Supplementary Figure 1: Local airway instillation of IC augments Th2-mediated inflammation through FcγRIII. (A) Timeline for the local instillation model. On days 0, 2, 4, 6, 8, 10, and 12 WT or FcγRIII$^{-/-}$ mice were challenged with OVA or OVA-IC. On day 13, the mice were sacrificed. Airway inflammation was assessed by determining (B) the number of eosinophils (left panel) and CD4^{+} T cells (right panel) in the BAL, and (C) representative H&E sections of lung tissue from treated WT and FcγRIII$^{-/-}$ mice. Black bars = 100 μm. Data represent the mean ±

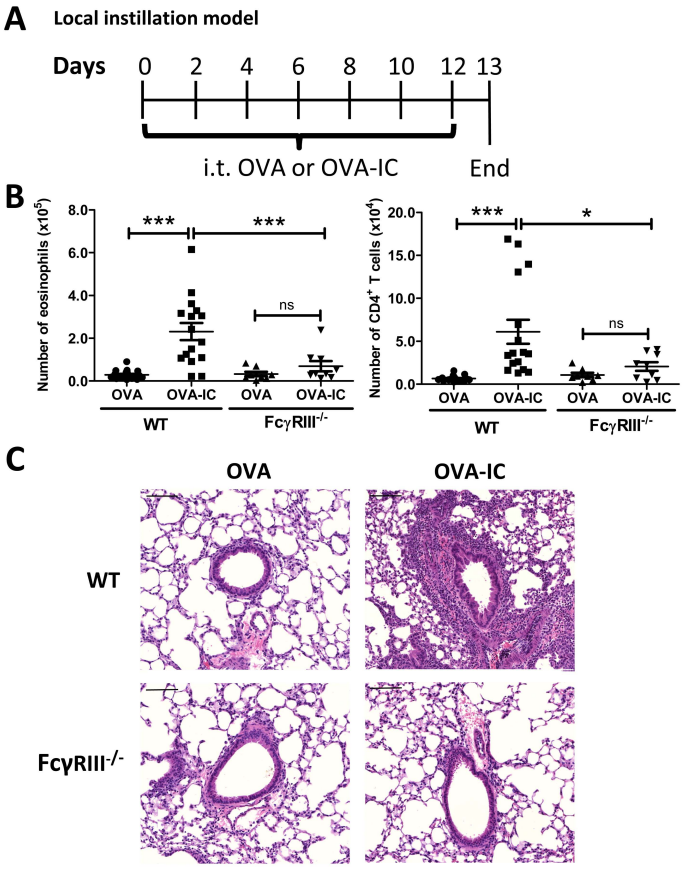
SEM (*, P <0.05; ***, P<0.001; ns = not significant). The data in this figure are combined from at least three independent experiments with a total of at least nine mice analyzed per group.

Supplementary Figure 2: IC upregulation of IL-33 in WT antigen presenting cells is TLR4 dependent. (A) qPCR analysis of IL-33 mRNA expression in WT or $TLR4^{-/-}$ BMDCs treated overnight with OVA or OVA-IC. (B) WT mice received α-OVA or $\alpha\text{-OVA}^{depl}$ serum i.v. followed by an OVA challenge 24 hours later. Six hours after challenge, the mice were sacrificed and AMs and rDCs were sorted from the lungs. IL-33 mRNA expression was assessed by qPCR. (**, P < 0.01; ***, P < 0.001; ns = not significant). The mean ± SEM from three independent experiments is shown.

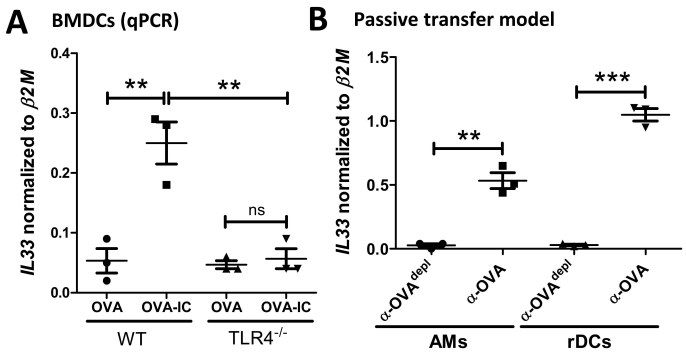
Supplementary Figure 3: IC uptake in $CD11b^+$ rDC subpopulations. (A) WT mice were challenged i.t. with OVA-APC or OVA-APC IC. Three hours after challenge, the mice were sacrificed and APC expression on $CD11b^+Ly6C^+$ and $CD11b^+Ly6C^-$ rDCs from the lung was assessed. (Red– unchallenged, Blue – OVA-APC, Green – OVA-APC IC). Data is a representative flow plot with at least six mice analyzed per group.

