Figure S1

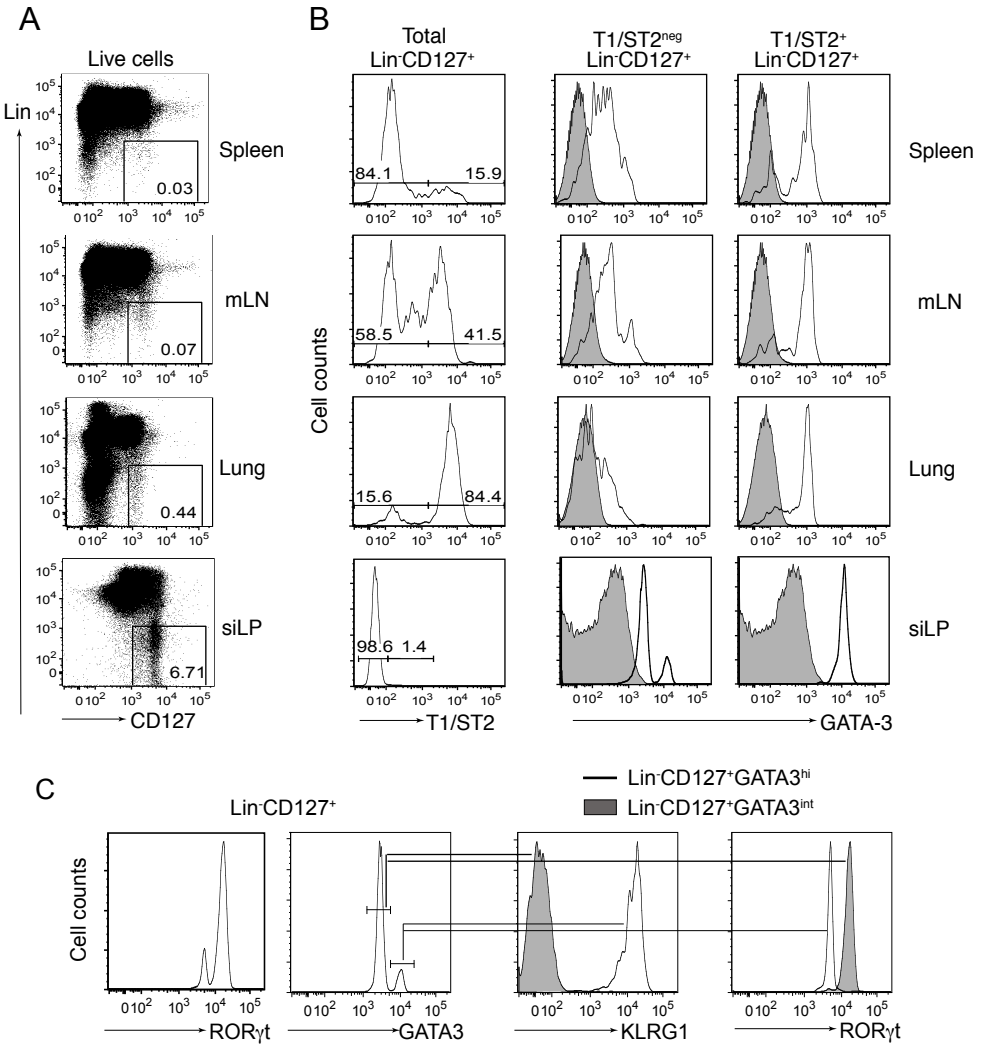

Figure S1. GATA3 is expressed by IL-7Rα+ ILCs at different levels (related to Figure 1)
(A) Cells prepared from spleen, mesenteric lymph node (mLN), lung and small intestine lamina propria (siLP) of C57BL/6 mice (n=3) were stained with a cocktail of antibodies to various lineage markers and CD127 (IL-7Rα). Dot plots show Lin-IL-7Rα+ cells from each organ. Numbers indicate percentage of the cells in each box.
(B) Lin-IL-7Rα+ cells shown in Fig. S1A were further divided into T1/ST2 (IL-33R) expressing and non-expressing cells. The expression of GATA3 was assessed by intracellular staining. Numbers indicate percentage of the cells in each gate. Open histograms represent specific antibody stained samples and shaded histograms represent staining with isotype controls.
(C) Cells prepared from siLP of C57BL/6 mice were stained with a cocktail of antibodies to various lineage markers, CD127 (IL-7Rα) and KLRG1 followed by intracellular staining for GATA3 and RORgt. Histograms (two left panels) show total Lin$^-$IL-7Rα$^+$ cells. Histograms (two right panels) show expression of KLRG1 and RORgt by GATA3^{hi} and GATA3^{int} subsets.
Data are representative of two independent experiments.

