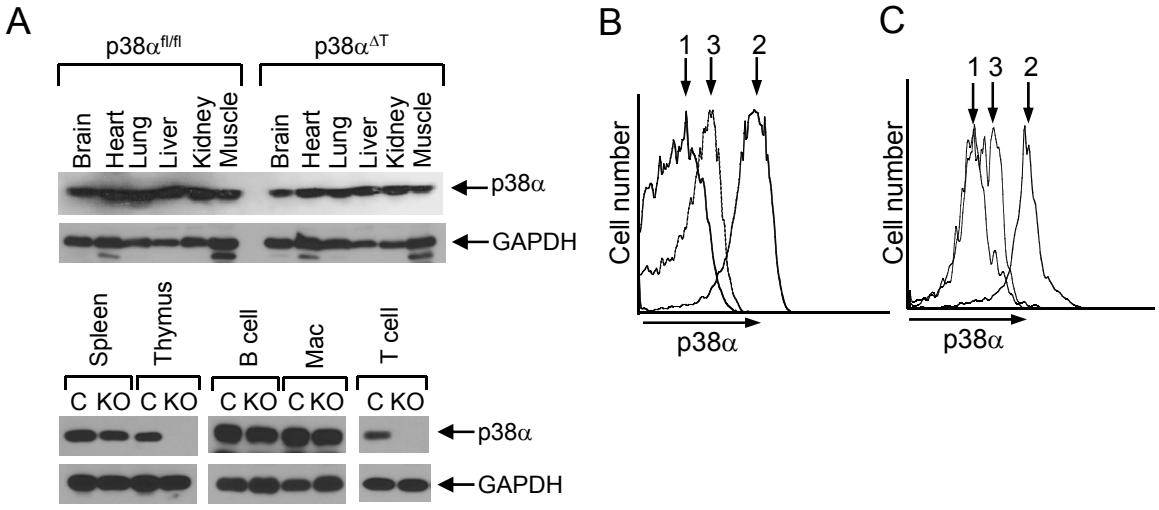
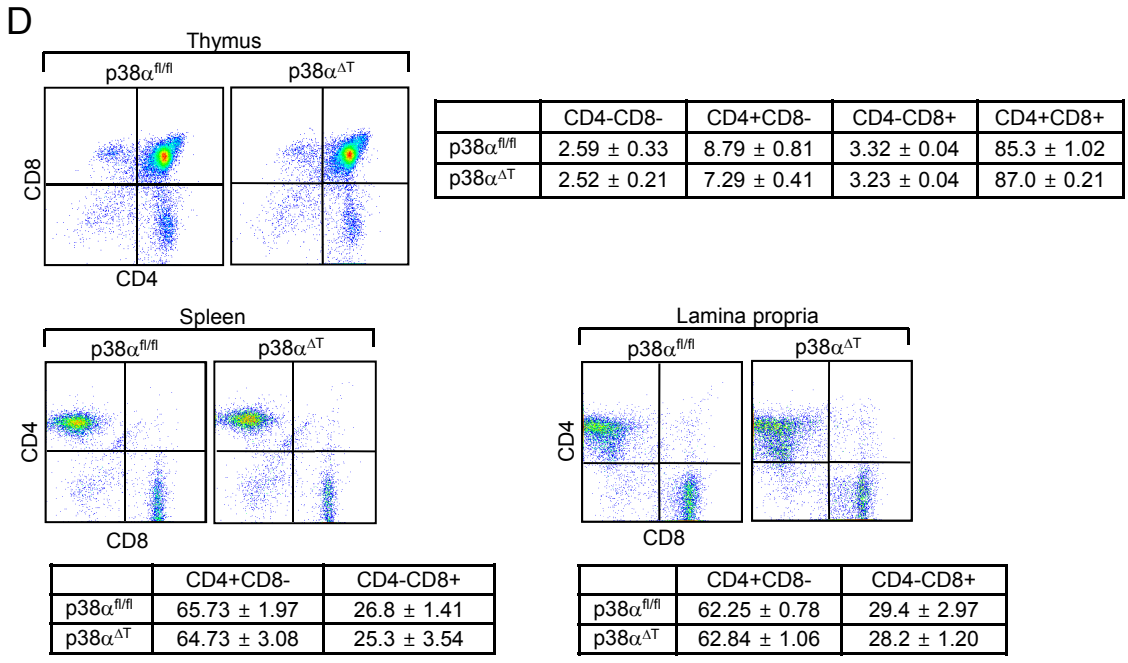
Supplemental Figure S1