Supplementary Figure 4: Gating strategy for identifying AMs and rDCs. Live cells were first gated on $CD11c^+$ expression after which AMs and rDCs were separated based on SSC. The rDC subsets were identified based on $CD103^+$ and $CD11b^+$ expression.

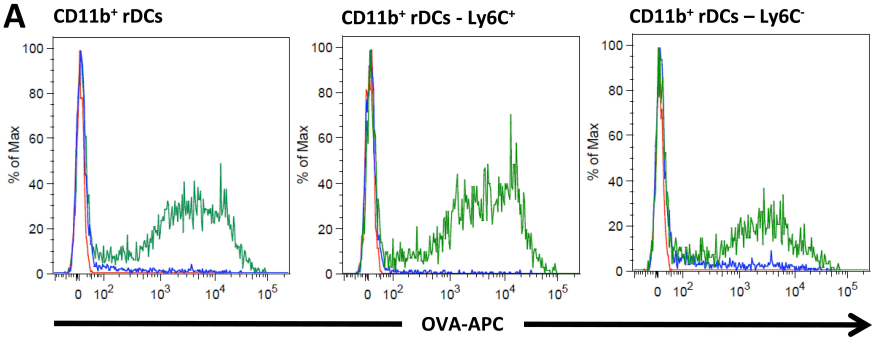
Supplementary Figure 5: After transfer of enriched lymph node T cells, ILC2 cells do not repopulate the lungs of $Rag^{-/-}IL2r\gamma^{-/-}$ mice. (A) Gating strategy for identifying ILC2s (Lin^- $Sca\text{-}1^+ICOS^+$ $ST2^+$). Live cells were first gated on FSC and SSC for lymphocytes. The Lin^- $Sca\text{-}1^+$ gate was then used for identification of ILC2 cells based on $ICOS^+$ and $ST2^+$ expression. The lineage gate included B220, CD3, CD4, CD8, CD11b, CD11c, CD19, F4/80, FcεRI, Gr1, NK1.1, and Ter119. (B) Lymph node cells were enriched for T cells by nylon wool non-adherence, or (C) $Rag^{-/-}$ or $Rag^{-/-}IL2r\gamma^{-/-}$ mice were reconstituted with either vehicle control or T cells as described in Figure 2C,D. Percent of lung ILC2 cells (right top corner) was determined within the lymphocyte gate as in Figure S5A.



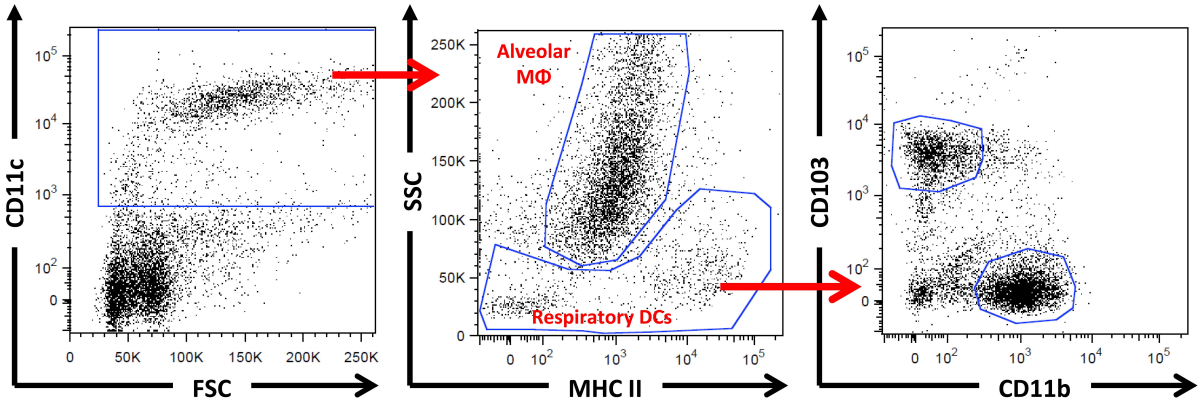
Supplementary Figure 1.



