

Supplementary Figure 1 Colonization of mice with SFB-monoassociated feces is sufficient to drive neutrophil recruitment into the ileum. (a) Representative FACS plots and associated (b) frequencies and numbers of neutrophils in the ileum of SFB-void Jax mice (Jax) following colonization with SFB⁺CC or SFB-monoassociated feces (SFB) for 7 days. Data are representative of four to six mice per group. All data are presented as mean \pm SEM; * p <0.05, ** p <0.01, and *** p <0.001, one-way ANOVA with Tukey test.

Supplementary Figure 2 Neutrophils remain in the ileum for an extended period after initial colonization with SFB-containing microbiota. (a) Representative FACS plots and associated (b) frequencies and numbers of neutrophils in the ileum of SFB-void Jax mice colonized with SFB⁺CC for 7 or 14 days. Data are representative of six mice per group. All data are presented as mean \pm SEM; * p <0.05 and *** p <0.001, one-way ANOVA with Tukey test.

Supplementary Figure 3 Neutrophil depletion during colonization with SFB-containing microbiota results in increased levels of mucosa-associated SFB. SFB-void Jax mice were treated with either isotype control antibody or α Ly6G antibody and colonized with SFB⁺CC for 7 days. Levels of total bacterial DNA (EUB) or SFB DNA in ileal tissue were examined via qPCR. Data are representative of four mice per group. All data are presented as mean \pm SEM; ** p <0.01, Mann-Whitney test, two-tailed.

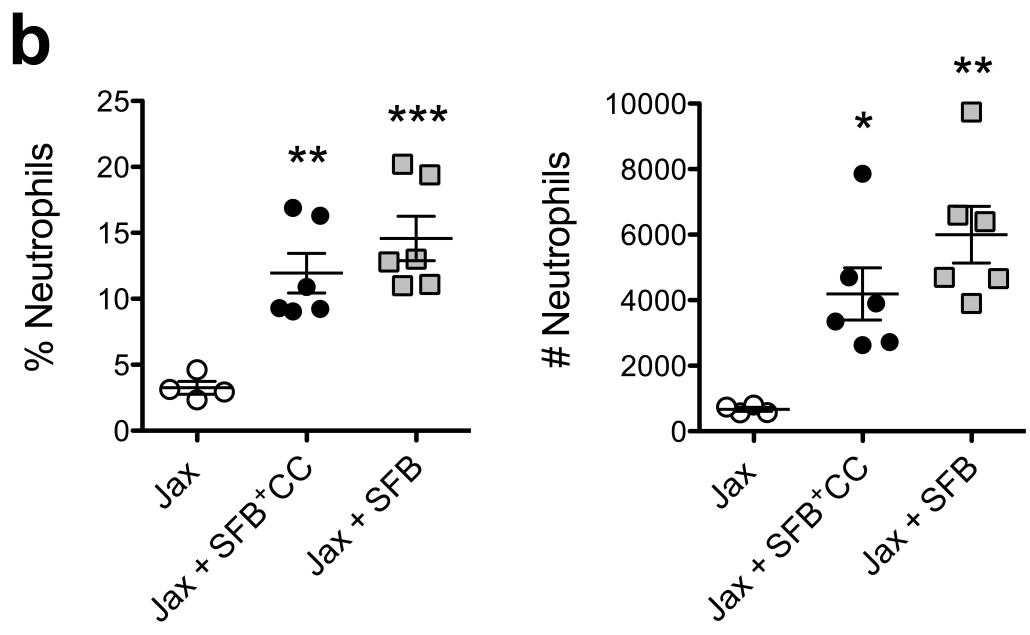
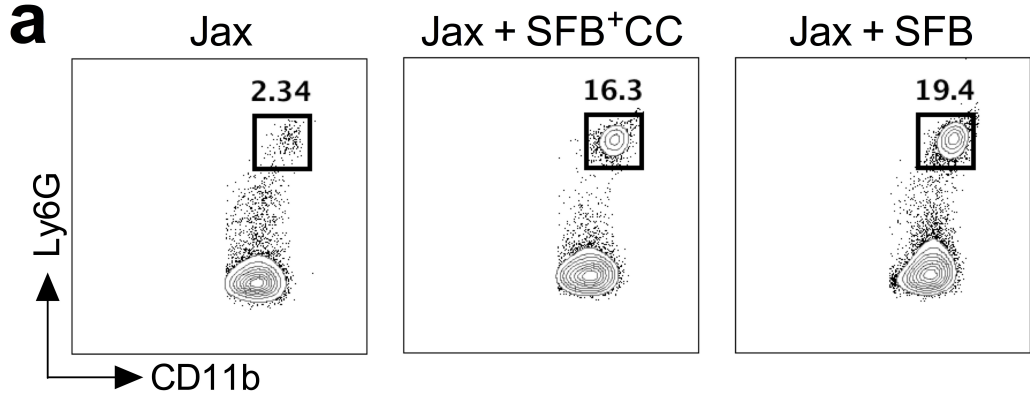
Supplementary Figure 4 Rag-deficient mice exhibit impaired control of SFB expansion. Levels of total bacterial DNA (EUB) and SFB DNA were examined by qPCR in the feces of SFB-void Jax B6 and Jax *Rag1*^{-/-} mice after colonization with SFB⁺CC for 7 days. Data are representative of two independent experiments of three to four mice per group. All data are presented as mean ± SEM; ****p*<0.001, Mann-Whitney test, two-tailed.