Figure S2

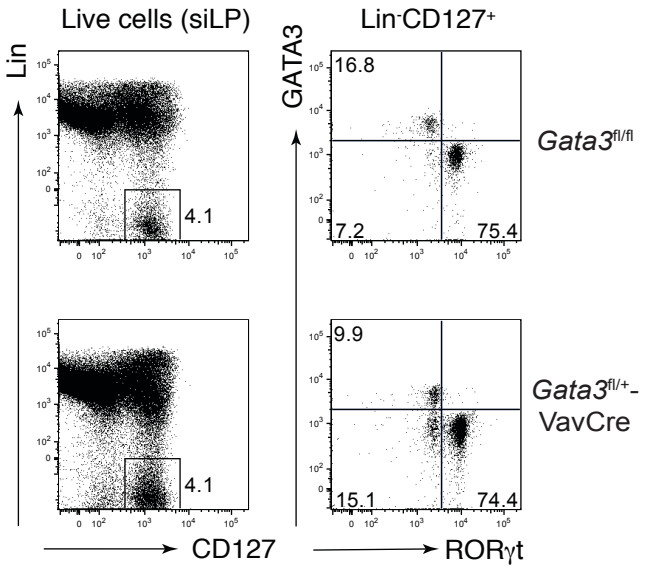

Figure S2. Heterozygous Gata3 deletion results in a partial reduction of ILC2s but not ILC3s (related to Figure 2)
Cells prepared from small intestine lamina propria (siLP) of Gata3$^{fl/fl}$ or Gata3$^{fl/+}$-Vav-Cre mice were stained with a cocktail of antibodies to various lineage markers, CD127, GATA3 and RORγt. Plots gated on total live cells (left panel) or Lin^{-}CD127^{+} ILCs (right panel) were shown.
Data are representative of two independent experiments.

Figure S3

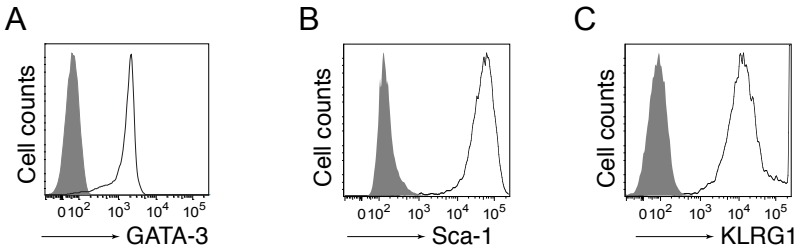

Figure S3. Cytokine-mediated expansion of KLRG1^{+}Sca-1^{+}GATA3^{hi} ILC2s (related to Figure 5)
Lineage negative cells were purified from mesenteric lymph node of IL-25-treated mice (n=3) by cell sorting. They were then cultured with IL-7, IL-25 and IL-33 for 1 week. The expression of GATA3 (A), Sca-1 (B) and KLRG1 (C) on these cultured cells was assessed by flow cytometry after staining. Open histograms represent specific antibody stained samples and shaded histograms represent staining with isotype controls.
Data are representative of three independent experiments.

Figure S4

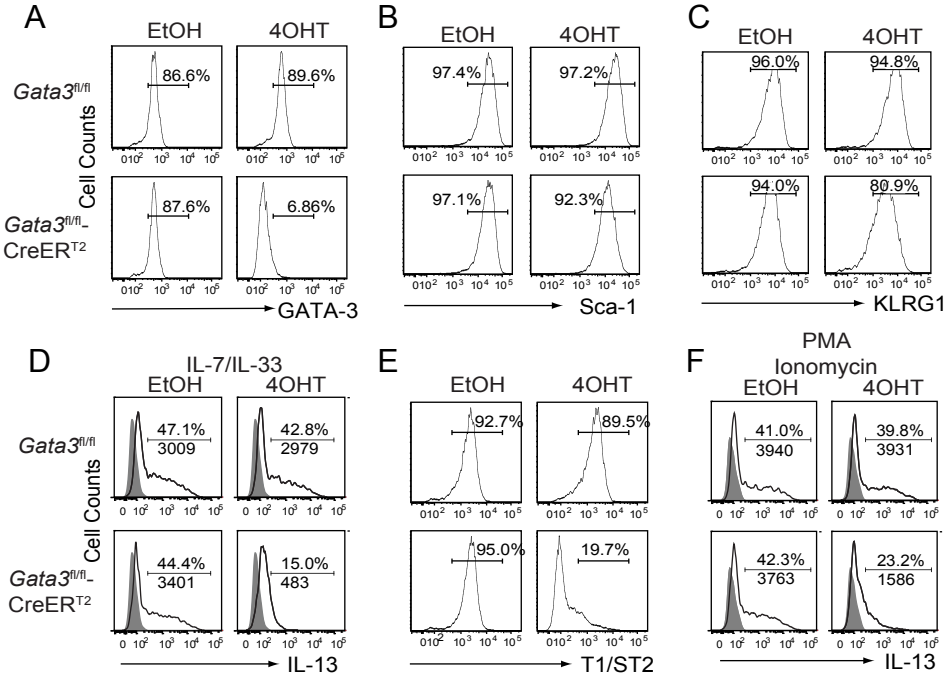

Figure S4. GATA3 directly and indirectly regulates the IL-13 production in ILC2s (related to Figure 6)
Lineage negative cells were purified from mesenteric lymph node of IL-25-treated Gata3fl/fl or Gata3fl/fl-CreERT2 mice (3-4 mice per group) by cell sorting. After cultured with IL-7, IL-25 and IL-33 for 5 days, they were then treated with either 4-hydroxytamoxifen (4-OHT) or ethanol (EtOH) for 2 days. The expression of GATA3 (A), Sca-1 (B), KLRG1 (C) and T1/ST2 (E) on these cultured cells was assessed by flow cytometry. Some cells were re-stimulated with either IL-7 plus IL-33 (D) or PMA plus ionomycin (F) in the presence of monensin and then intracellular staining for IL-13 was carried out. Open histograms represent cells stained with anti-IL-13 and shaded histograms represent cells stained with an isotype control. The upper number in the graphs indicates the percentage of the cells in each gate and the lower number indicates mean fluorescence intensity of IL-13 within the IL-13-producing cells. Data are representative of three independent experiments.