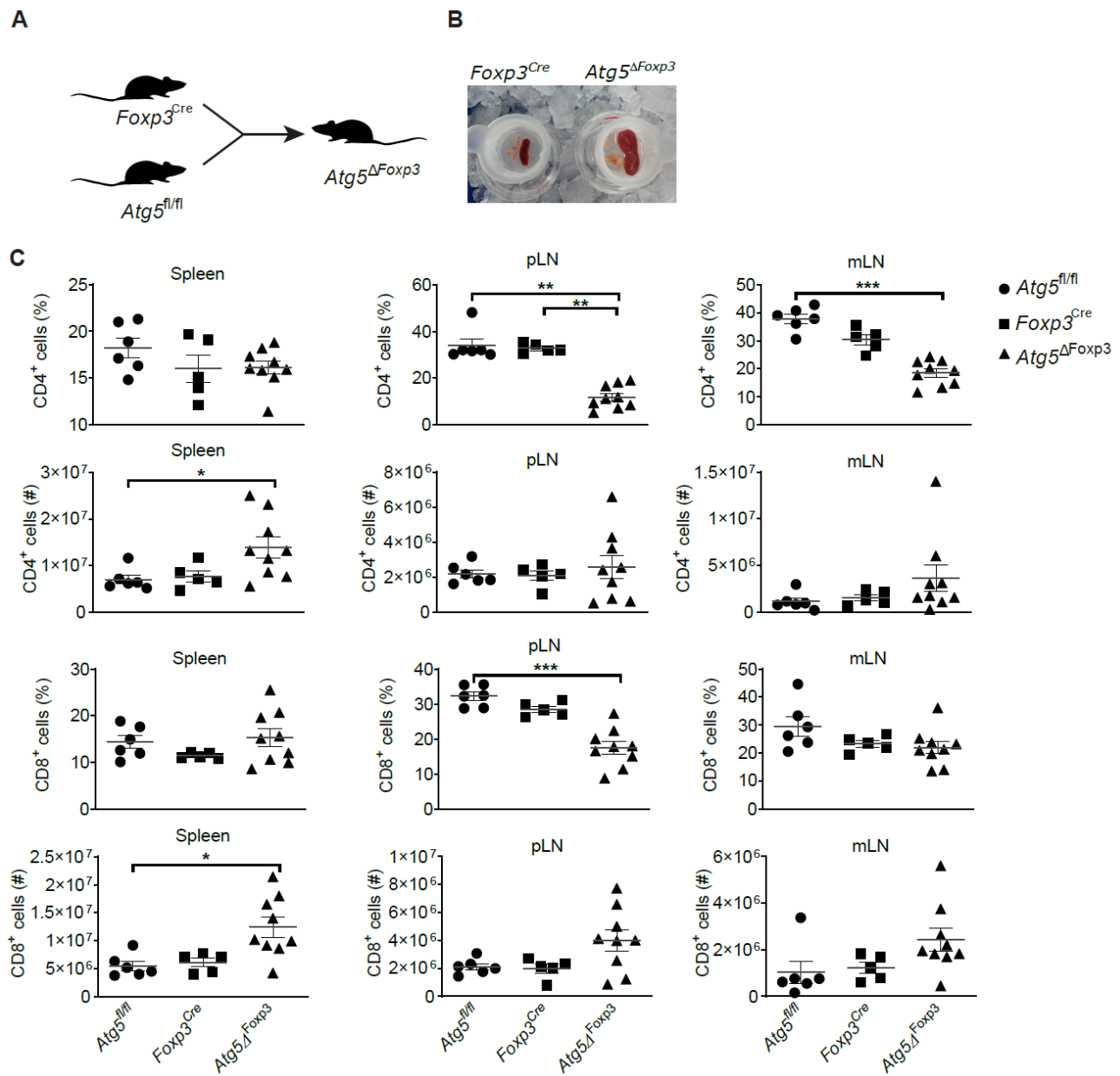
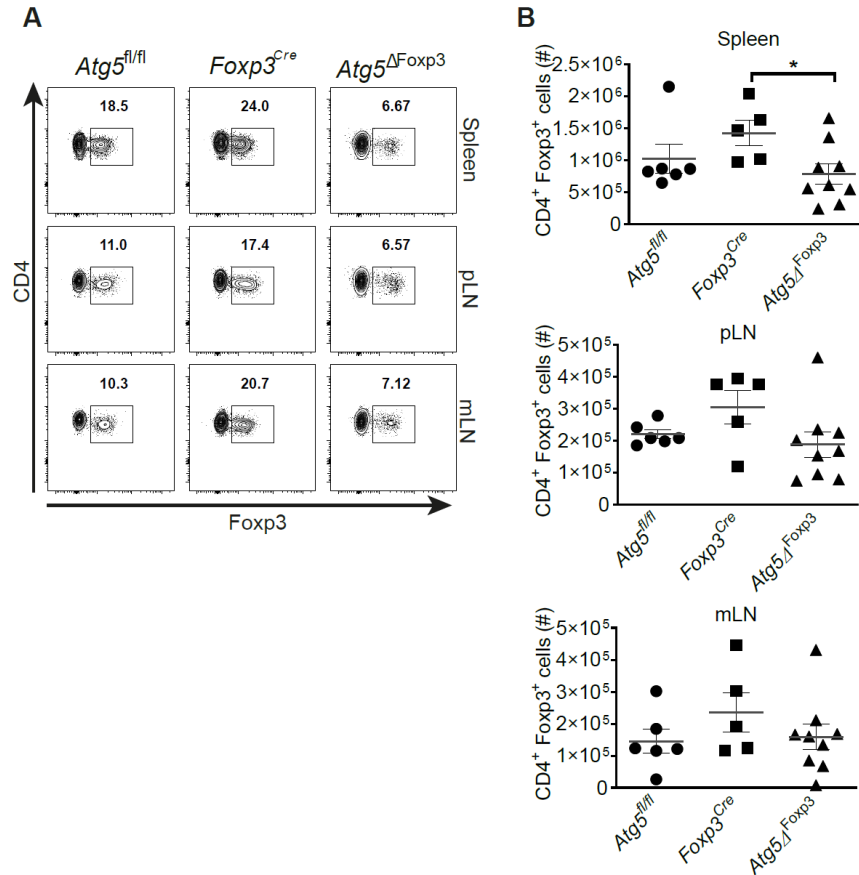


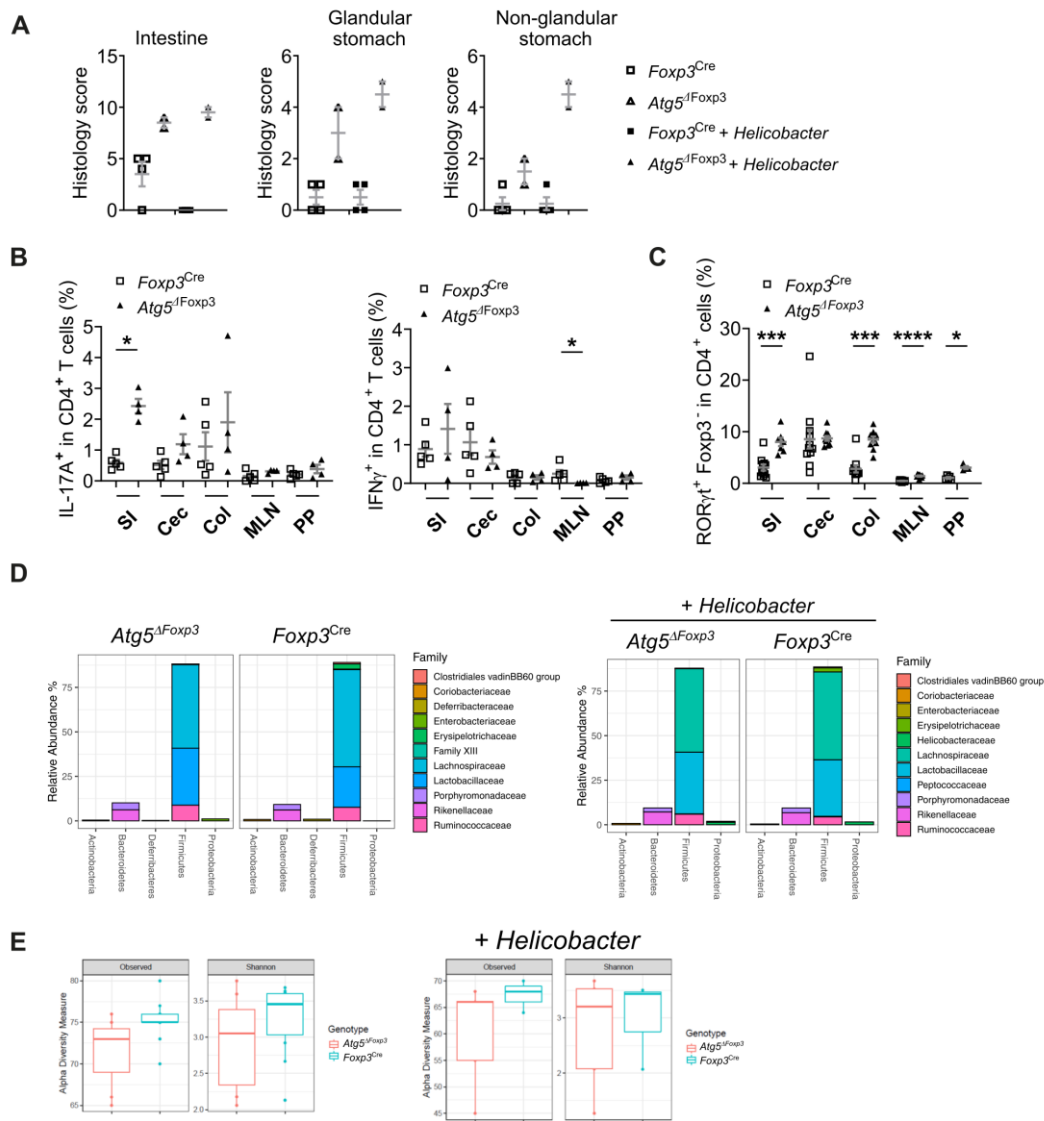
Supplementary Material



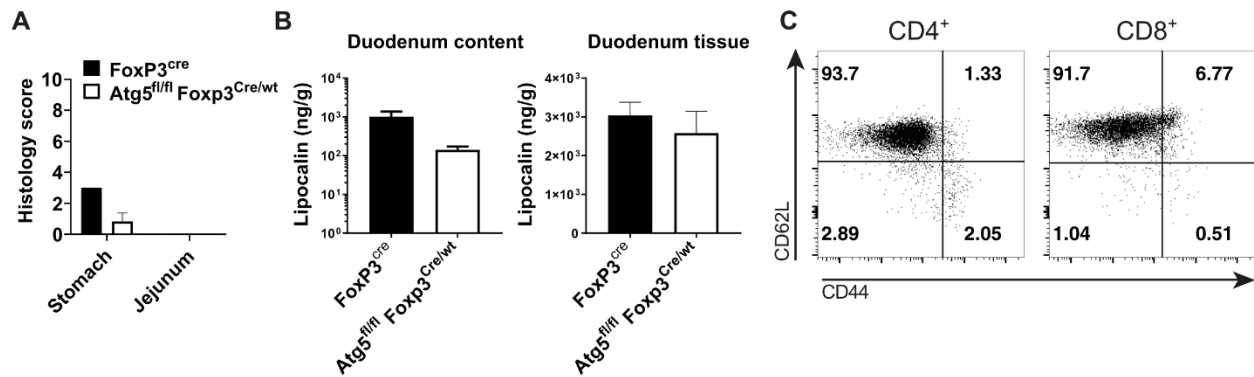
**Supplementary Figure 1.** (A) Schematic cartoon depicting the generation of the conditional knock out mouse *Atg5<sup>ΔFoxp3</sup>* from the *Atg5<sup>fl/fl</sup>* and *Foxp3<sup>Cre</sup>* mice. (B) Picture of spleen and lymph nodes from *Foxp3<sup>Cre</sup>* and *Atg5<sup>ΔFoxp3</sup>* mice. (C) CD4<sup>+</sup> and CD8<sup>+</sup> cell numbers and frequencies of spleen, peripheral lymph (pLN) and mesenteric lymph nodes (mLN) from 11-20 week old *Atg5<sup>fl/fl</sup>*, *Foxp3<sup>Cre</sup>* and *Atg5<sup>ΔFoxp3</sup>* mice. The Kruskal–Wallis one-way ANOVA tests were used for statistical analysis. Mean ± SEM are given. Each symbol represents a single mouse in the scatter plots.