Supplementary Figure 5 Neutrophil depletion during colonization with SFB-containing microbiota does not promote ileal inflammation. (a) Representative histology of hematoxylin and eosin-stained ileum sections and (b) associated inflammation scores from SFB-void Jax mice (Jax), and SFB-void Jax mice treated with isotype control antibody or αLy6G antibody and colonized with SFB⁺CC for 7 days. Data are representative of four to five mice per group. All data are presented as mean ± SEM; not significant, one-way ANOVA with Tukey's multiple comparison test.

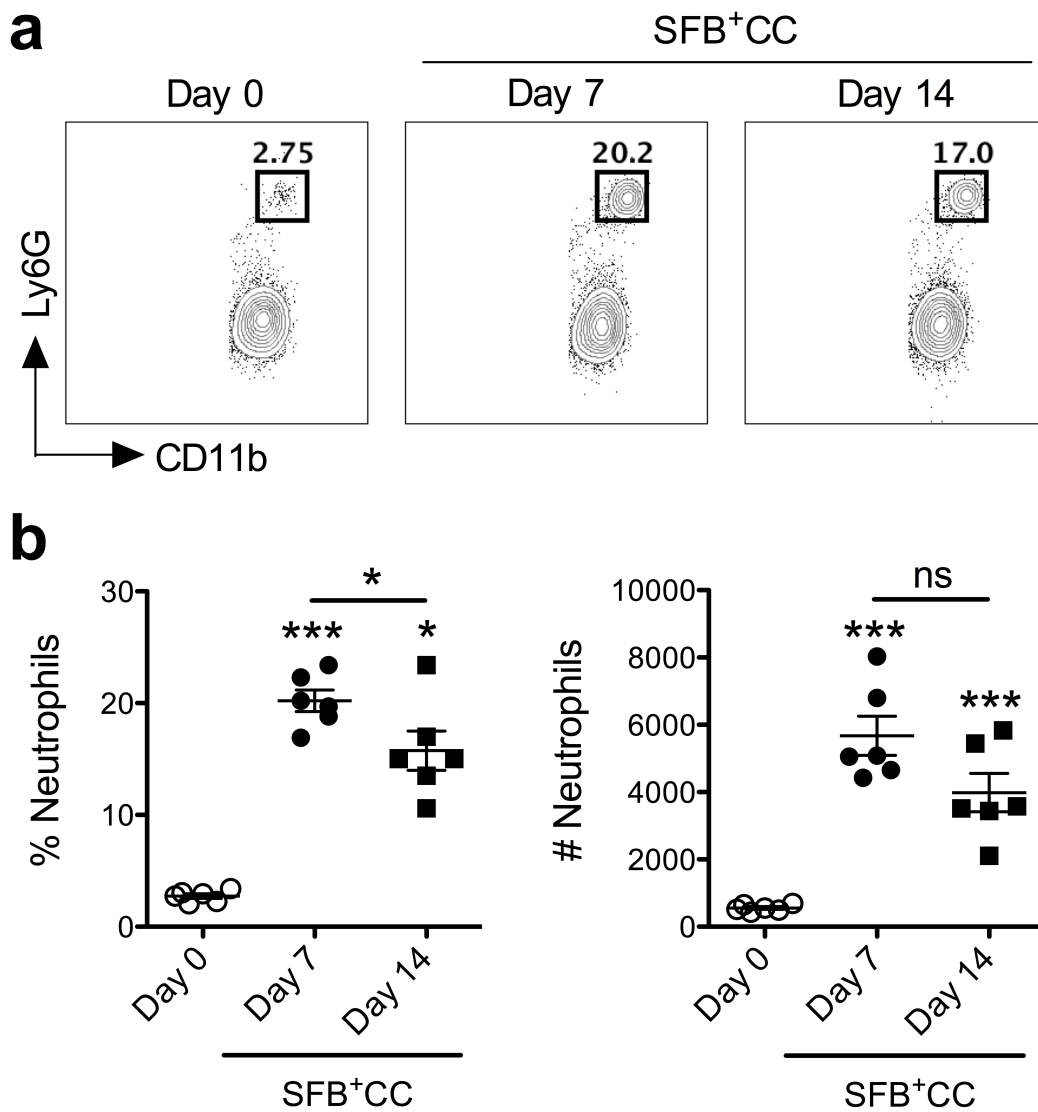
Supplementary Figure 6 IL-17A neutralization during colonization with SFB-containing microbiota results in augmented Th17 responses in the ileum. (a) Expression of IL-17A mRNA in the ileum of SFB-void Jax mice treated with isotype control antibody or αIL-17A antibody and colonized with SFB⁺CC for 7 days. Isolated cells from the ileum of these mice were restimulated with PMA and ionomycin and assessed for intracellular IL-17A. (b) Representative FACS plots as well as cell (c) frequency and number among the indicated groups are shown

