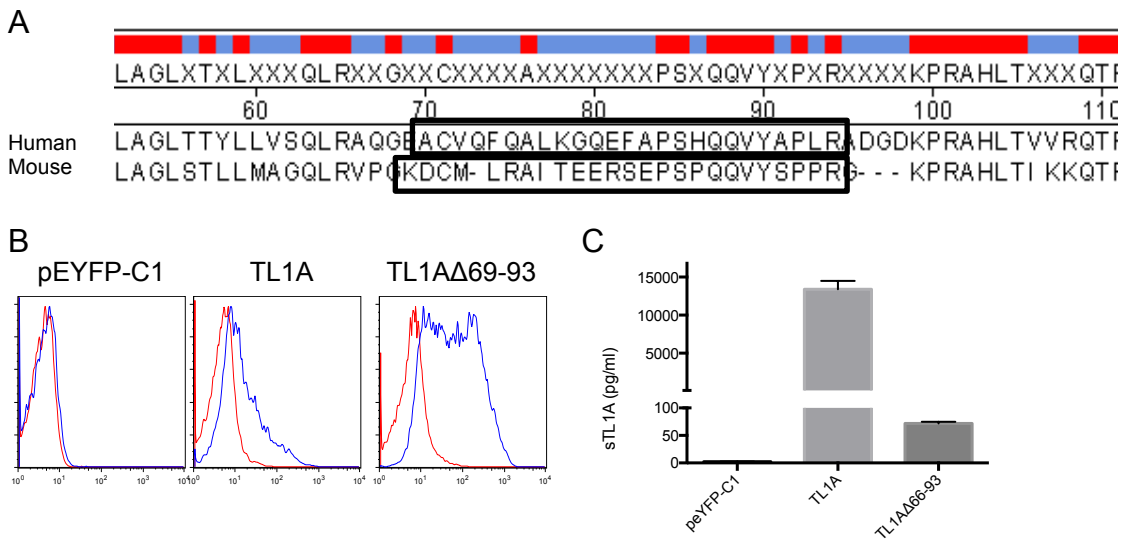


# Supplemental Figure 1

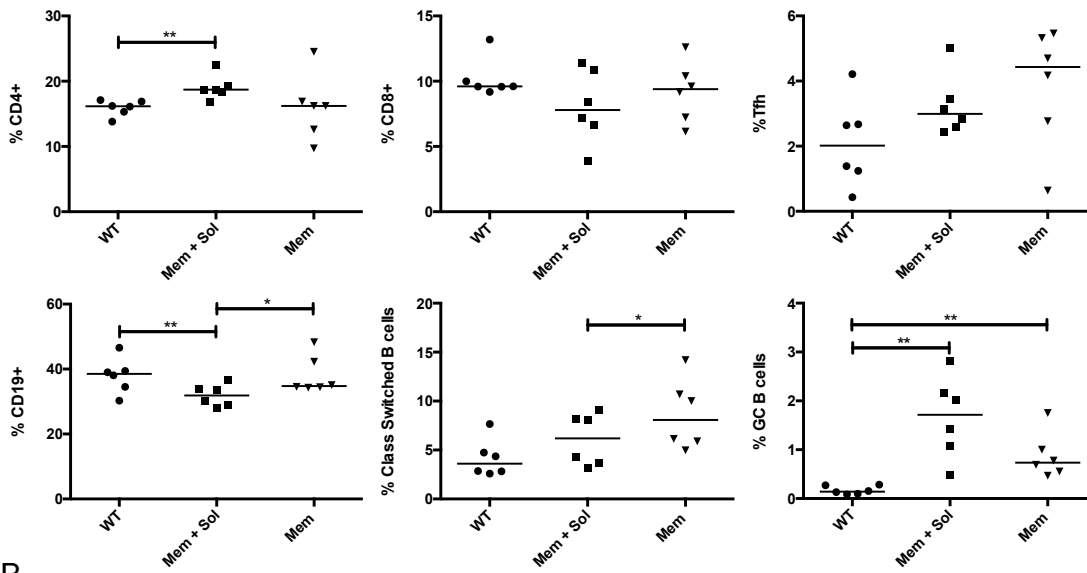


## Supplemental Figure 1. Production of a membrane restricted TL1A mutant. **A**

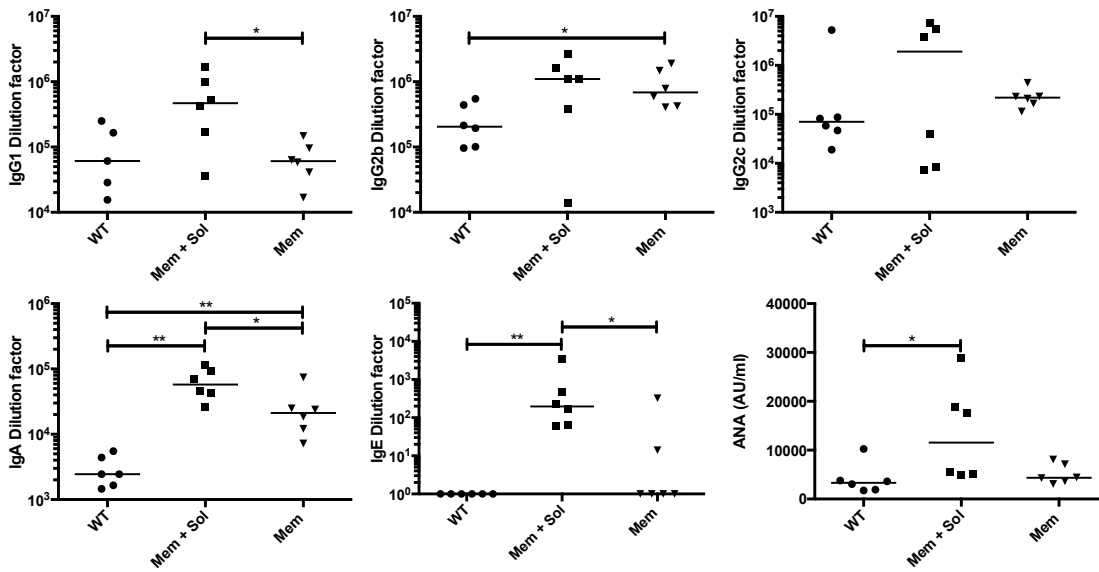
Comparison of previously reported cleavage region in human TL1A and the homologous region in mouse TL1A corresponding to amino acids 69-93. **B** Either full length TL1A or TL1A $\Delta$ 69-93 were cloned into pEYFP-C1 and expressed in 293T cells. Surface expression of TL1A was measured by flow cytometry in the indicated cell lines using anti TL1A (blue line) and compared to an isotype control (red line). **C** Soluble TL1A was measured in the supernatant of cultures from B 72 hours post transduction.

## Supplemental Figure 2

A



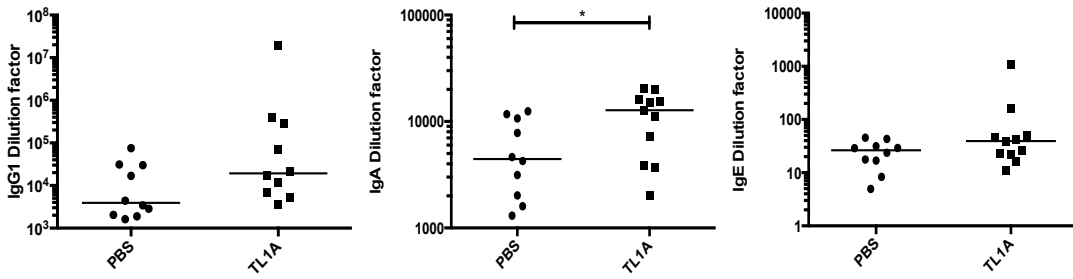
B



