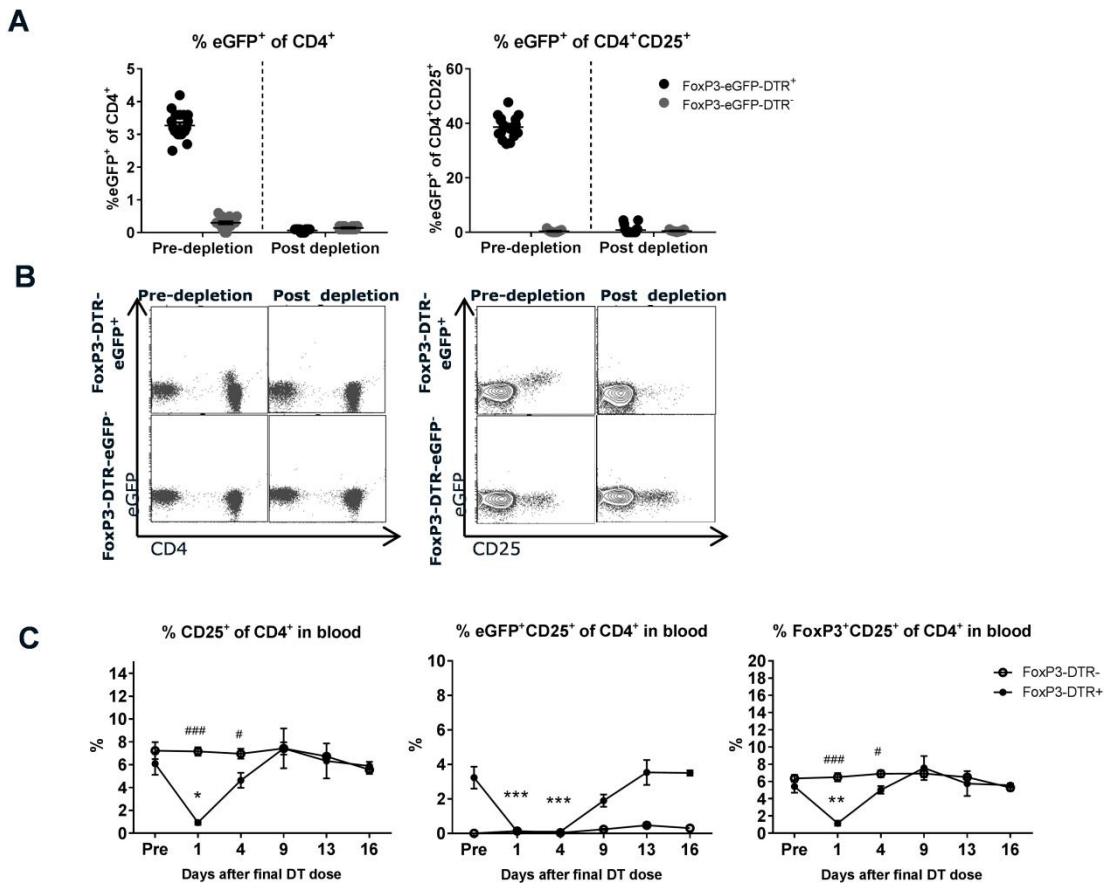
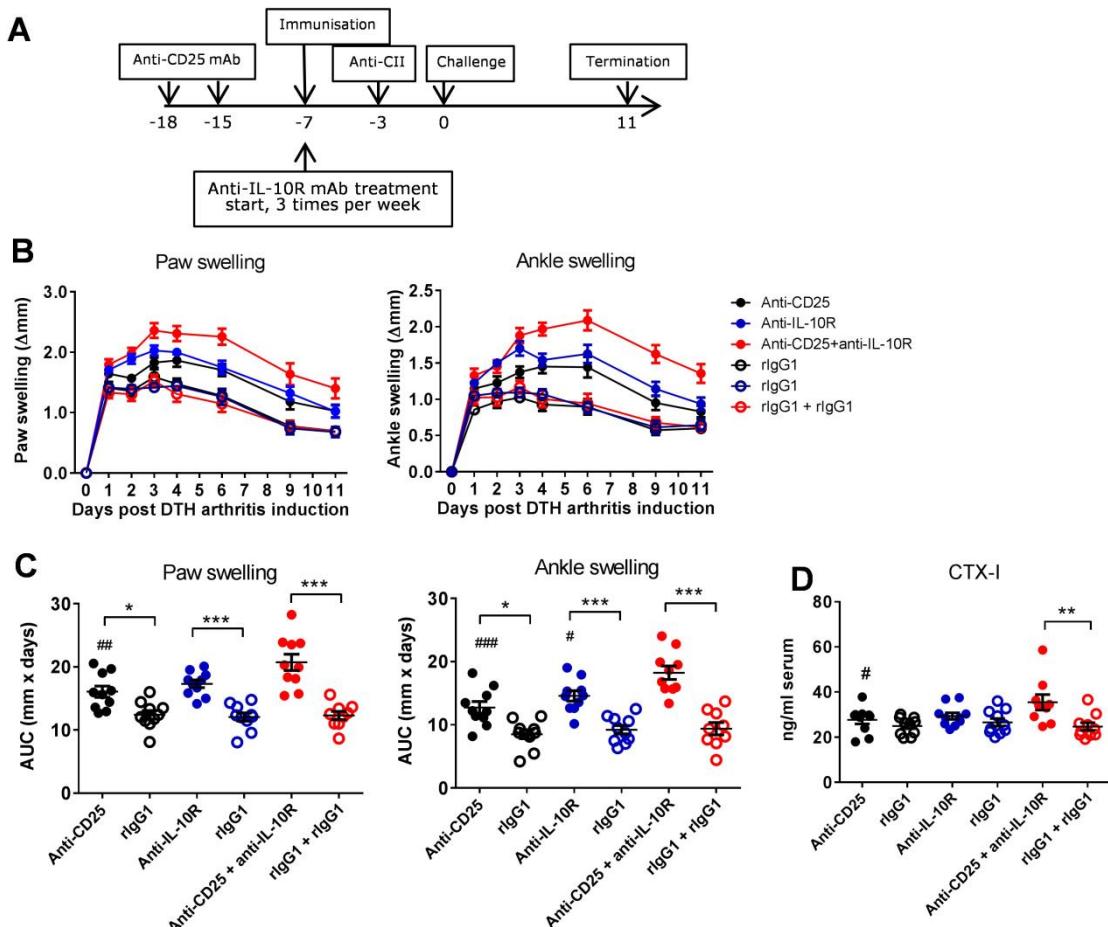


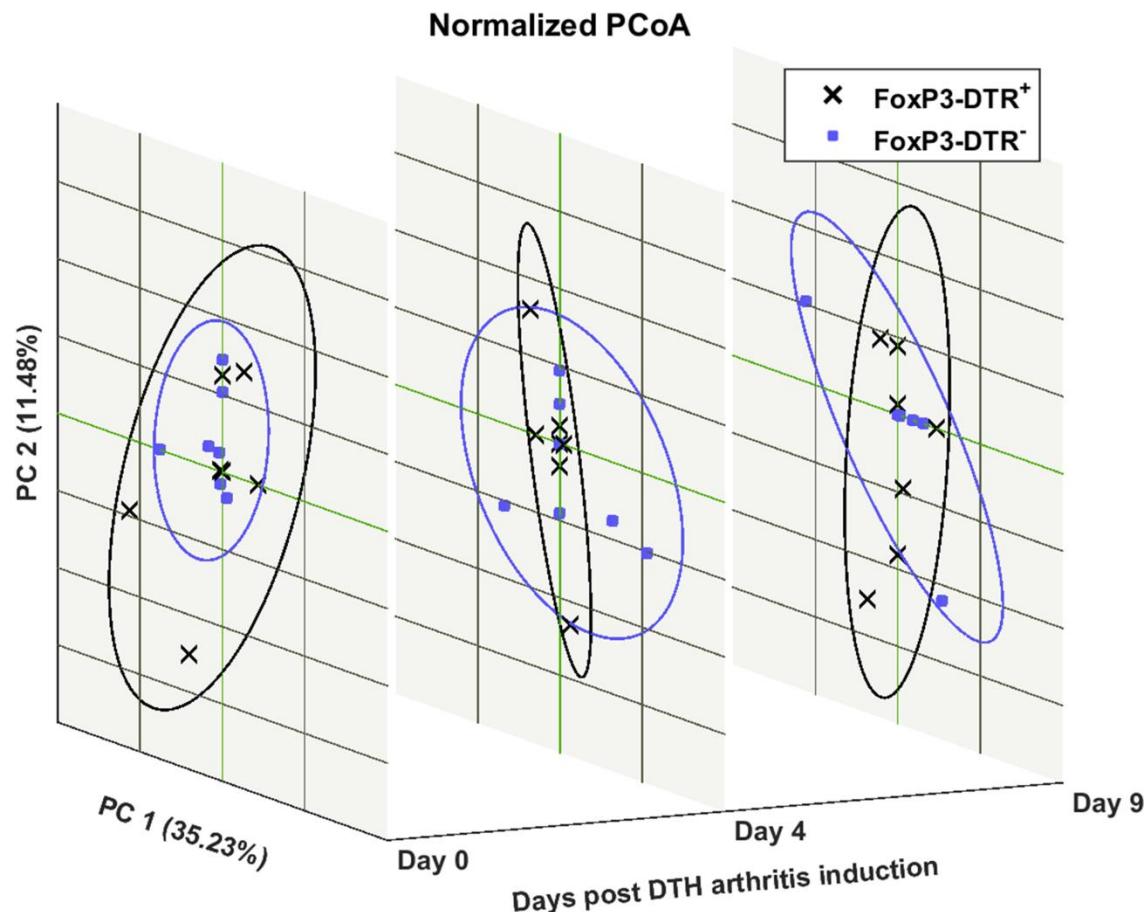
Supplementary figure 1. A) Flow cytometry gating strategy for the experiment shown in figure 1. First panel shows 33% of all events, which was 186135 in this case. The other panels show 33-100% of collected events. A representative blood sample from day 2 is shown. **B)** Gating strategy for the popliteal lymph node (PLN) samples in the flow cytometry experiment shown in figure 4. In the left panel, 33% of total events are shown, which in this case was 28016. A representative lymph node from T_{reg} depleted mice on day 4 is shown. **C)** Gating strategy for the paw