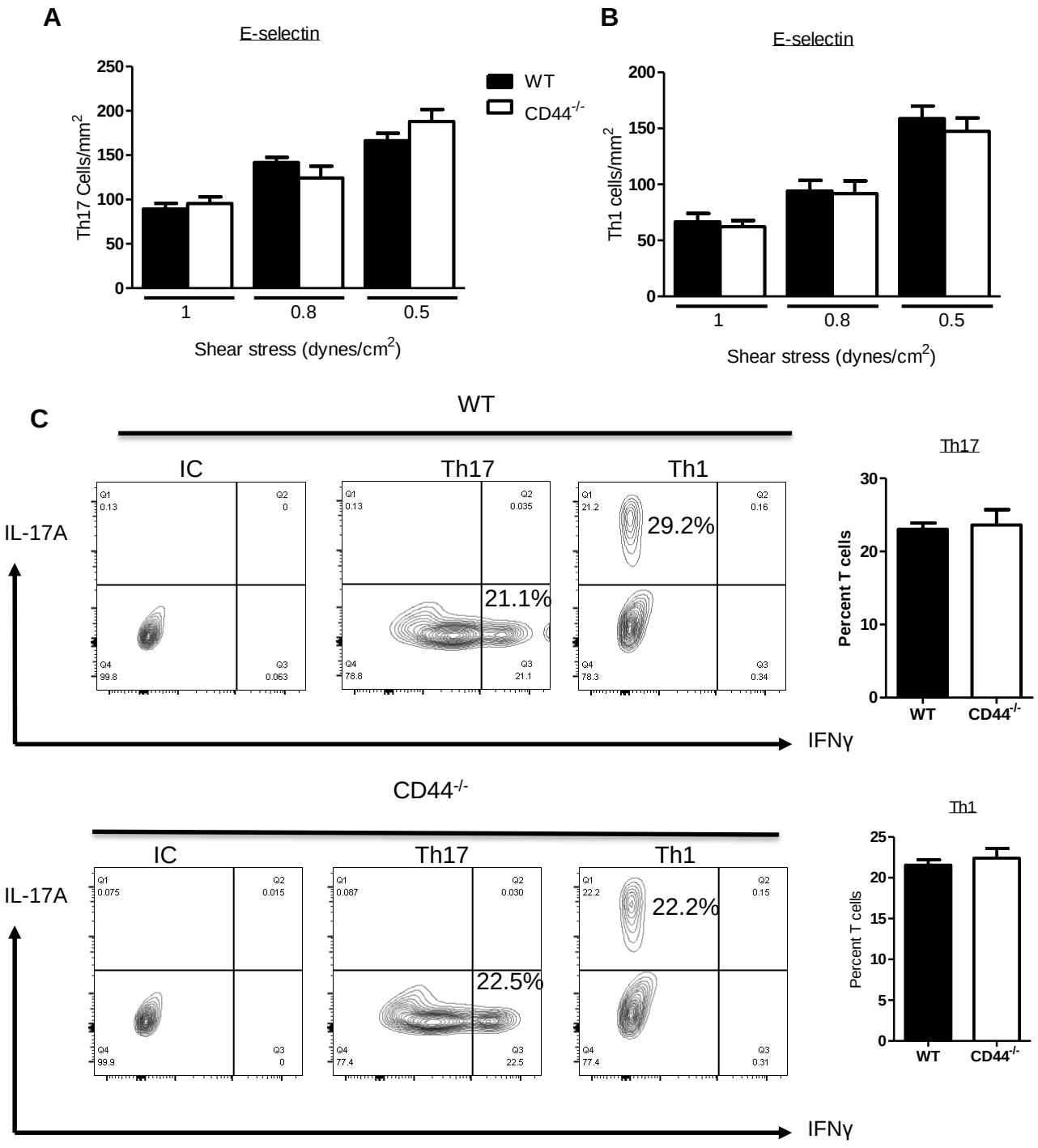
Supplemental Figure 1 :