for expression of IL-17A following restimulation with PMA and ionomycin (pre-gated on TCR β ⁺CD4⁺ cells). Data are representative of two independent experiments with four mice per group. All data are presented as mean \pm SEM; * p <0.05 and ** p <0.01, one-way ANOVA with Tukey's multiple comparison test.

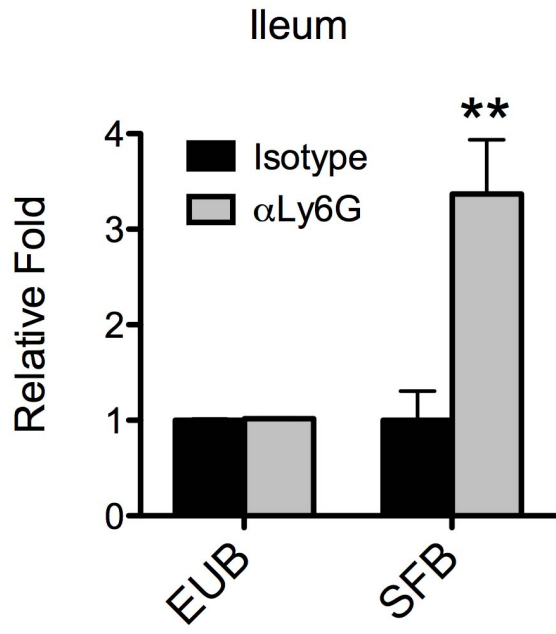
Supplementary Figure 7 Neutrophil depletion during colonization with with SFB-containing microbiota results in decreased expression of antimicrobial peptides. Expression of RegIII β , RegIII γ , and pan-defensin mRNA in ileal explants from SFB-void Jax mice (Jax), and SFB-void Jax mice treated with isotype control antibody or α Ly6G antibody and colonized with SFB⁺CC for 7 days, and subsequently restimulated *in vitro* with rML-23 for 8 hours. Data are representative of two independent experiments with three to six mice per group. All data are presented as mean \pm SEM; * p <0.05 and *** p <0.001, one-way ANOVA with Tukey's multiple comparison test.