**Supplementary Figure 2.** (A) Representative contour plots of CD4<sup>+</sup> Foxp3<sup>+</sup> cell frequencies of spleen, peripheral lymph nodes (pLN) and mesenteric lymph nodes (mLN) from 11-20-week-old *Atg5<sup>fl/f</sup>*, *Foxp3<sup>Cre</sup>* and *Atg5<sup>ΔFoxp3</sup>* mice. (B) Cell numbers of CD4<sup>+</sup> Foxp3<sup>+</sup> cells of spleen, peripheral lymph node (pLN) and mesenteric lymph node (mLN) from 11-20-week-old *Atg5<sup>fl/f</sup>*, *Foxp3<sup>Cre</sup>* and *Atg5<sup>ΔFoxp3</sup>* mice. Mean ± SEM are given. Each symbol represents a single mouse in scatter plots. The Kruskal–Wallis one-way ANOVA tests were used for statistical analysis.



**Supplementary Figure 3.** (A) Histological score of stomach and intestinal injury in *Foxp3<sup>Cre</sup>* and *Atg5<sup>ΔFoxp3</sup>* mice under specific-pathogen-free conditions and colonized with *Helicobacter* species. (B) Frequency of IL-17A<sup>+</sup> (left) and IFNγ<sup>+</sup> cells (right) and (C) frequencies of RORγt<sup>+</sup> Foxp3<sup>-</sup> cells within CD4<sup>+</sup> cells in small intestine (SI), cecum (Cec), colon (Col), mesenteric lymph nodes (MLN) and Peyer's patches (PP) of *Foxp3<sup>Cre</sup>* and *Atg5<sup>ΔFoxp3</sup>* mice. (D) Representation of relative abundances of bacterial families and (E) alpha diversity and Shannon diversity index analysis of fecal microbiota from *Foxp3<sup>Cre</sup>* and *Atg5<sup>ΔFoxp3</sup>* mice under specific-pathogen-free conditions (left) and colonized with *Helicobacter* (right) using 16S rRNA sequencing. (B, C) Statistical analyses were performed by two-tailed Mann-Whitney tests. (A-C) Mean ± SEM are given. Each symbol represents a single mouse in the scatter plots.



**Supplementary Figure 4.** (A) Histological score of stomach and jejunum inflammation in *Foxp3<sup>Cre</sup>* and *Atg5<sup>fl/fl</sup> Foxp3<sup>Cre/wt</sup>* mice. (B) Lipocalin-2 levels in duodenum content and duodenum tissue of *Foxp3<sup>Cre</sup>* (n=2) and *Atg5<sup>fl/fl</sup> Foxp3<sup>Cre/wt</sup>* mice (n=6). (C) Representative dot plots of T cell activation markers CD44 and CD62L in CD4<sup>+</sup> Foxp3<sup>-</sup> and CD8<sup>+</sup> cells from peripheral lymph nodes of 14 week-old *Atg5<sup>fl/fl</sup> Foxp3<sup>Cre/wt</sup>* mice (n=6).