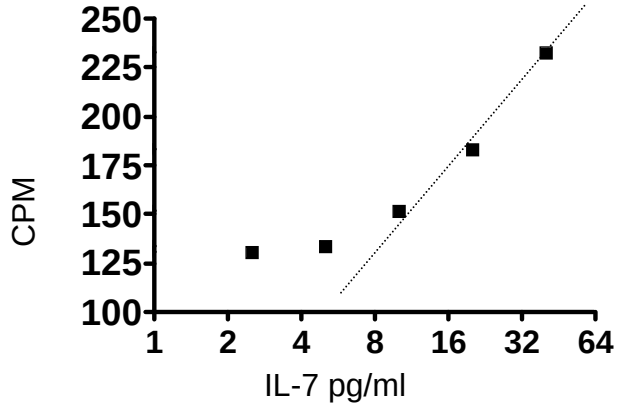
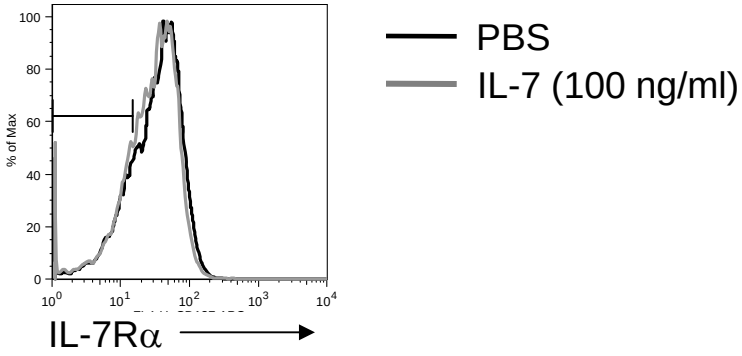
Table 1. qPCR primer sequences and conditions

Gene	Primer/probe sequence
IL-7 Applied Biosystems	Mm00434291_m1
IL-7r Applied Biosystems	Mm00434295_m1
HPRT Applied Biosystems	Mm00446968_m1

