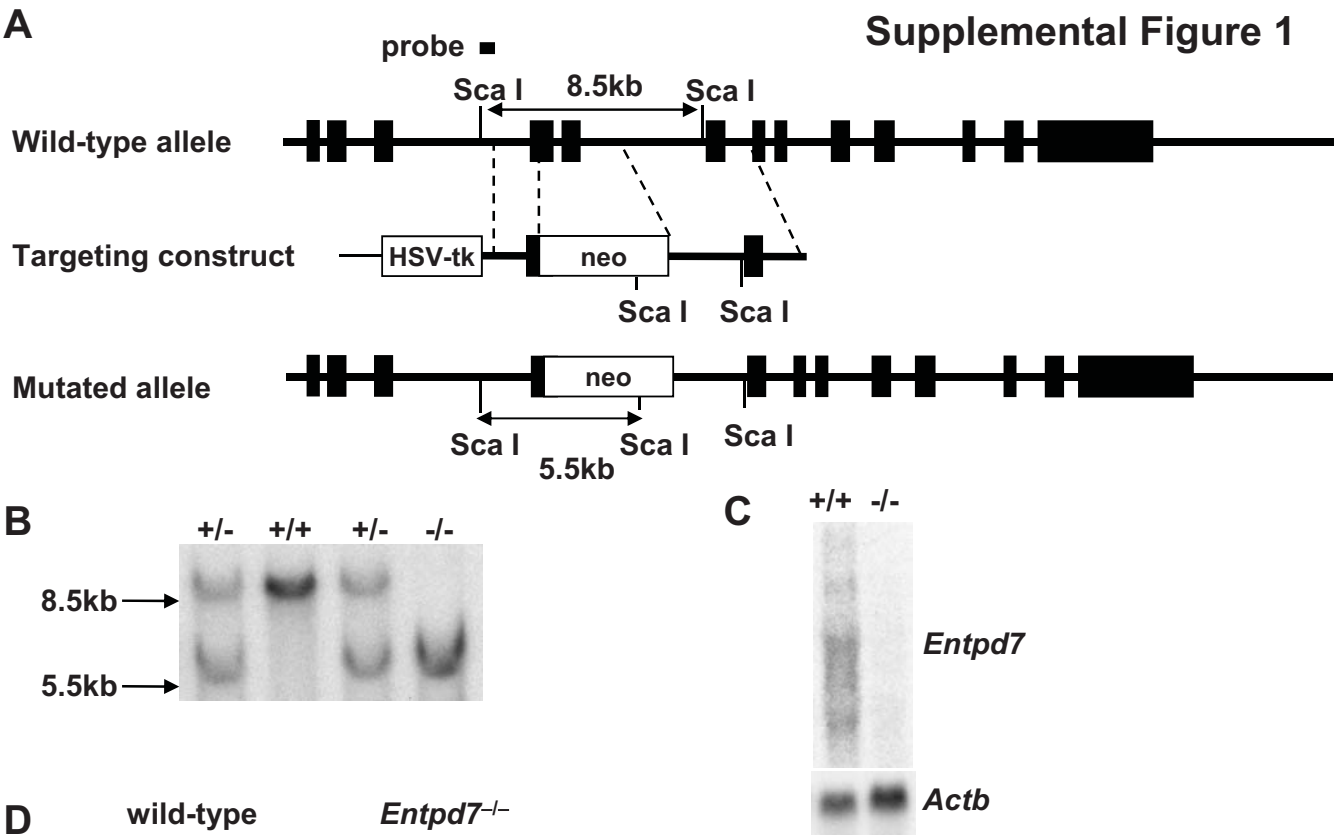
