

Figure S1. Spleen is not a major contributor of antigen-specific Th cell priming to pulmonary cryptococcal infection. Flow plot and composite graph of Chitin deacetylase 2 (Cda2)-MHCII tetramer binding, *Cryptococcus*-specific Th cells from the spleens of mice infected 14 days prior.



Figure S2. Th17 and Th1 cell cytokines do not increase in the absence of Treg cell suppression. Interleukin (IL)-17A and Interferon (IFN)- γ measured in lung homogenates from wildtype, Foxp3-IRF4 fl/fl, and Foxp3-DTR mice 14 days post-infection. Global tests were by Kruskal-Wallis ANOVA . All data are presented as the mean ± standard error of the mean and include 2 independent experiments.



Figure S3. IL-10 is dispensable for suppression of Th2 cells produced in response to pulmonary cryptococcal infection. (A) Interleukin (IL)-10 measured in lung homogenates from wildtype, Foxp3-IRF4 fl/fl, and Foxp3-DTR mice 14 days post-infection. (B) Cda2+ Th2 cells quantified in the lungs of infected mice treated with IL-10 receptor blocking antibody or isotype control. (C). IL-5 (*left*) and IL-13 (*right*) measured in lung homogenates from infected mice treated with IL-10 receptor blocking antibody or isotype control. (C). IL-5 (*left*) and IL-13 (*right*) measured in lung homogenates from infected mice treated with IL-10 receptor blocking antibody or isotype control. All data are presented as the mean \pm standard error of the mean.



Figure S4. IRF4-deficient Treg cell differentiation is unaffected in secondary lymphoid tissues. (A) Flow cytometry plots and composite graphs of Th cells of mediastinal lymph nodes (MLN) and spleens from wildtype and Foxp3-cre IRF4 fl/fl mice infected 14 days prior. **(B)** Flow cytometry plots and composite graphs of Th cells of MLN and spleens from wildtype Th cells transferred into Foxp3-cre IRF4 fl/fl hosts or Foxp3-cre IRF4 fl/fl cells transferred into wildtype hosts infected 7 days prior and harvested 14 days post-infection. Red and black boxes on the plots are donor-derived cells that are also quantified in the composite graphs. Pairwise comparisons were made by Man-Whitney U. Plots are representative of 2 independent experiments. All data are presented as the mean ± standard error of the mean.