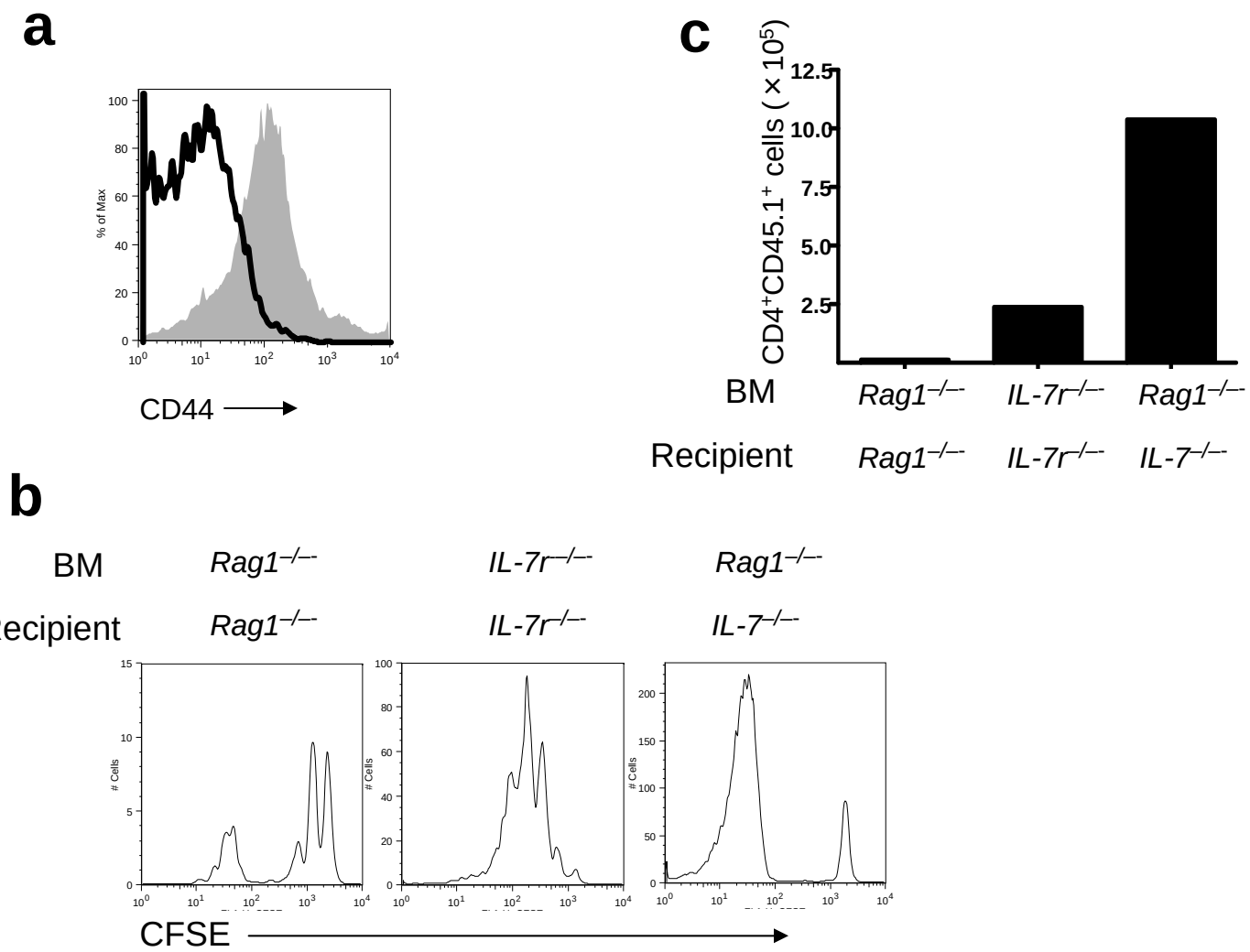
a



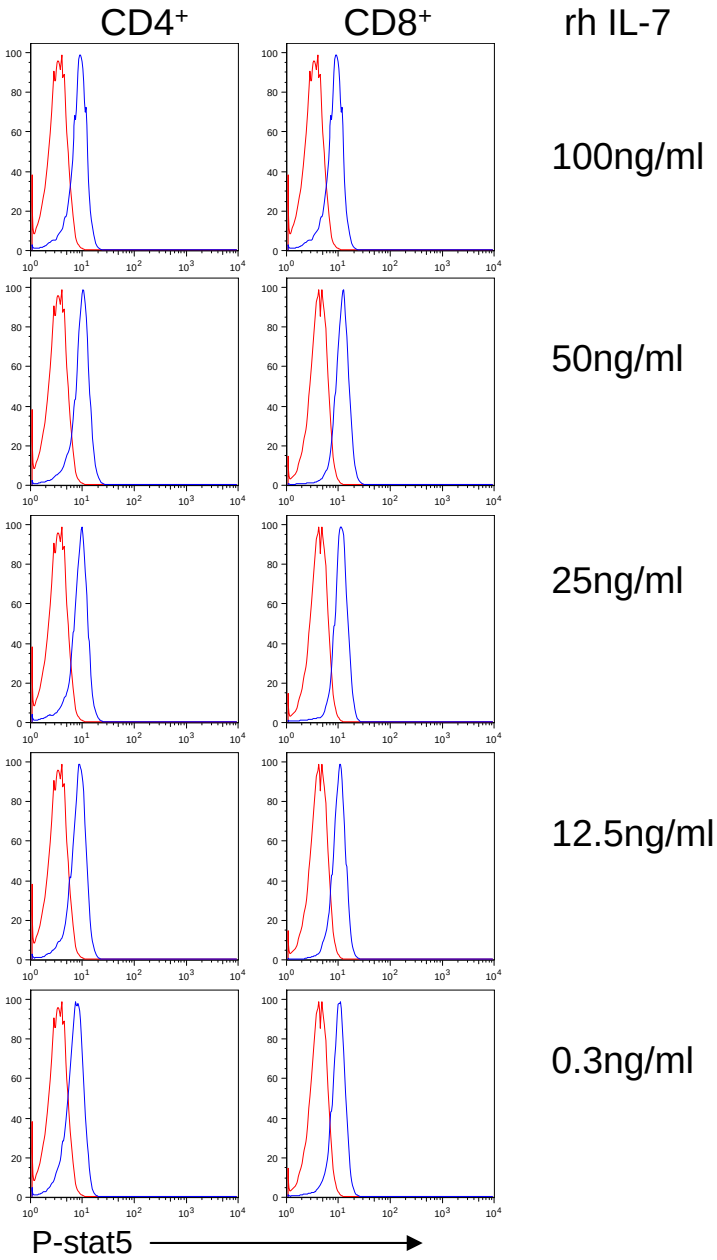
b



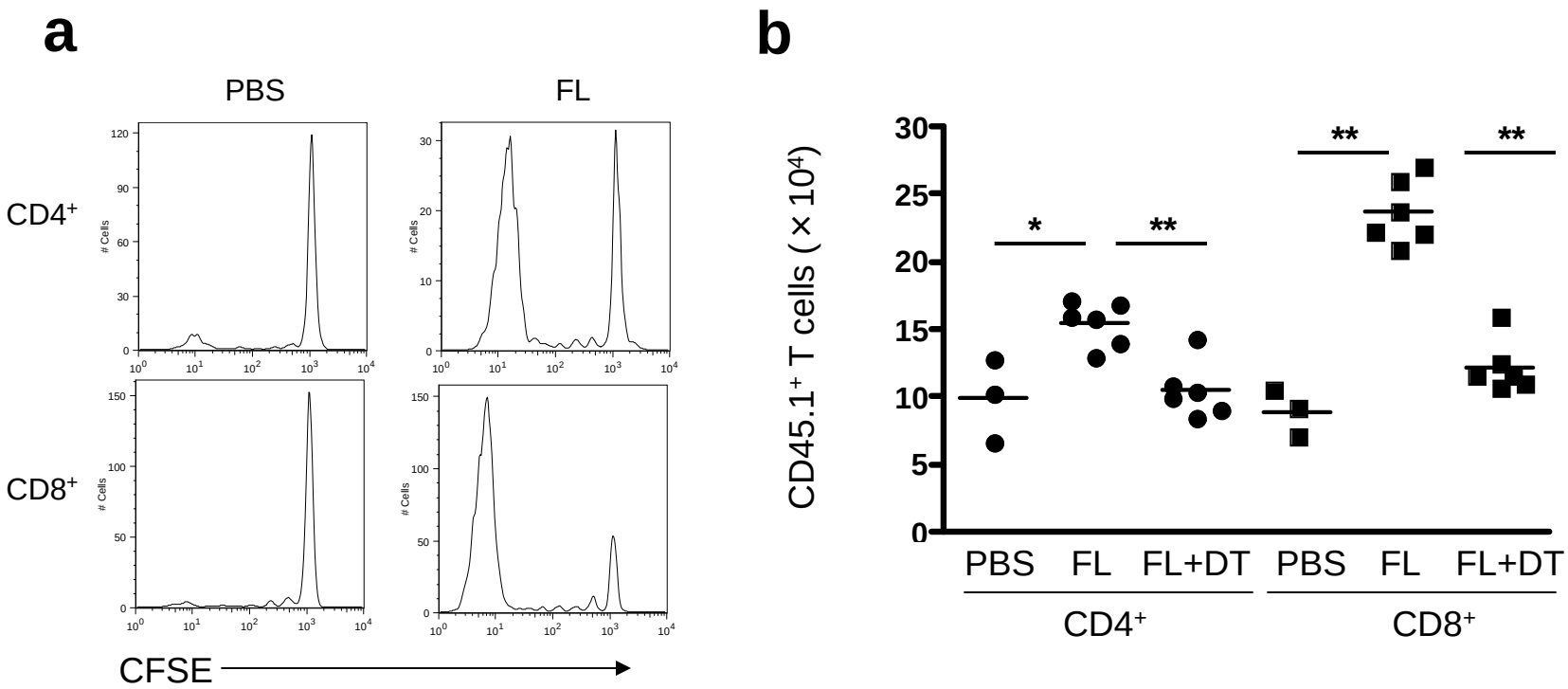
Supplementary Figure 1 (**a**) Standard curve of rmIL-7 measured by 2E8 cell proliferation. (**b**) Pre-incubation with a high concentration of IL-7 did not prevent IL-7Rα detection by flow cytometry. LN T cells were seeded in 24-well plates and incubated with PBS or rhIL-7 for 30 min. IL-7Rα expression was analyzed via flow cytometry.