and blood samples in the flow cytometry experiment shown in figure 4. A representative paw from T_{reg} depleted mice on day 4 is shown. Total number of events (top left panel) was 471378. Gating strategy for blood samples was identical.



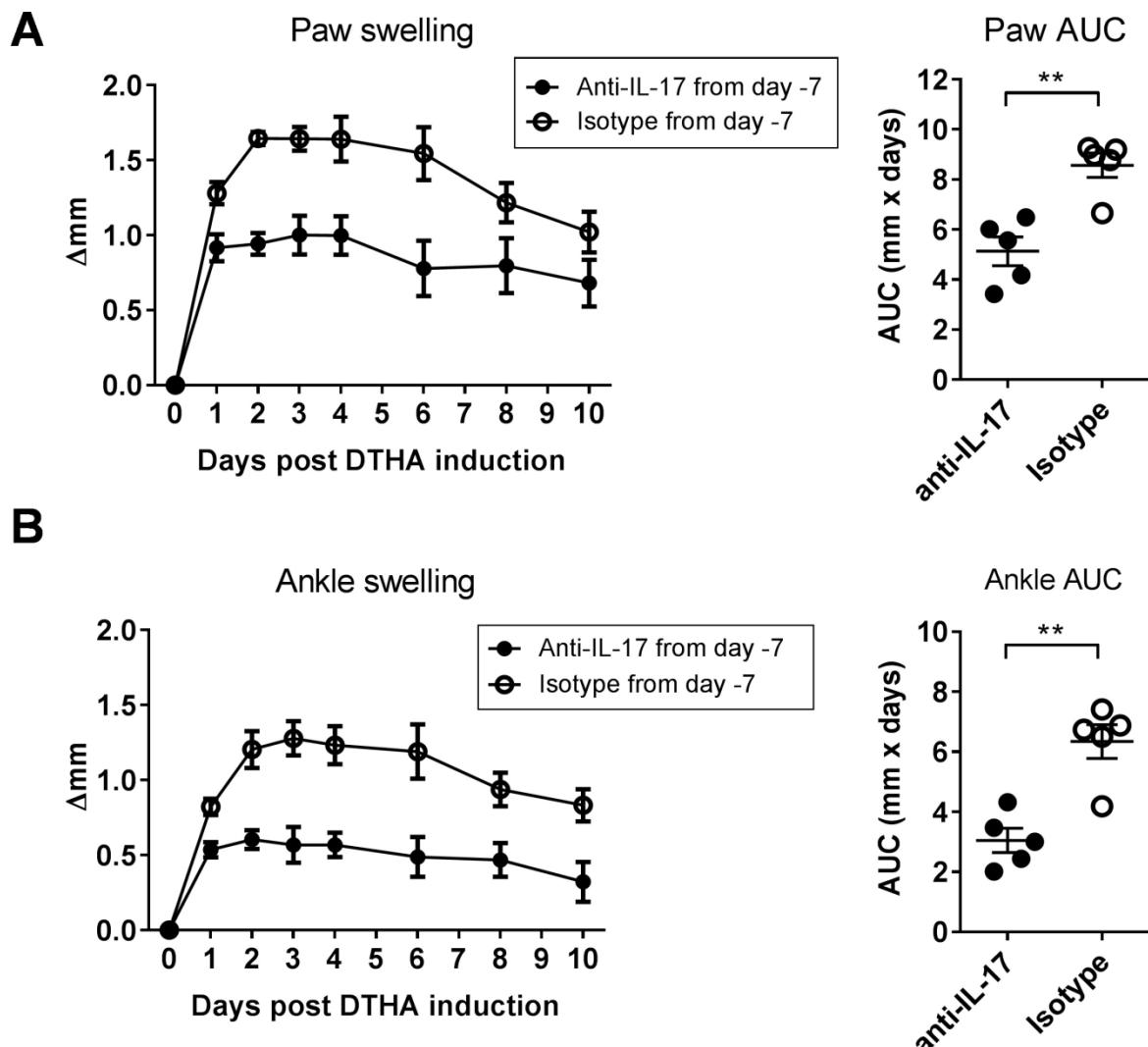
Supplementary figure 2. Whole blood was analysed by flow cytometry 24 hours after final diphtheria toxin (DT) dose to assess degree of T_{reg} depletion. **A)** Fraction of eGFP $^{+}$ CD4 $^{+}$ T-cells (left) and of CD25 $^{+}$ CD4 $^{+}$ T-cells (right). Mean \pm SEM shown, n=10. **B)** Representative flow cytometry plots showing eGFP $^{+}$ cells within the CD45 $^{+}$ TCR β^{+} CD4 $^{+}$ gate (left) and the