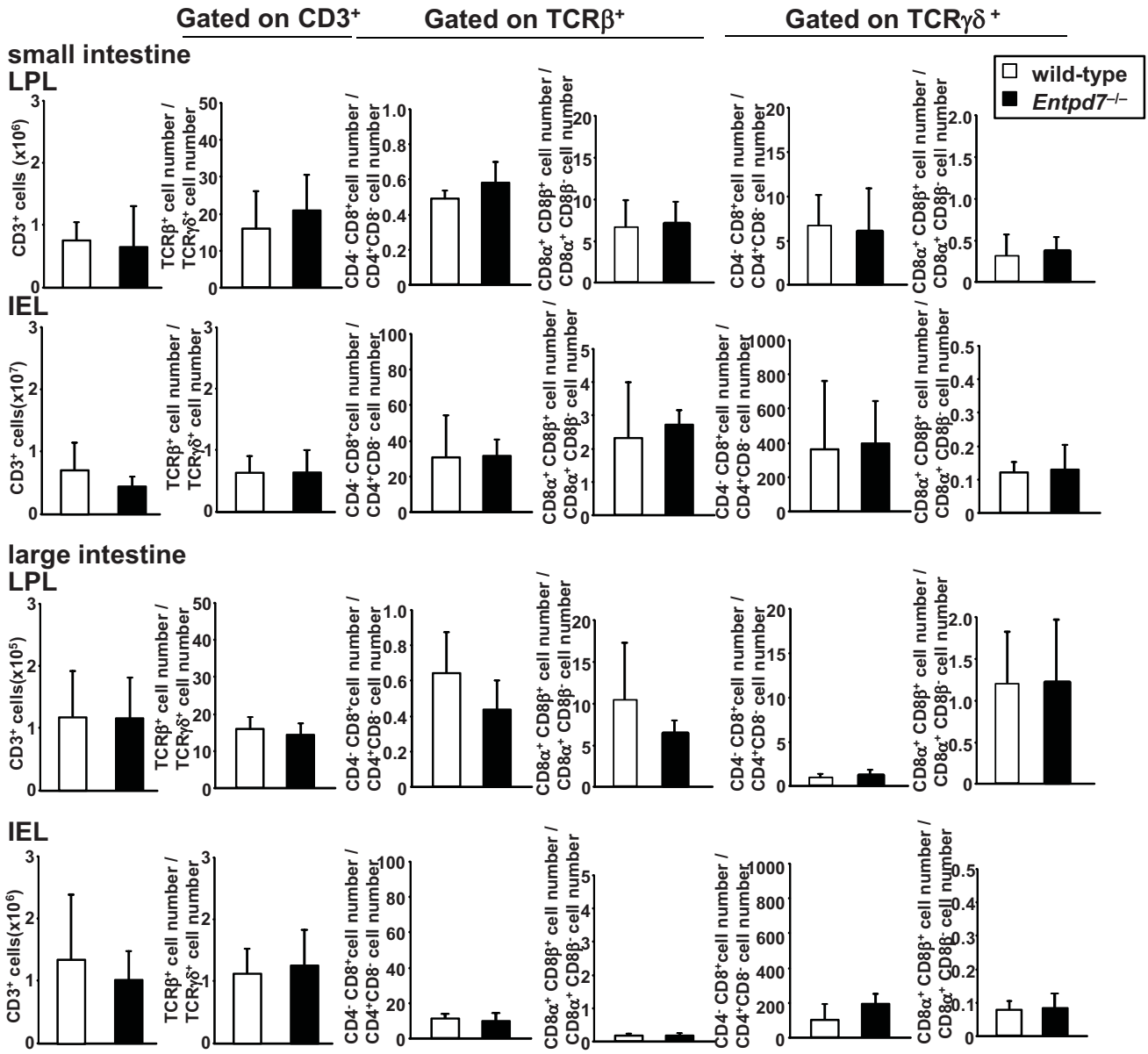


