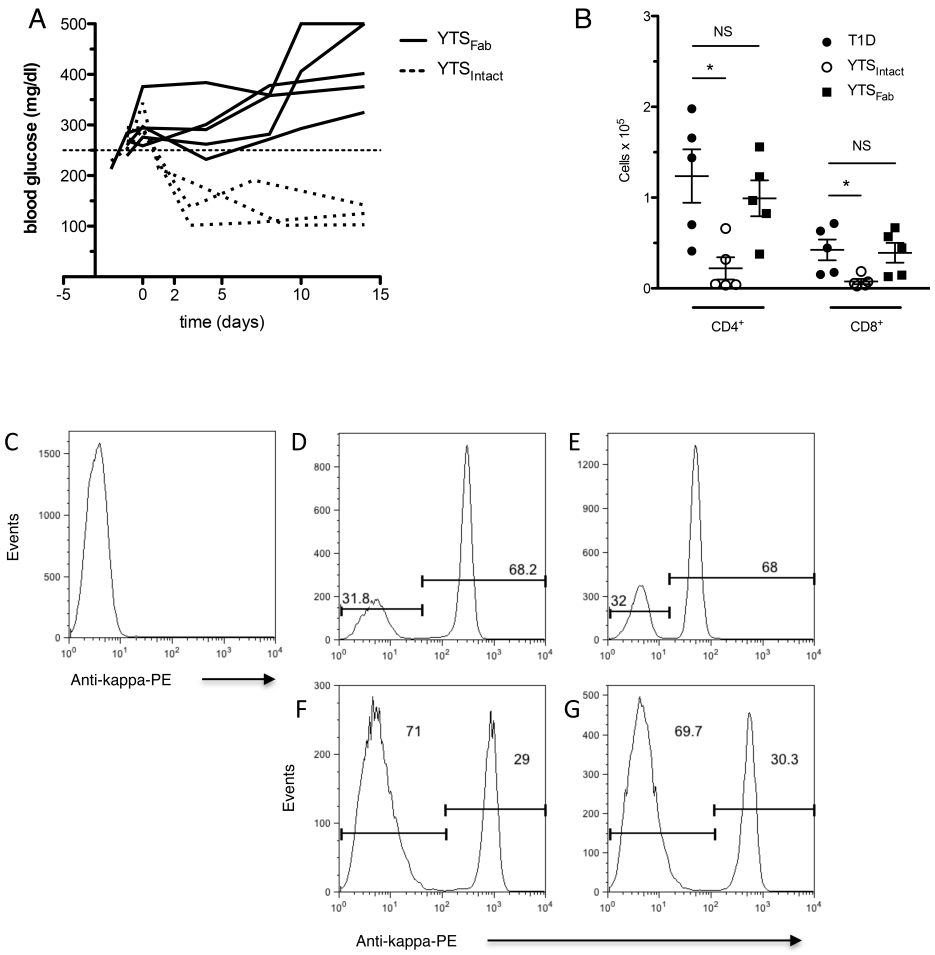
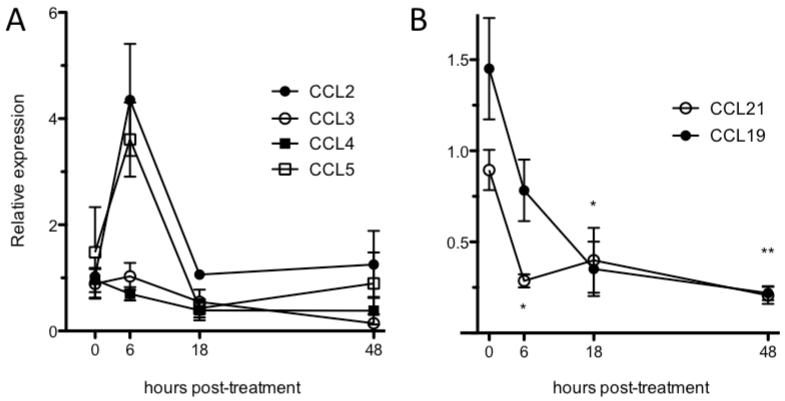
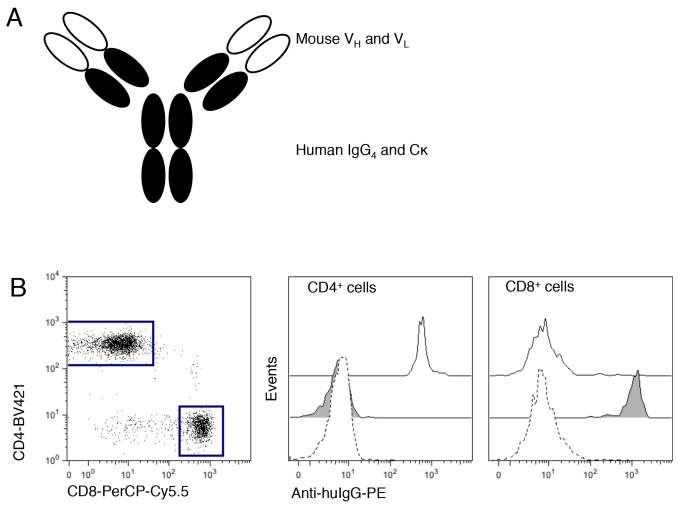