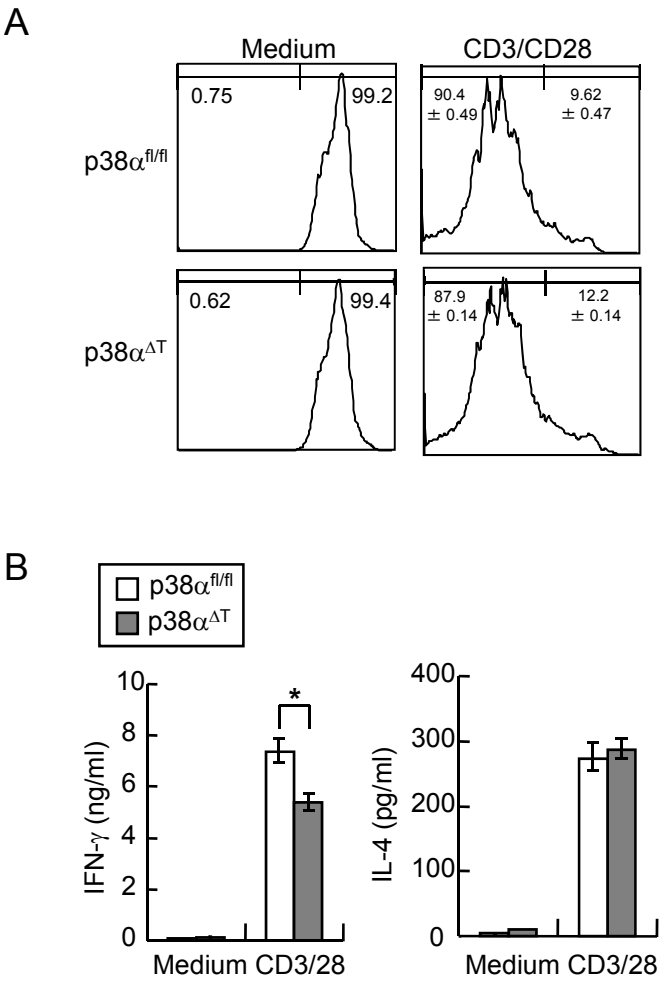
	CD4-CD8-	CD4+CD8-	CD4-CD8+	CD4+CD8+
p38α$^{fl/fl}$	2.59 ± 0.33	8.79 ± 0.81	3.32 ± 0.04	85.3 ± 1.02
p38α$^{\Delta T}$	2.52 ± 0.21	7.29 ± 0.41	3.23 ± 0.04	87.0 ± 0.21

	CD4+CD8-	CD4-CD8+
p38α$^{fl/fl}$	65.73 ± 1.97	26.8 ± 1.41
p38α$^{\Delta T}$	64.73 ± 3.08	25.3 ± 3.54

	CD4+CD8-	CD4-CD8+
p38α$^{fl/fl}$	62.25 ± 0.78	29.4 ± 2.97
p38α$^{\Delta T}$	62.84 ± 1.06	28.2 ± 1.20

