Monoclonal Antibodies Against Mature Interleukin-18 Ameliorate Colitis and Repair Goblet Cell Function

Supplementary Information

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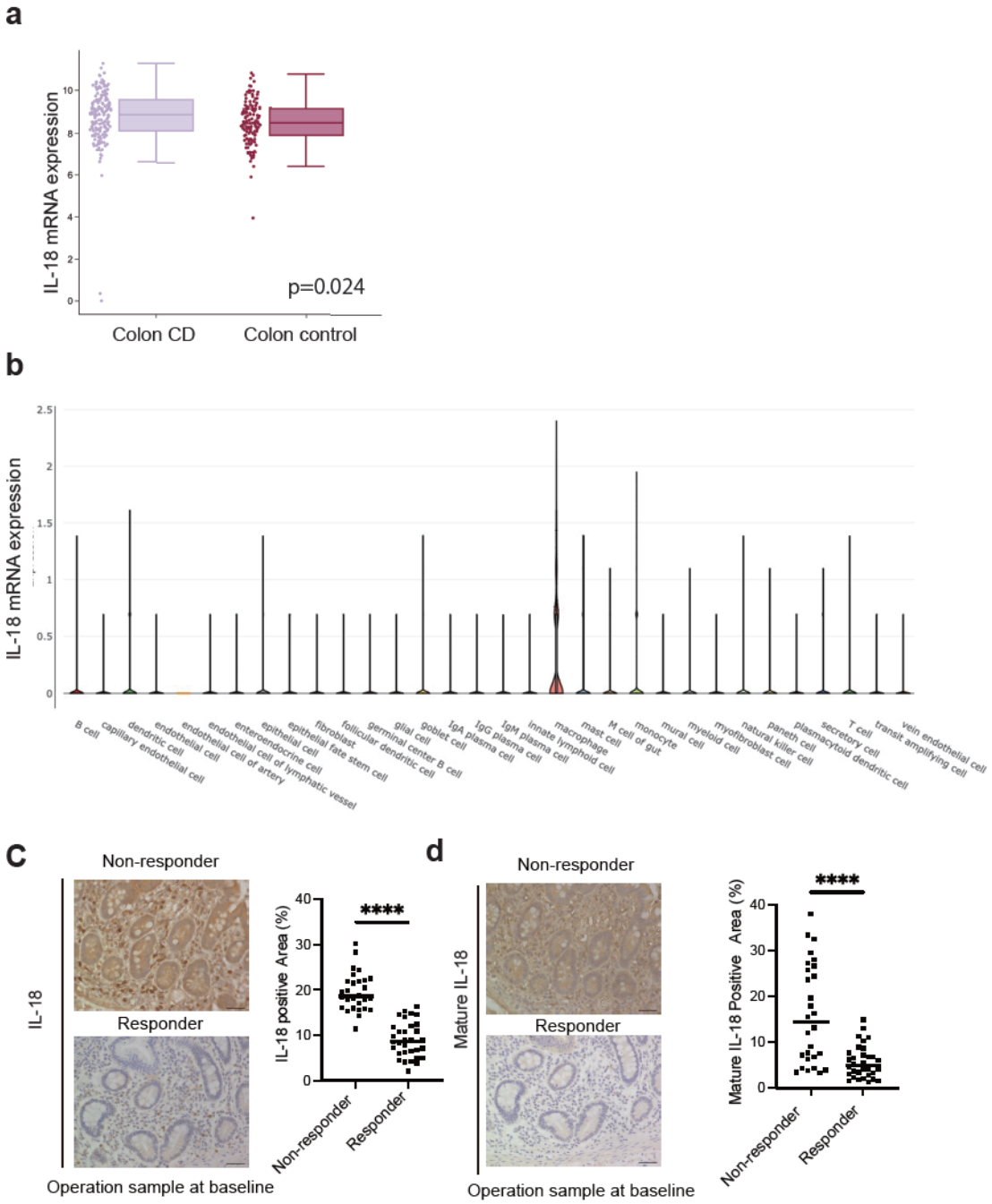
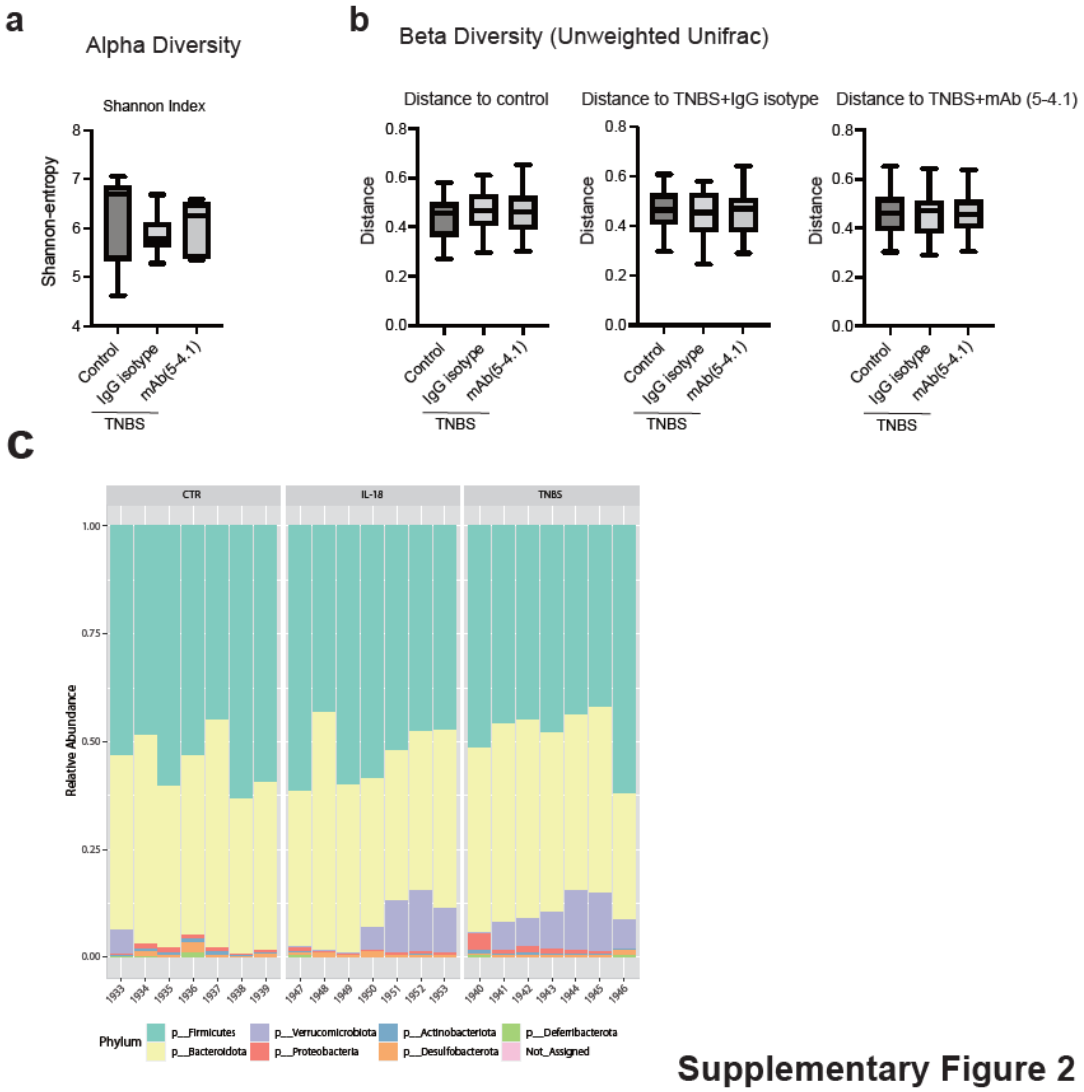