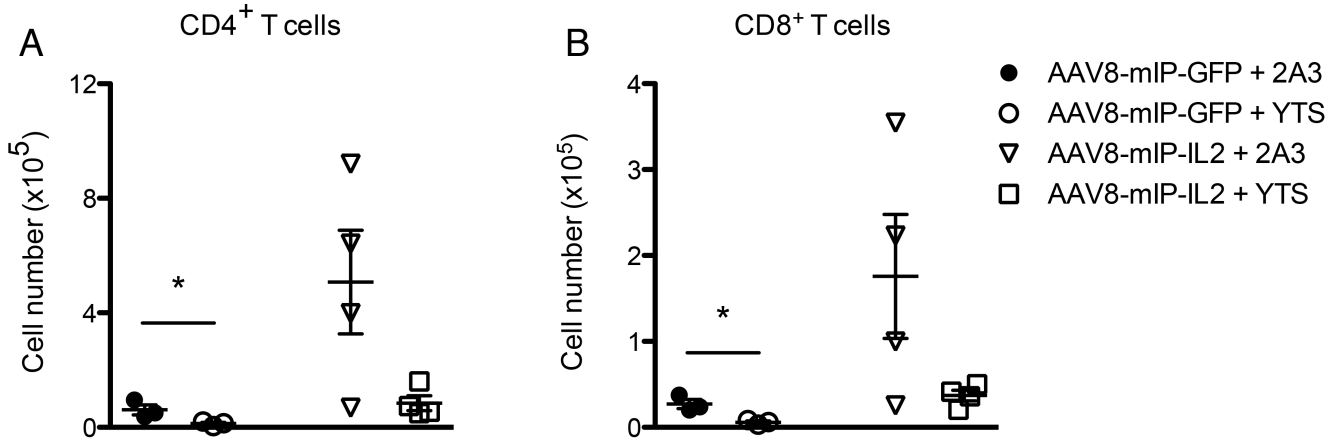
Supplementary Figure 1. Fab monomers do not exert tolerogenic effects. (A) Newly diabetic NOD female mice were injected i.p. with 1 mg intact or 300 μg of Fab monomers of YTS177 and YTS105, and blood glucose monitored. (B) Pancreatic CD4$^+$ and CD8$^+$ T cell numbers from groups of 5 mice were determined by flow cytometry. *$p<0.05$ (one-way ANOVA with Bonferroni's multiple comparisons correction). Splenic leukocytes from a 12 wk-old female NOD mice were labeled with no Ab (C), or 1 μg of the following immunoglubulin molecules: intact YTS177 (D), YTS177 Fab (E), intact YTS105 (F), or YTS105 Fab (G). Following extensive washing, cells were stained with anti-mouse CD3-APC and mouse-anti-rat kappa-PE Ab. Histograms are gated on single CD3$^+$ lymphocytes.



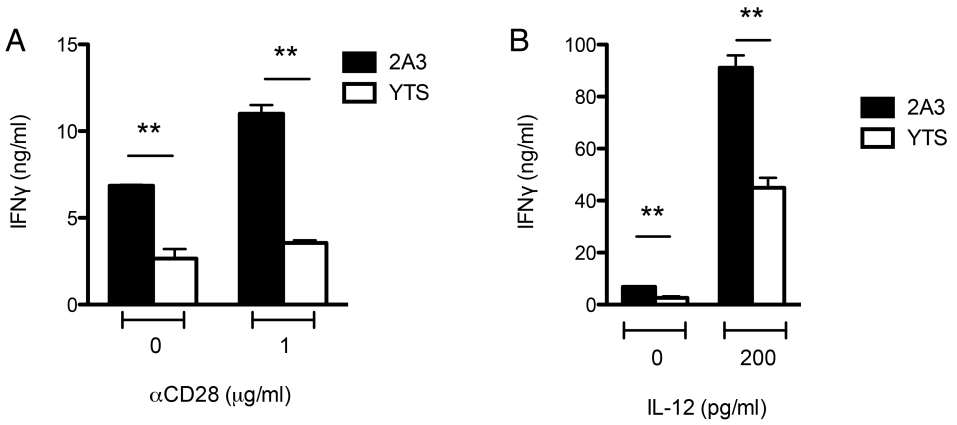
Supplementary Figure 2. Expression of CC family chemokines is downregulated following YTS treatment. 12 wk-old female NOD mice were injected i.p. with 1 mg of YTS177 and YTS105, and islets were harvested at the indicated times. mRNA was measured via qRT-PCR for CCL2-5 (A) and CCL19 and 21 (B). Islets from 3 mice were pooled for each time point. Data are the average of 3 independent experiments; *$p<0.05$ (one way ANOVA with Bonferroni's multiple comparisons test).