CD45 $^{+}$ TCR β^{+} CD4 $^{+}$ CD25 $^{+}$ gate (right). **C)** Whole blood from naïve C57BL/6 mice dosed with 1 μ g DT on two consecutive days was analysed in order to assess regrowth of CD25 $^{+}$ CD4 $^{+}$ T cells (left panel), eGFP $^{+}$ CD25 $^{+}$ CD4 $^{+}$ T cells (middle panel) and FoxP3 $^{+}$ CD25 $^{+}$ CD4 $^{+}$ T cells. Mean \pm SEM shown, n=3. *: p < 0.05, **: p < 0.01, ***: p < 0.001, One-way ANOVA with Dunnett's multiple comparison test (all other time points were compared to pre-depletion). #: p < 0.05, ###: p < 0.001, Student's t-test.



Supplementary figure 3. **A)** Mice were treated with anti-CD25 mAb or isotype control 11 and 8 days before immunisation with mBSA. Treatment with anti-IL-10R was begun on the day of immunisation and continues 3 times weekly until study termination. **B)** Paw and ankle swelling of the arthritic hind paw measured over the duration of the study. Mean \pm SEM shown, n=10. **C)** Area under curve (AUC) of the paw and ankle swelling for individual mice calculated over day 0-11. Mean \pm SEM shown, n=10. #: p \leq 0.05, ##: p \leq 0.001, difference to the “Anti-CD25 + anti-IL-10R” group. *: p \leq 0.05, ***: p \leq 0.001, Student’s t-test. **D)** Serum levels of the marker of bone erosion C-terminal telopeptides of type I collagen (CTX-I) measured by ELISA. Mean \pm SEM shown, n=10. **: p \leq 0.01, Student’s t-test.