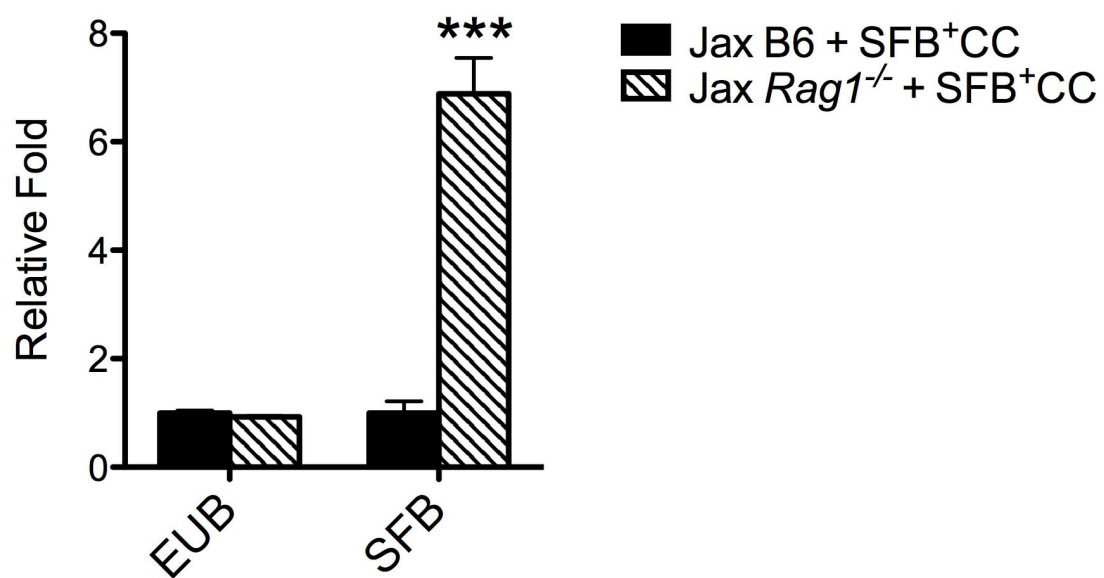
Supplementary Figure 1



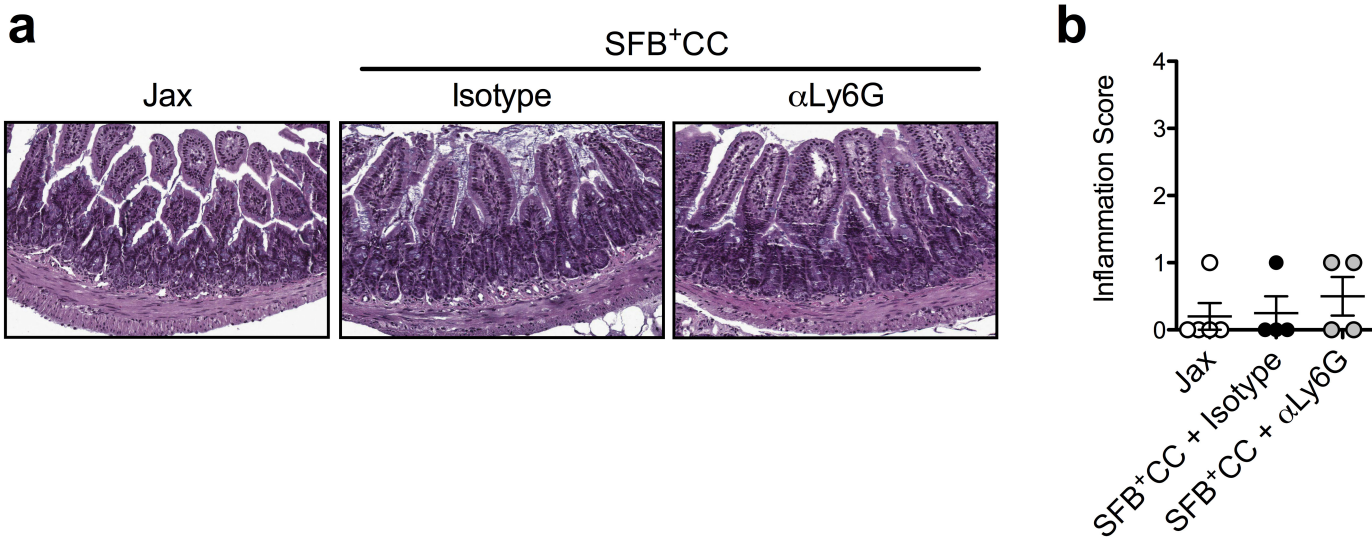
Supplementary Figure 2