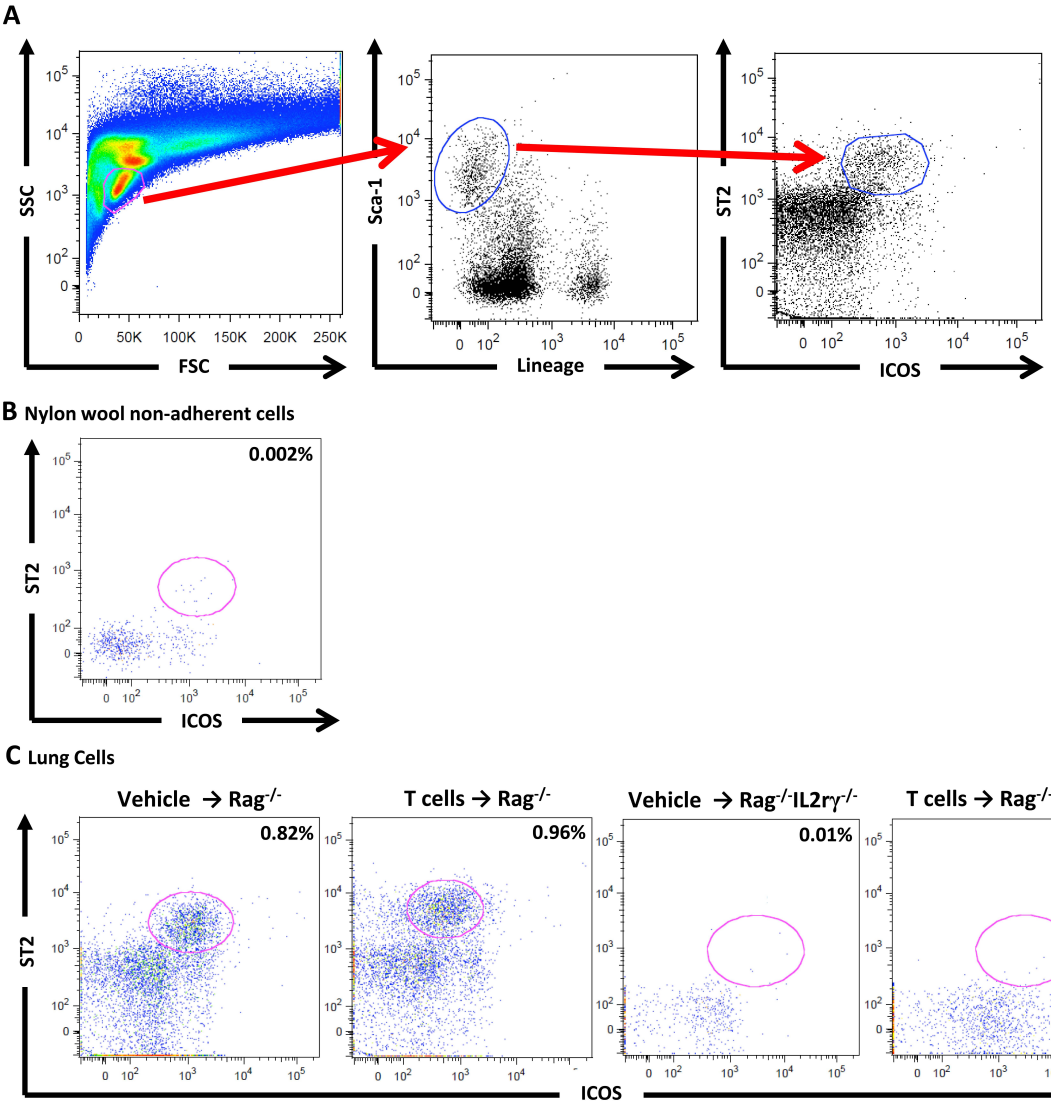
Supplementary Figure 2.



Supplementary Figure 3.



Supplementary Figure 4.



Supplementary Figure 5.