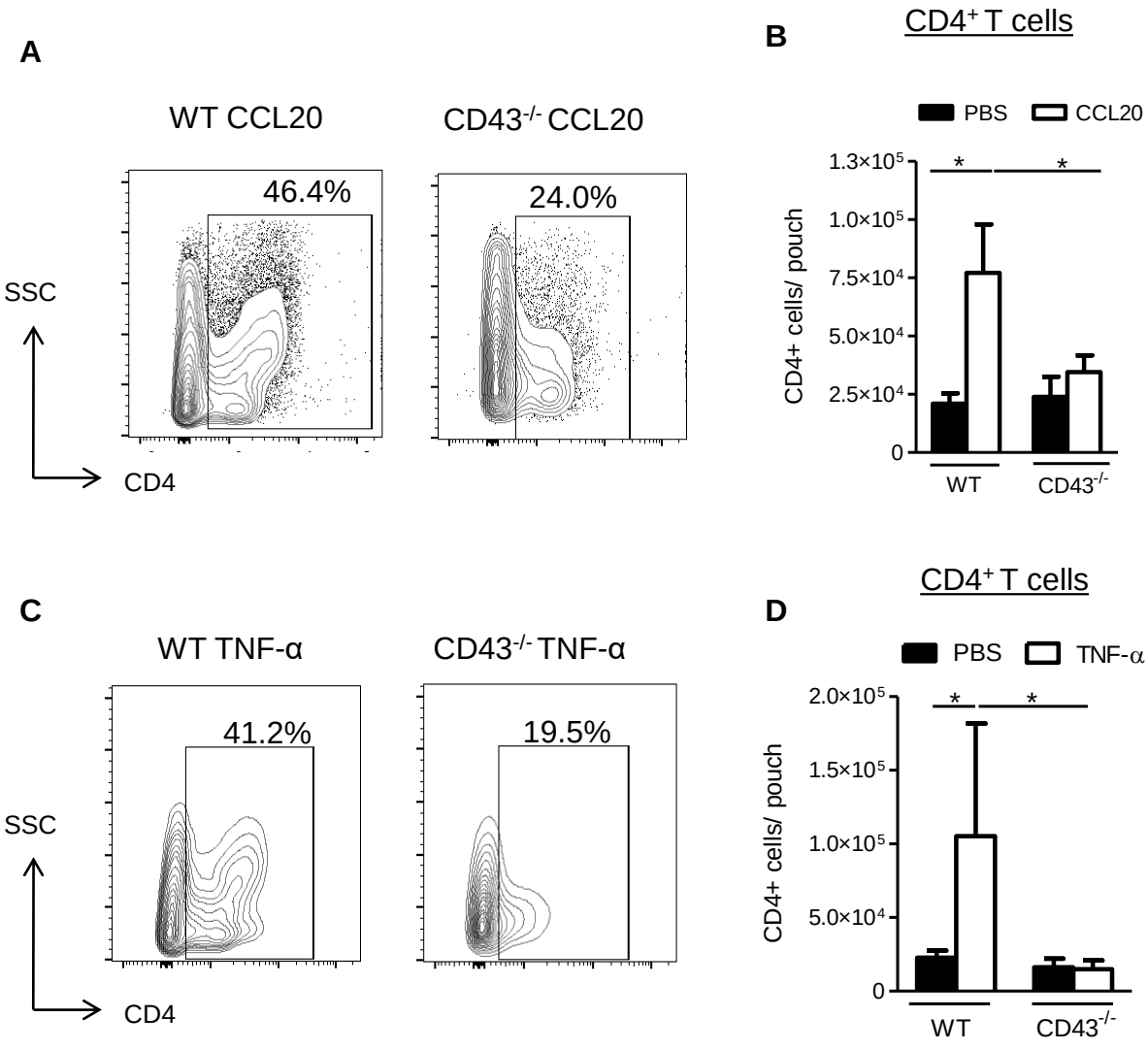
<u>Supplemental Figure 1:</u> Th17 differentiation in the indicated candidate scaffold molecules deficient mice. Naïve CD4$^+$ T cells from WT **(A)**, PSGL-1 **(B)**, PSGL-1$^{-/-}$CD43$^{-/-}$ DKO (**C**), CD43$^{-/-}$ (**D**) and PSGL1$^{-/-}$CD43$^{-/-}$CD44$^{-/-}$ (TKO) (**E**) mice were polarized to Th17 cells as described in methods and assessed by flow cytometry for IL17-A staining. Quantification of the percentages of IL17A$^+$ cells among the different preparations for the indicated mice. A representative FACS plot is shown from 3-6 independent experiments quantified in **F.**