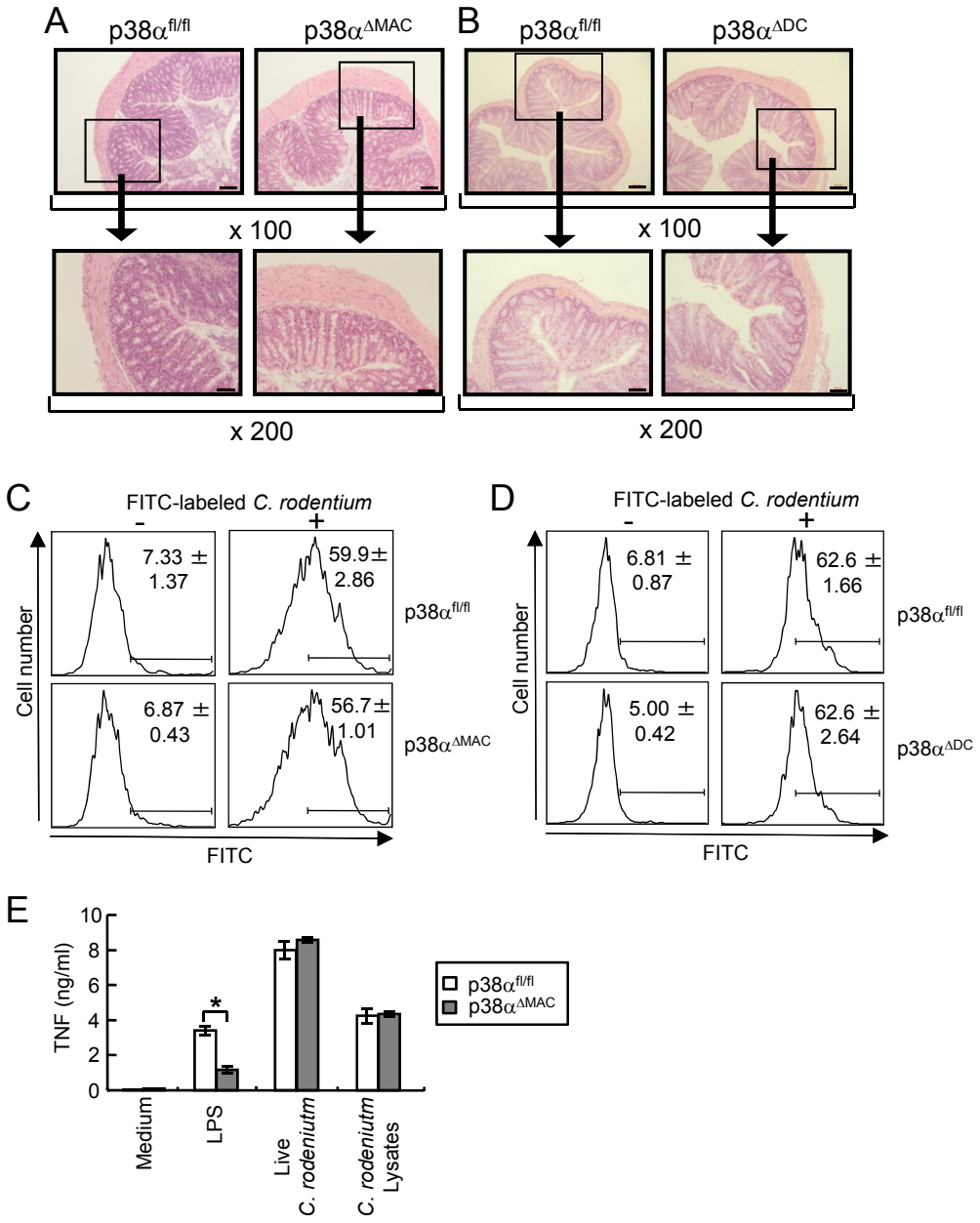
Supplemental Figure S1. Generation and characterization of T cell-specific p38α-deficient mouse strain. (A & B) T cell-specific deletion of p38α. Lysates of tissues and immune cells from control (p38α$^{fl/fl}$ or C) and T cell-specific p38α-deficient (p38α$^{\Delta T}$ or KO) mice were analyzed by immunoblotting using anti-p38α antibodies. Equal loading of proteins was assessed by detecting GADPH levels (A). (B & C) LP lymphocytes were stained with anti-CD3-APC and anti-CD4-FITC (B) or mesenteric lymph node (LN) cells were stained with anti-CD11c-FITC (C) Abs. Cells were further permeabilized and stained with rabbit anti-p38α followed by anti-rabbit-PE Abs. Intracellular p38α was detected in CD3+CD4+ or CD11c+ cells. 1, isotype Ab control; 2, p38α$^{fl/fl}$ LP cells; 3, p38α$^{\Delta T}$ LP (in B) or p38α$^{\Delta DC}$ LN cells. (D) Subsets of T cells. Cells from the thymus, spleen, or lamina propria were obtained from p38α$^{fl/fl}$ or p38α$^{\Delta T}$ mice, and stained with fluorescein-conjugated antibodies. The proportion of CD4 and CD8 T cells in the CD3^{+} cell population were analyzed by flow cytometry. The percentage of each subset of T cells is shown as mean ± s.d. in the table.