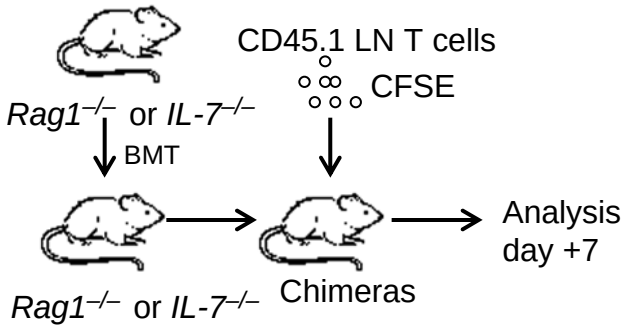
Supplementary Figure 2 IL-7 signaling in BM-derived cells prevents efficient $CD4^+$ T cell homeostatic proliferation and accumulation of naïve ($CD44^{low}$) polyclonal T cells. (**a**) CD44 expression on $CD45.1^+$ LN T cells depleted of $CD44^{hi}$ cells (grey histogram). Open histogram, isotype control. (**b,c**) CFSE-labeled $CD44^{low}$ polyclonal $CD4^+$ T cells were transferred into indicated BM chimeras. Seven days later, CFSE dilution was measured (**b**) and $CD4^+CD45.1^+$ T cells in the spleen were enumerated (**c**). Results are representative of 2 independent experiments.



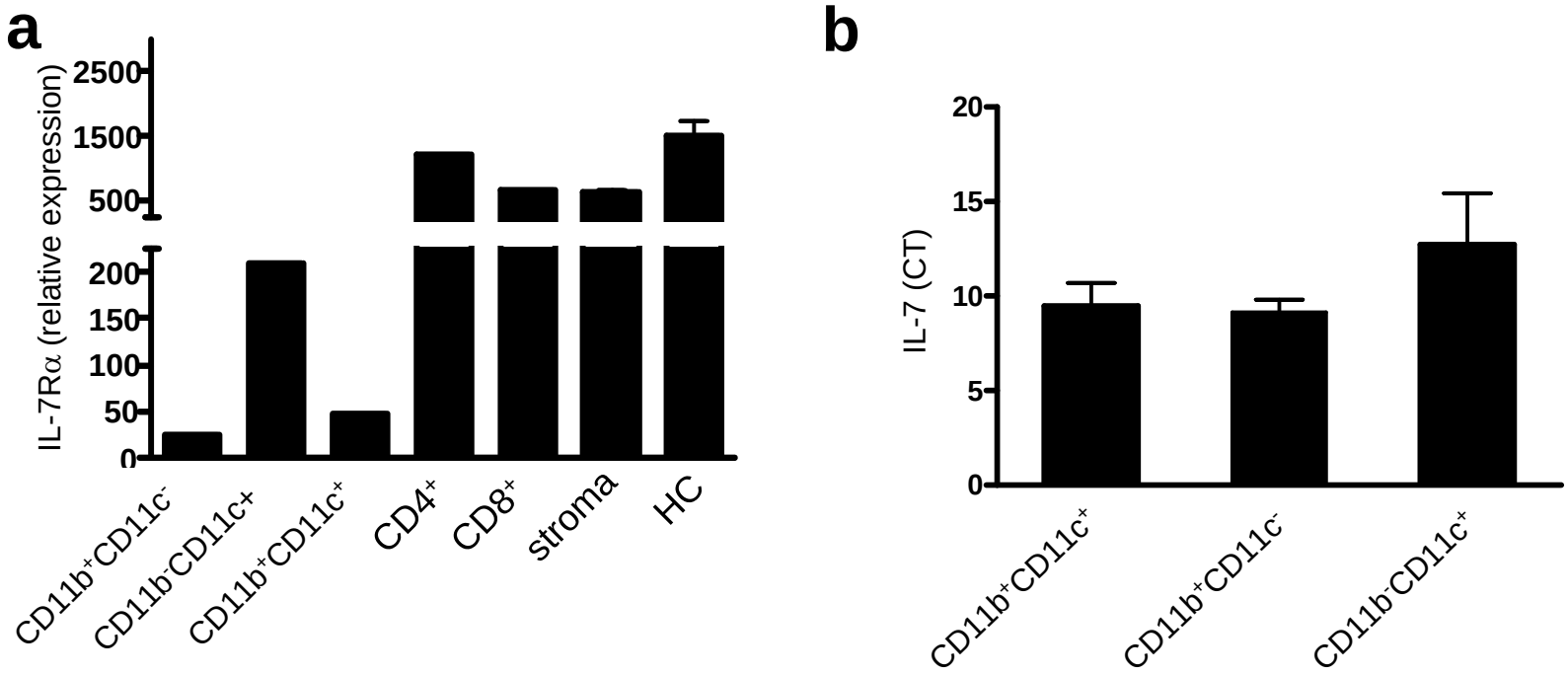
Supplementary Figure 3 $CD4^+$ and $CD8^+$ T cells sustain equal STAT5 phosphorylation following exposure to limiting amounts of rhIL-7 *ex vivo*. LN T cells were seeded in 24-well plates (1×10^6/ml) and incubated with diminishing concentrations of IL-7 for 45 min. STAT5 phosphorylation was analyzed by intracellular flow cytometric analysis. Red, PBS alone; blue, IL-7.