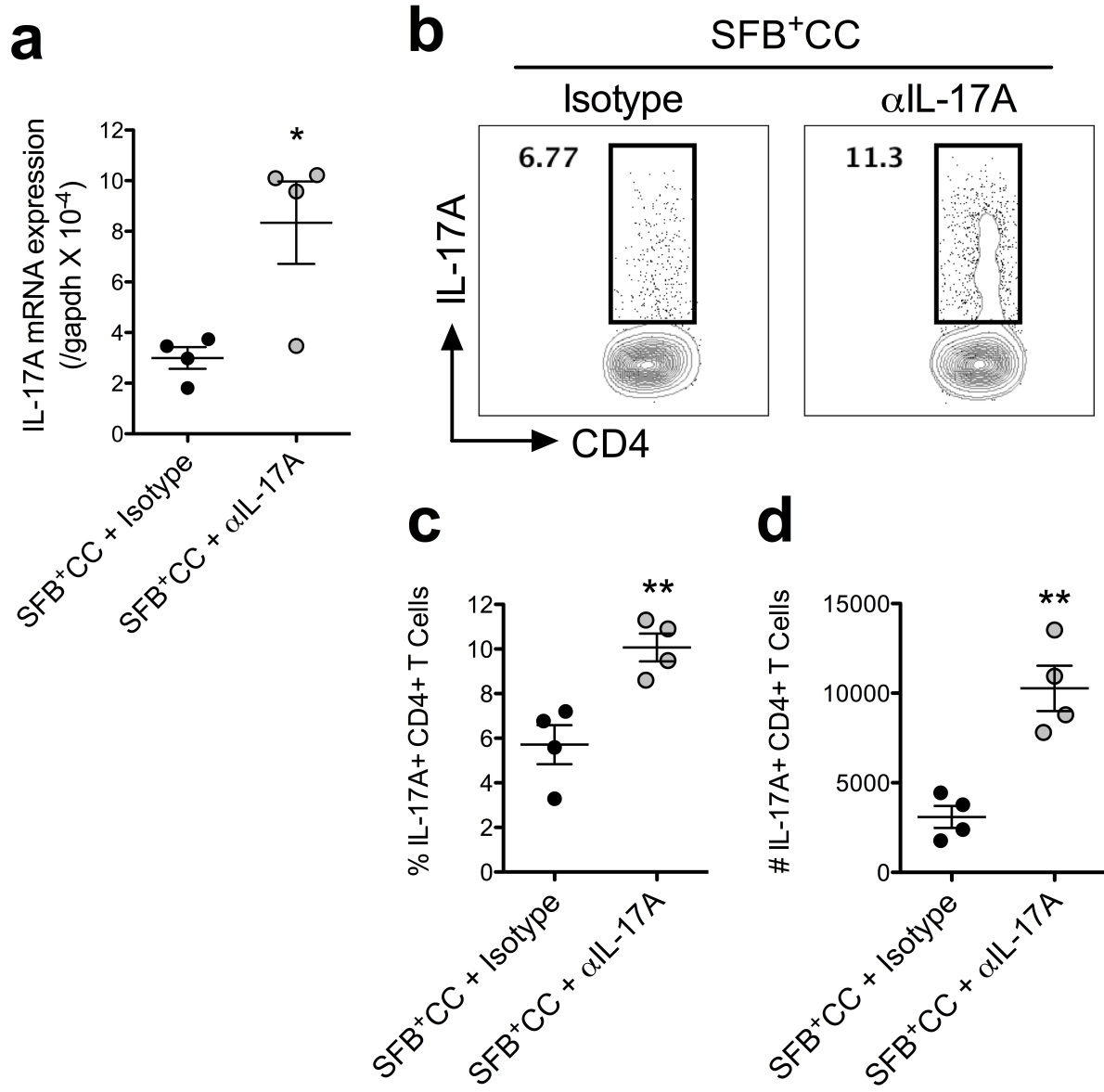
Supplementary Figure 3



Supplementary Figure 4

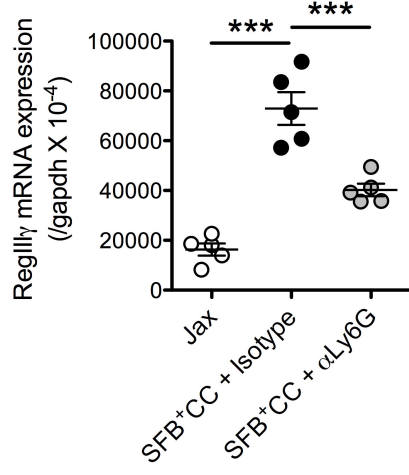
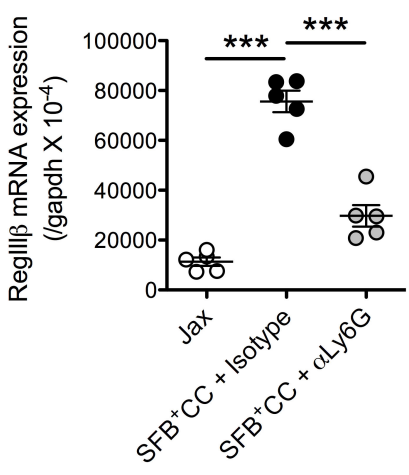


Supplementary Figure 5

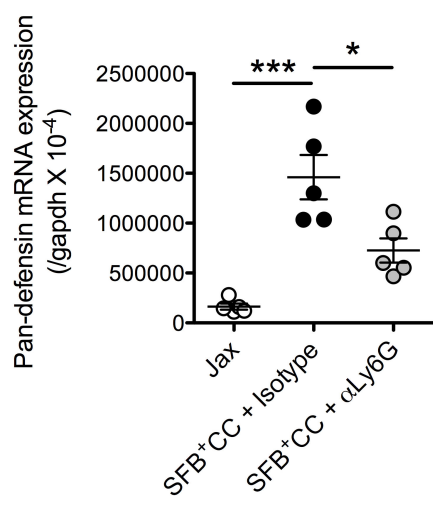


Supplementary Figure 6

a



b



Supplementary Figure 7