Supplemental Figure S2



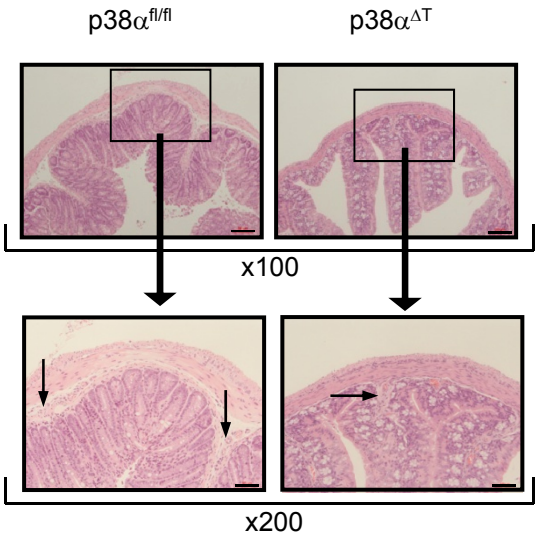
Supplemental Figure S2. Role of p38α in T cell activation *in vitro*. T cells from the spleens of $p38\alpha^{fl/fl}$ or $p38\alpha^{\Delta T}$ mice were obtained. (A) Purified T cells were stained with CFSE and stimulated with medium or anti-CD3/CD28 antibodies for 3 days. Proliferation of T cells was analyzed by flow cytometry. (B) T cells were stimulated with medium or anti-CD3/CD28 antibodies, and culture supernatants were obtained. IFN-γ and IL-4 levels in culture supernatants were measured by ELISA. *, $p<0.05$, and error bars indicate s.d.

Supplemental Figure S3



Supplemental Figure S3. Innate immunity is not regulated by p38α in *C. rodentium* infection. (A & B) Inflammation of colon tissues in the *C. rodentium*-infected mice. Colon tissues of *C. rodentium*-infected $p38\alpha^{fl/fl}$ or $p38\alpha^{\Delta MAC}$ (A), or $p38\alpha^{fl/fl}$ or $p38\alpha^{\Delta DC}$ (B) mice were obtained after 2 weeks of infection and stained with hematoxylin and eosin. Original magnification is shown. Scale bar = 20 μm. (C & D) Role of p38α in phagocytosis of *C. rodentium.* Peritoneal macrophages from $p38\alpha^{fl/fl}$ or $p38\alpha^{\Delta MAC}$ mice (C), or BM-derived DCs from $p38\alpha^{fl/fl}$ or $p38\alpha^{\Delta DC}$ mice (D) were incubated with FITC-labeled *C. rodentium* (1 mg/ml of FITC in PBS for 15 min). Cell:bacteria=1:100. After 6 hours, cells were washed and harvested in ice-cold PBS to measure the intracellular phagocytosis of *C. rodentium*. DCs were stained with anti-CD11c-PE antibodies. (E) p38α in macrophages is not involved in the host response to *C. rodentium.* Peritoneal macrophages from $p38\alpha^{fl/fl}$ or $p38\alpha^{\Delta MAC}$ mice were obtained and stimulated with medium, LPS (100 ng/ml), live *C. rodentium* (10^9 CFU), or *C. rodentium* lysates (100 μg/ml) for 24 hours. TNF-α levels in culture supernatants were measured by ELISA.

Supplemental Figure S4



Supplemental Figure S4. Inflammation in *C. rodentium*-infected mice. H & E staining of colon tissues of *C. rodentium*-infected p38$\alpha^{fl/fl}$ or p38$\alpha^{\Delta T}$ mice. Colon segments were obtained after 2 weeks of infection. Boxed area is x200 of the original x100 magnification. Arrows in the figure indicate the infiltration of inflammatory cells. Scale bar = 20 μm.