Supplementary Figure 1:IL-18 and mature IL-18 expression is upregulated in patients with CD.

(a) IL-18 expression in patients with CD using bulk RNA-seq database IBD

Transcriptome and Metatranscriptome Meta-Analysis, IBD TaMMA; https://ibd-meta-analysis.herokuapp.com). (b) Cell type expressing IL-18 using scRNA-seq databases derived from the Single Cell Portal (SCP1423, https://singlecell.broadinstitute.org/single_cell). (c) Anti-IL-18 mAb (11-4.1) recognition of precursor and mature IL-18 in surgical samples and quantification of IL-18-positive areas. (d) Immunochemistry with anti-IL-18 mAb (9-10.2) showing mature IL-18 in surgical samples and quantification of the mature IL-18-positive areas. Non-responder n=14, responder n=17, Scale bar: 40 μm. Data are presented as the means ± SD. Statistical comparisons were performed using an unpaired *t*-test. **P* < 0.05, ***P* < 0.01, ****P* < 0.001, *****P* < 0.0001.



Supplementary Figure 2: Gut microbiota analysis after administration of anti-IL-18 mAb (5-4.1).

(a and b) Comparison of alpha-diversity and β-diversity at day 5 after TNBS administration. (c) Comparison of the intestinal microbiota at the phylum level, n=7 for each group. Data are presented as the means; *$P < 0.05$ by one-way ANOVA, followed by Tukey's post-hoc test.