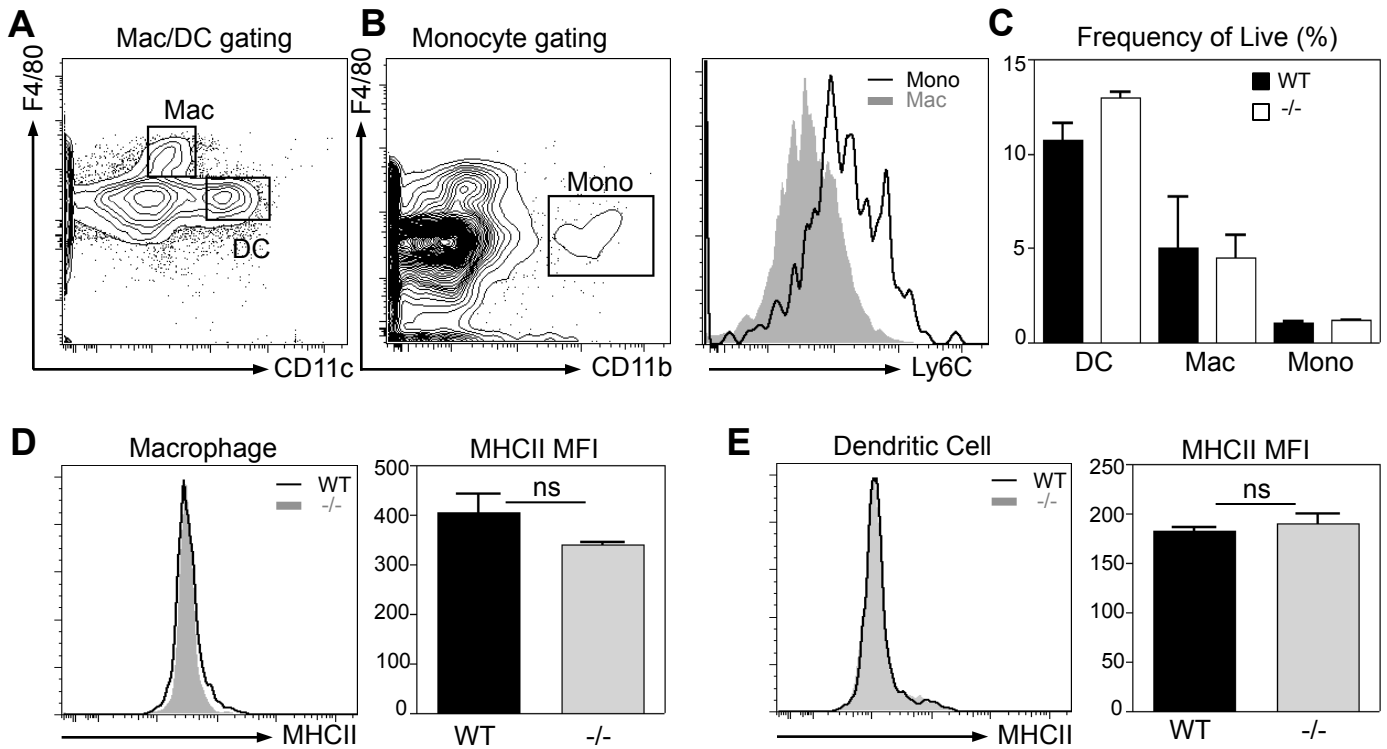
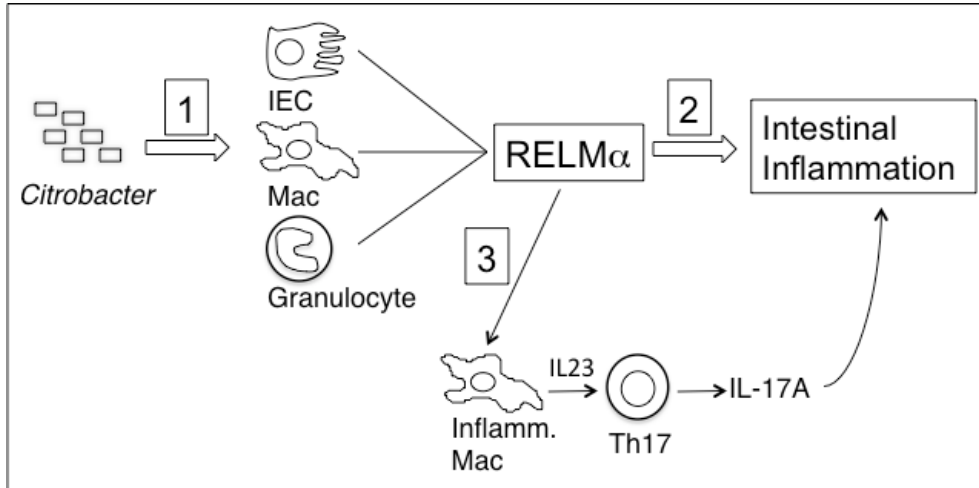