Supplemental Figure 1. Targeted disruption of the gene encoding mouse ENTPDase7

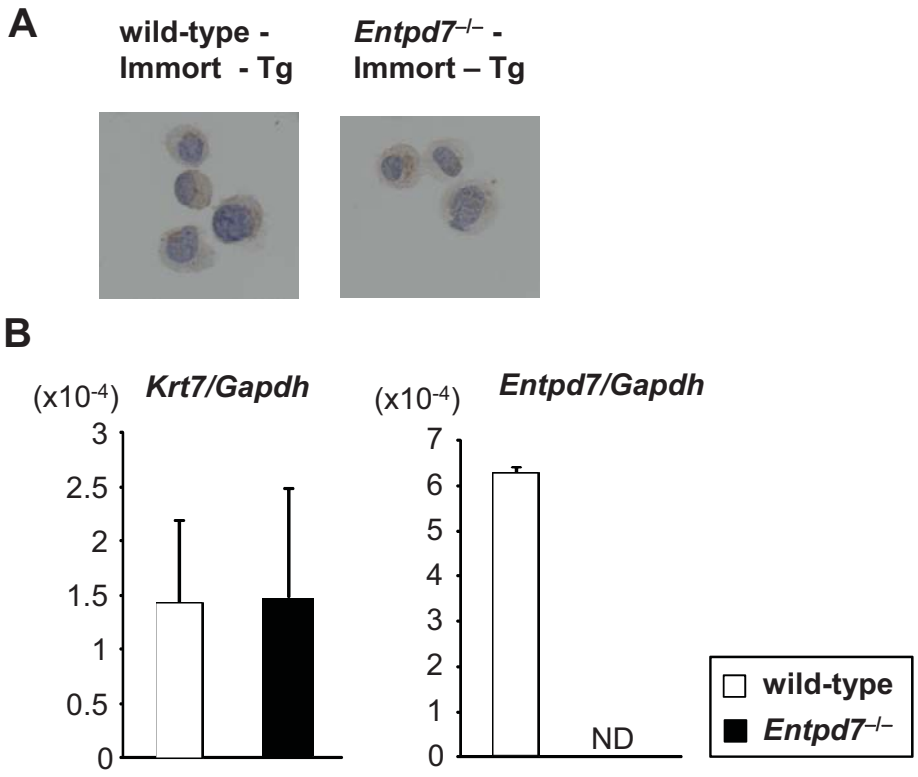
(A) The structures of the *Entpd7*gene **(top)**, the targeting vector **(middle)** and the predicted disrupted gene **(bottom)**. Black box, coding exon. **(B)** Southern blot analysis of offspring from the heterozygote intercrosses. Genomic DNA was extracted from mouse tail tissue, digested with *Sca*I, separated by electrophoresis and hybridized with the radiolabeled probe shown in **(A)**. Southern blot analysis detected a single 8.5-kb band for wild-type mice (+/+), a 5.5-kb band for homozygous *Entpd7*-deficient mice (-/-), and both bands for heterozygous mice (+/-). **(C)** Northern blot analysis of offspring from the heterozygote intercrosses. Total RNA was extracted from the small intestine, separated by electrophoresis and hybridized with the radiolabeled *Entpd7* cDNA probe. Northern blot analysis detected *Entpd7* mRNA bands for wild-type mice (+/+) and no *Entpd7* mRNA bands for homozygous *Entpd7*-deficient mice (-/-). Bottom, the same amount of mRNA extracts hybridized with the radiolabeled β-actin (*Actb*) cDNA probe to monitor mRNA extraction. **(D)** Representative FACS dot plots of surface markers of splenic lymphocytes. Spleens were collected from wild-type and *Entpd7*$^{-/-}$ mice and single-cell suspensions were prepared. The cells were stained for CD4/CD8 or CD3/B220 and analyzed by flow cytometry.