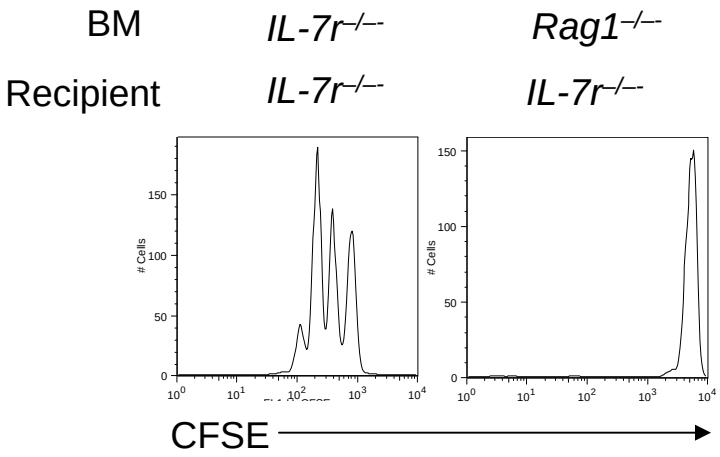
Supplementary Figure 4 FLT3 ligand induces $CD4^+$ T cell homeostatic proliferation. $CD45.1^+$ LN T cells were labeled with CFSE and transferred into the BM-chimeras generated by transfer of CD11c-DTR BM into wild-type recipients. Mice were treated with PBS or FLT3 ligand (10mg/day) for 14 d. (**a**) CFSE dilution of CD45.1+ T cells. (**b**) Enumeration of splenic $CD45.1^+$ T cells. Horizontal lines indicate mean, and each dot represents an individual mouse. DT (4ng/kg body weight) was administered on day 0, +4, +8 and +12 to ablate $CD11c^{hi}$ cells (n=3-6 mice/group). *, $P<0.01$ and **, $P<0.001$.



Supplementary Figure 5 Schematic representation of the experimental model. *Rag1*$^{-/-}$and *Il7*$^{-/-}$ mice were used as donors or recipients to create hematopoietic BM-chimeras wherein IL-7 production was limited to radioresistant stroma or BM-derived cells. Five weeks after BMT, mice received CFSE labeled congenic LN T cells.



Supplementary Figure 6 IL-7Rα mRNA expression in electronically sorted cell spleen subpopulations was measured by qRT-PCR. HC denotes hematopoietic cells. B) IL-7 relative expression according to the comparative CT method. 3 mice per group were analyzed.



Supplementary Figure 7 IL-7 signaling in APCs prevents CD4$^+$ T cell homeostatic proliferation in *Il7r*$^{-/-}$mice. CFSE-labeled TCR Tg+ T cells were adoptively transferred into indicated BM chimeras. Seven days later, mice were sacrificed and CFSE dilution was analyzed. (*n*=3-6 mice/group). Results are representative of 2 independent experiments.