Supplemental Figure 2 :



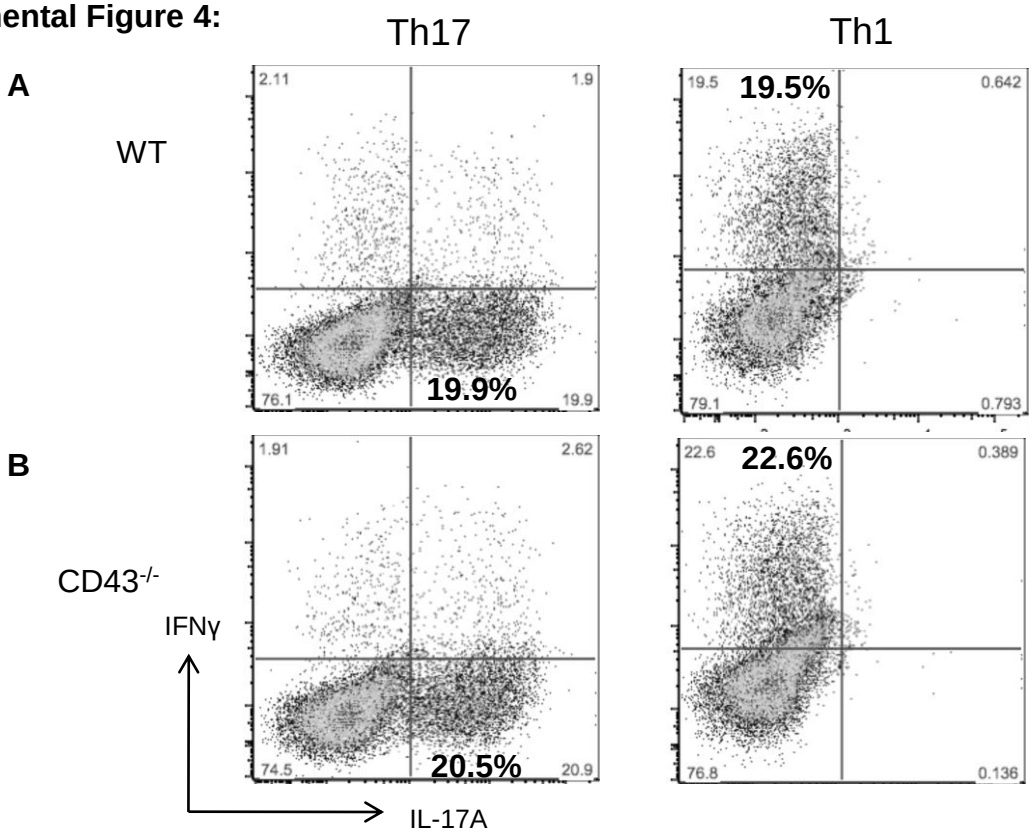
<u>Supplemental Figure 2:</u> WT and CD44$^{-/-}$ Th17 and Th1 cells adhere to E-selectin in similar numbers. Naïve CD4^{+} T cells from WT and CD44$^{-/-}$ mice were polarized to Th17 **(A)** and Th1 cells **(B)** as described in materials and methods and perfused over E-selectin coated coverslips at the indicated shear stress. CD44$^{-/-}$ and WT naïve T cells differentiate into Th1 and Th17 cells similarly. Representative FACS plots and quantification **(C-D).** Data shown from 3 individual T cell preparation per cell subset.