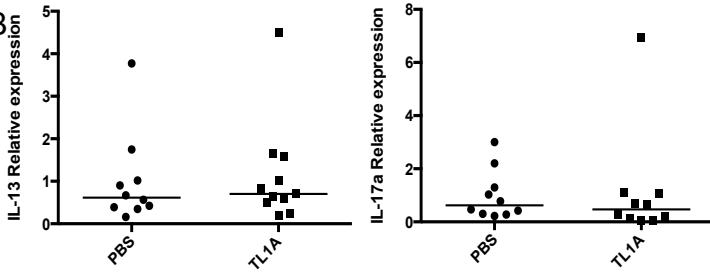
**Supplemental Figure 2. Cellular composition of the spleen in Mem vs Mem+Sol TL1A transgenic mice.** **A** Spleens were taken from the indicated mice at 12 weeks of age and cellular composition assessed by flow cytometry. CD4+, CD8+ and CD19+ cells are expressed as a percentage of total splenocytes. % Tfh cells are the percentage of CD4+ ICOS+ CD40L + PD1+ CXCR5+ out of the CD4+ population, % Class Switched B cells are the percentage of CD19+ IgM- IgD- out of the CD19+ population, and % GC B cells are the percent of CD19+ PNA+ GL-7+ out of the CD19+ population. **B** Serum was collected from the indicated TL1A transgenic mice at 12 weeks of age. Levels of total antibodies were measured along with ANA titers as indicated. Bar indicates median. \* 0.05>P>0.01 \*\* 0.01>P>0.001 using Mann Whitney test.