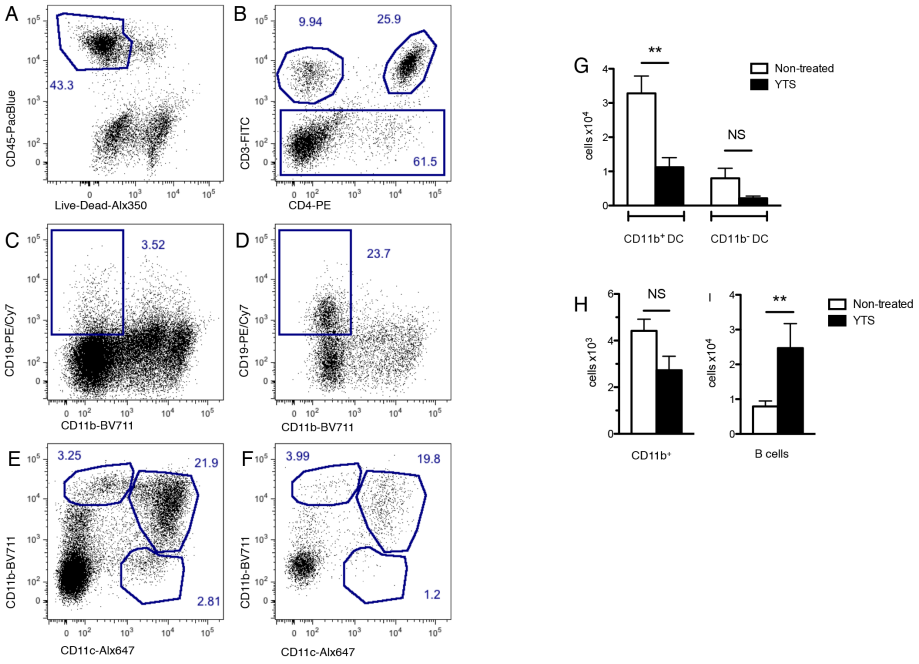
Supplementary Figure 3. Mouse-human IgG_4 chimeric Ab specific for human CD4 and CD8α. Schematic diagram of chimeric Ab, which feature murine heavy and light chain variable regions fused to human IgG_4 and κ constant regions (A). Fresh human PBMC were labeled with CH9d2 and CH5g5 prior to staining with fluorochrome-conjugated Ab. $CD4^+$ and $CD8^+$ T cells were identified from populations of live $CD3^+$ events using the indicated gates. Histograms with a dashed line represent T cells labeled with only anti-human IgG-PE Ab. Solid lines indicate samples labeled with CH5g5 (anti-CD4), and the shaded histogram indicates samples labeled with CH9d2 (anti-CD8).



Supplementary Figure 4. β cell-specific IL-2 expression does not prevent YTS-induced T cell purging. 12 wk-old female NOD mice were injected with $2x10^{10}$ vector particles of AAV8mIP-GFP (n=6) or AAV8mIP-IL2 (n=8). Two weeks later, half of the mice from each group were injected with 1 mg of YTS177 and 1 mg of YTS105, and the other half injected with 2 mg of 2A3. 24 h later, islets were harvested and intra-islet T cells enumerated by flow cytometry; *$p<0.05$.



Supplementary Figure 5. YTS suppresses IFNγ secretion in the presence of anti-CD28 or IL-12. Islets were harvested from 8-10-wk old BDC female mice and disaggregated. The resulting cell suspensions were cultured for 3 d in the presence of 0.1 mg/ml of YTS177 or 2A3, and supplemented with the indicated concentrations of IL-12 (A) or anti-CD28 (B). IFNγ levels were measured by ELISA. Data presented are the means of 3 technical replicates **p<0.01.



Supplementary Figure 6. **YTS treatment alters non-T cell leukocyte populations.** 12 wk-old female NOD mice were injected with 1 mg of YTS177 and YTS105. 24 h post-treatment, live intra-islet CD45$^+$ leukocytes (panel A) were analyzed. The composition of the CD3$^-$ subset (Panel B) was analyzed. B cells in non-treated (C) and YTS treated (D) were enumerated as were CD11b$^+$CD11c$^-$ events and CD11b$^+$ and CD11b$^-$ DCs. Numbers of DCs, monocyte/macrophages, and B cells appear in G,H, and I, respectively. **p<0.01, Student's t test, n=6.