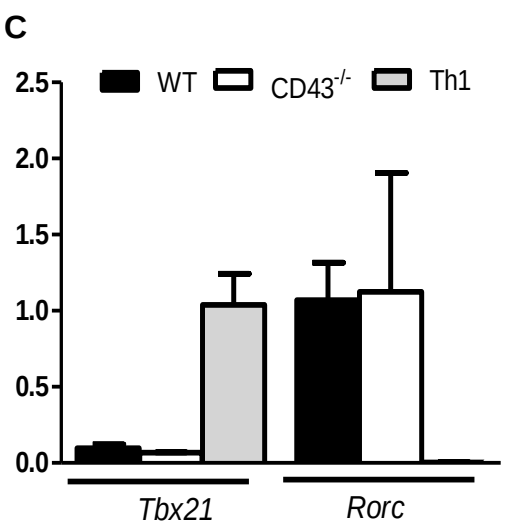
Supplemental Figure 3:

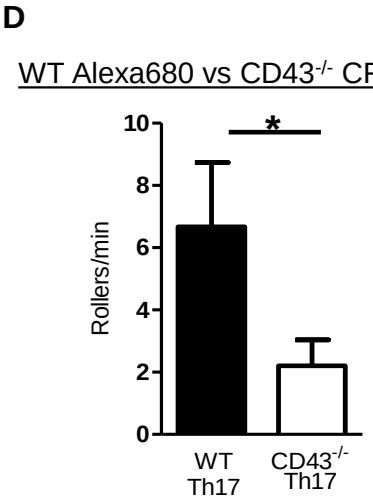


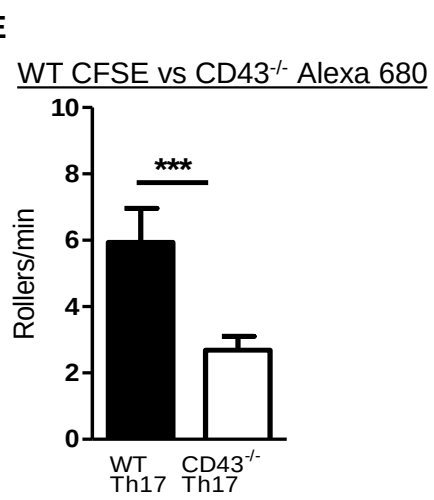
Supplemental Figure 3: CD4⁺ cell recruitment in the air pouch of WT and CD43$^{-/-}$ mice after CCL20 or TNFα injection *in vivo*. WT and CD43$^{-/-}$ mice were injected with CCL20 **(A-B)** or TNF-α **(C-D)** into the air pouch. CD4⁺ T cell recruitment was assesed by flow cytometry 24h after injection. Representative FACS plots are shown along with the quantification of CD4⁺ recruitment in response to CCL20 **(B)** or TNF-α **(D).** Data is representative of 3 independent experiments with 5 mice per group for PBS and CCL20, and 4-7 mice per group for TNF-α. *p<0.05

Supplemental Figure 4:









<u>Supplemental Figure 4:</u> Th17 and Th1 cell differentiation from WT and CD43$^{-/-}$ mice used in competitive rolling intravital microscopy studies. Less numbers of CD43$^{-/-}$ Th17 cells roll on the cremaster microvasculature as compared to WT Th17 cells, regardless of the dye used for Th17 cell labeling **A**. WT and **B.** CD43$^{-/-}$ Th17 and Th1 cells were generated from naïve isolated CD4^{+} T cells using cytokine cocktails for Th17 or Th1 cells as described in methods. Both mouse strains generated similar number of cells as assessed by flow cytometry for IL17-A (Th17 cells) and IFNγ (Th1 cells). FACS plots are representative of 3 separate experiments. **C**. Quality of T cell preparations was also verified by qPCR. Th17 cells from WT and CD43$^{-/-}$ show similar expression of RORγT upon T cell differentiation. qPCR data is representative of 3-5 independent experiments. Th1 cells were used as control. **D.** Equal amounts of WT Th17 cells stained with Alexa 680 and CD43$^{-/-}$ Th17 cells stained with CFSE were injected via the femoral artery into the cremaster muscle. This phenotype was confirmed when the dyes were inverted **(E)**. Data shown from 3 individual experiments using independent T cell preparations and imaging 3-5 vessels per experiment. *p<0.05, ***p<0.005.