# Supplemental Figure 3

A



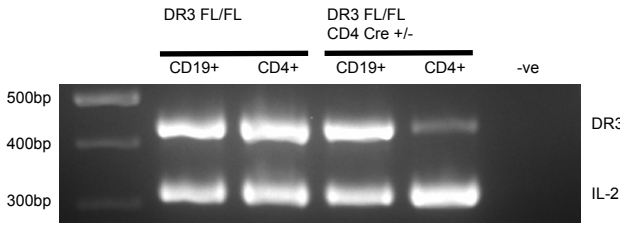
B



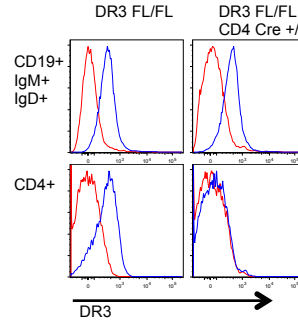
**Supplemental Figure 3 – Antibody titres and cytokine expression under chronic soluble TL1A treatment.** Mice were euthanized 6 weeks post implantation with an osmotic pump containing soluble TL1A. **A** Total levels of the indicated antibodies were measured in the serum of mice at the end of treatment. **B** qPCR analysis of the indicated cytokines from the postcaval lobe of the lung. Bar indicates median. No significant differences were found using Mann Whitney test. Data combined from 2 independent experiments.

# Supplemental Figure 4

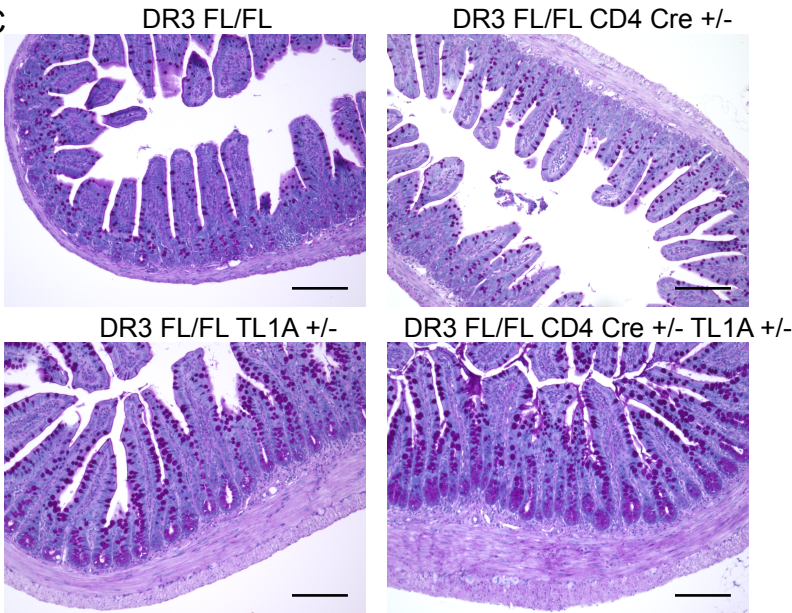
A



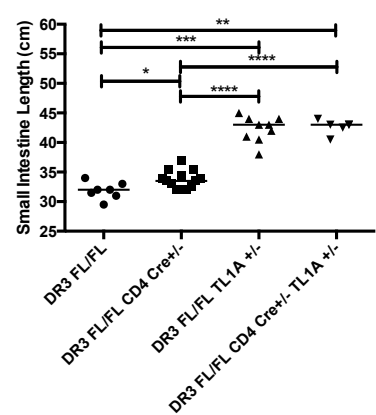
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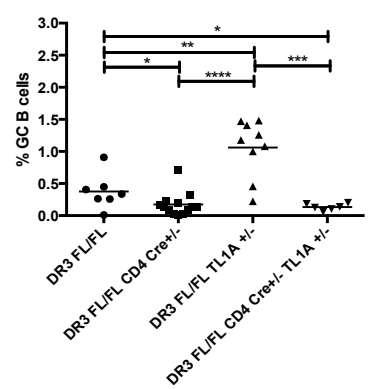
C



D



E



**Supplemental Figure 4 – DR3 T cell conditional deletion.** **A** DNA was extracted from either CD4+ or CD19+ cells sorted from the spleen of DR3 FL/FL or DR3 FL/FL CD4 Cre +/-/. Levels of DR3 DNA were assessed by PCR and compared to IL-2 as a control using genotyping primers. **B** The level of DR3 expression (blue) compared to an isotype control (red) on the surface of either CD4+ or CD19+ IgM- IgD- cells from the same strains as in A was compared by flow cytometry. **C** Terminal ileum sections from 12 week old mice of the indicated strains were stained with PAS; scale bars are equal to 150µm. **D** The length of the small bowel was measured. **E** The fraction of GC B cells in the indicated strains as the percentage of CD19+ PNA+ GL-7+ cells out of the CD19+ population. Bar indicates median. \* 0.05>P>0.01, \*\* 0.01>P>0.001, \*\*\* 0.001>P>0.0001, \*\*\*\* P<0.0001 using Mann Whitney test.