Supplemental Figure 2



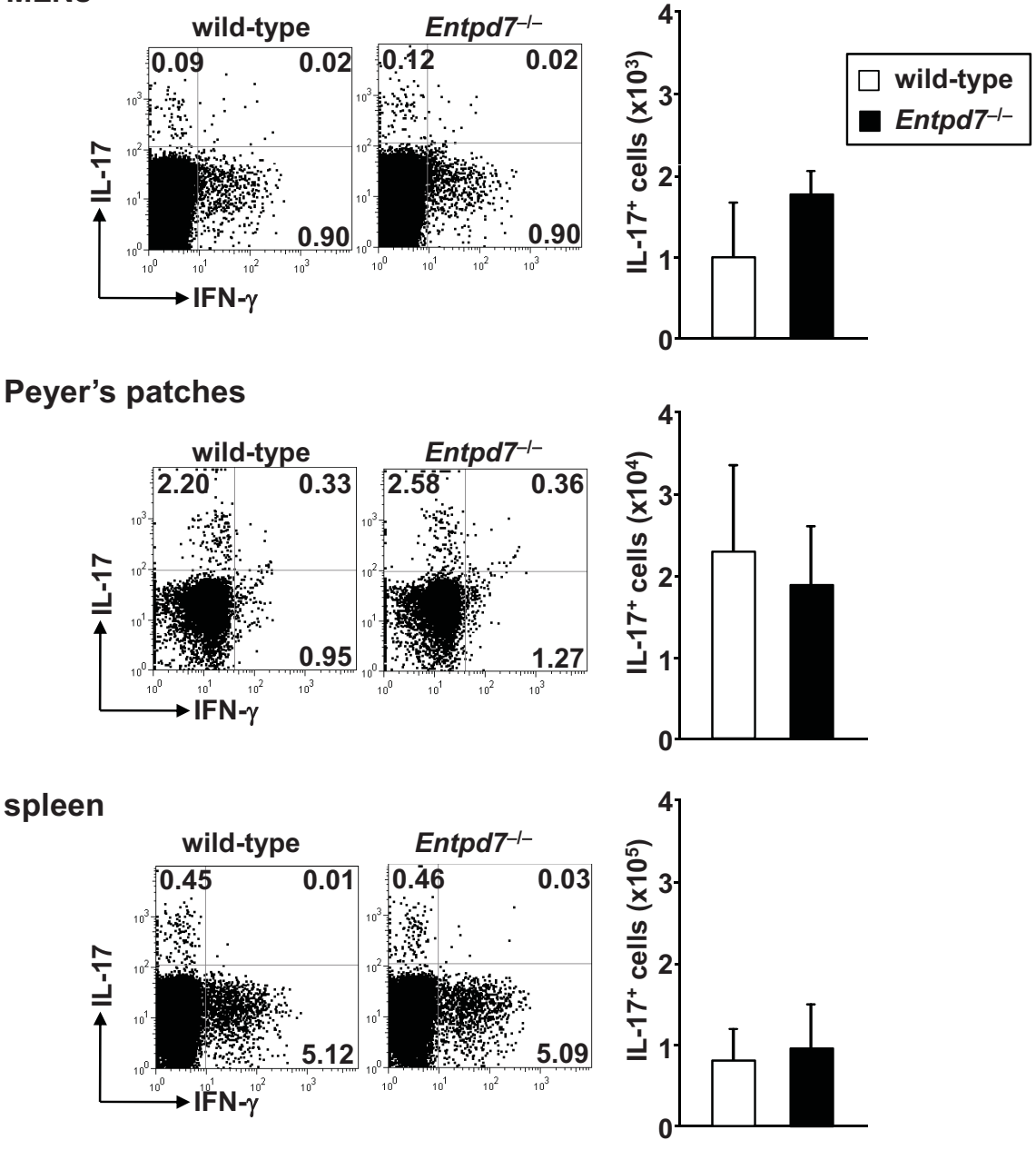
Supplemental Figure 2. Lymphocyte composition in the intestine of *Entpd7*$^{-/-}$ mice
Intraepithelial lymphocytes and lamina propria lymphocytes were isolated from the small and large intestines of wild-type and *Entpd7*$^{-/-}$ mice, stained for CD3/TCRβ/TCRγδ, TCRβ/CD4/CD8α/CD8β and TCRγδ/CD4/CD8α/CD8β, and analyzed by flow cytometry. Total numbers of CD3^{+} cells and proportion of each cellular subset were shown. Data are shown as means + SD of four mice.

Supplemental Figure 3



Supplemental Figure 3. Establishment of small intestinal epithelial cell lines
To establish small intestinal epithelial cell lines, wild-type and *Entpd7*$^{-/-}$ mice were crossed with H-2Kb-tsA58 transgenic mice. Crypts isolated from the small intestine were cultured at 33° C for 3 weeks, and growing cells were cloned and expanded to establish the epithelial cell lines. The cell lines were stained with anti-cytokeratin, and visualized with diaminobenzidine **(A).** The expression of *Krt7*, encoding cytokeratin-7, and *Entpd7*, was analyzed by real-time RT-PCR. ND; not detected **(B)**.

Supplemental Figure 4



Supplemental Figure 4. Cytokine production of CD4$^+$ T cells in several lymphoid organs
Representative FACS dot plots of intracellular cytokine profiles of CD4$^+$ T cells and total numbers of IL17-producing CD4$^+$ cells in the MLNs, Peyer's patches, and spleen. Cells were isolated from the indicated lymphoid organs of wild-type and *Entpd7*$^{-/-}$ mice, stimulated, and permeabilized to stain intracellular IL-17 and IFN-γ. Data are shown as means + SD of four mice.