**Supplementary Figure 1. RELM $\alpha$  promotes DSS-induced colitis and Th17 cell responses.** A. *Retnla* real-time PCR analysis of cDNA from naïve and day 4 DSS-treated colonic tissue, measured as fold induction over naïve. B. Immunofluorescent staining of PFA-fixed colonic tissue from naïve or day 7 DSS-treated mice reveals DSS-induced recruitment of RELM $\alpha$ <sup>+</sup> cells to the lamina propria. RELM $\alpha$ , red; DAPI, blue. Bar, 50  $\mu$ m. C. DSS-induced weight loss in WT or RELM $\alpha$ <sup>-/-</sup> mice. D. Pathology score of day 7 DSS-treated WT or RELM $\alpha$ <sup>-/-</sup> mice. E. PAS/Acian blue staining of colonic tissue sections from day 7 DSS-treated WT or RELM $\alpha$ <sup>-/-</sup> mice. Bar, 50  $\mu$ m. F-G. Mesenteric lymph node cells from day 7 DSS-treated WT or RELM $\alpha$ <sup>-/-</sup> mice were stimulated with  $\alpha$ CD3/ $\alpha$ CD28 for 3 days followed by ELISA of supernatants for IL-17A and IFN- $\gamma$  (F) and flow cytometry analysis of CD4<sup>+</sup> T cells (G). H. Real-time PCR analysis of cDNA from day 4 DSS-treated colonic tissue of WT and RELM $\alpha$ <sup>-/-</sup> mice. \*\**P*<0.01, \**P*<0.05. Data are representative of 2 experiments with 4-5 mice per group.



**Supplementary Figure 2. Leukocyte frequencies and MHCII expression are equivalent in macrophages and dendritic cells in the colons of WT and  $RELM\alpha^{-/-}$  mice.** Single leukocyte preparations from colonic tissue day 10 *Citrobacter*-infected (A-C) or naïve (D-E) mice were analyzed by flow cytometry. A. Gating strategy for macrophages (mac, Ly6G<sup>+</sup>F4/80<sup>+</sup>CD11c<sup>-</sup>) and dendritic cells (DC, Ly6G<sup>-</sup>CD11c<sup>+</sup>F4/80<sup>-</sup>). B. Gating strategy for monocytes (mono, Ly6G<sup>-</sup>CD11c<sup>+</sup>F4/80<sup>+</sup>CD11b<sup>+</sup>) was validated by surface expression of Ly6C. C. Frequency of leukocyte populations in the colons of WT or -/- mice. D-E. MHCII expression in macrophages (D) and dendritic cells (E) was measured as mean fluorescent intensity (MFI). ns, not significant.



**Supplementary Figure 3. RELM $\alpha$  promotes *Citrobacter* infection-induced intestinal inflammation through selectively promoting IL-17A expression.** 1. *Citrobacter* infection induces RELM $\alpha$  expression by intestinal epithelial cells, macrophages and eosinophils. 2. RELM $\alpha$  promotes intestinal inflammation by stimulating IL-17A production through 3. activation of macrophages to produce IL-23.