Supplementary figure 4. Principal Coordinate Analysis of fecal samples from day 0, 4 and 9 using Bray-Curtis dissimilarity indices. Points represent each individual normalized by the coordinates of the individual's centroid, with 95% confidence ellipses for each group on each day shown. Adonis test of significance was used for both inter- and intra-group comparisons. The green grid lines intercept at zero.



Supplementary figure 5. Prophylactic anti-IL-17 treatment reduces severity of DTHA.

Treatment with 200 µg anti-IL-17 mAb or rIgG1 isotype control from the day of immunisation (day -7) and every 48 hours until study termination led to a significant reduction in paw (**A**) and ankle (**B**) swelling in DTHA. Mean ± SEM shown, n=5. **: p≤0.01, Student's t-test.

Supplementary Table 1. Raw and corrected p-values from figure 6 and 7E. Corrections were made using the False Discovery Rate method.

Figure 6			Figure 7E		
Analyte, day	Raw p-value	Corrected p-value	Analyte (+/- depletion)	Raw p-value	Corrected p-value
IL-1 β day 4	0.0001	0.0002	G-CSF (-)	0.0015	0.0428
IL-1 β day 7	0.0005	0.0009	G-CSF (+)	0.5365	0.8143
IL-17 day 4	0.0001	0.0002	KC/CXCL1 (-)	0.0041	0.0428
IL-17 day 7	0.0001	0.0002	KC/CXCL1 (+)	0.1570	0.4491
IL-12(p70) day 4	0.0001	0.0002	IFN γ (-)	0.0051	0.0428
IL-12(p70) day 7	0.0005	0.0009	IFN γ (+)	0.7463	0.9062
IFN γ day 4	0.0001	0.0002	IL-6 (-)	0.0056	0.0428
IFN γ day 7	0.0986	0.1117	IL-6 (+)	0.1056	0.3989
TNF α day 4	0.1930	0.1988	LIX/CXCL5 (-)	0.0063	0.0428
TNF α day 7	0.0001	0.0002	LIX/CXCL5 (+)	0.9629	0.9629
IL-10 day 4	0.0007	0.0011	MIP-2/CXCL2 (-)	0.1951	0.4817
IL-10 day 7	0.0001	0.0002	MIP-2/CXCL2 (+)	0.0732	0.3111
MCP-1/CCL2 day 4	0.0001	0.0002	IL-10 (-)	0.1414	0.4491
MCP-1/CCL2 day 7	0.0001	0.0002	IL-10 (+)	0.9360	0.9629
LIX/CXCL5 day 4	0.0207	0.0271	IP-10/CXCL10 (-)	0.2225	0.4817
LIX/CXCL5 day 7	0.0001	0.0002	IP-10/CXCL10 (+)	0.1585	0.4491
RANTES/CCL5 day 4	0.0001	0.0002	MIP-1 α /CCL3 (-)	0.2073	0.4817
RANTES/CCL5 day 7	0.0001	0.0002	MIP-1 α /CCL3 (+)	0.9419	0.9629
MIG/CXCL9 day 4	0.0008	0.0012	IL-23 (-)	0.2267	0.4817
MIG/CXCL9 day 7	0.0001	0.0002	IL-23 (+)	0.6504	0.8801
MIP-1 α /CCL3 day 4	0.1752	0.1922	IL-1 β (-)	0.2931	0.5862
MIP-1 α /CCL3 day 7	0.0001	0.0002	IL-1 β (+)	0.3378	0.6195
G-CSF day 4	0.1857	0.1973	TNF α (-)	0.3462	0.6195
G-CSF day 7	0.0001	0.0002	TNF α (+)	0.6730	0.8801
GM-CSF day 4	0.0001	0.0002	GM-CSF (-)	0.4368	0.7072
GM-CSF day 7	0.0026	0.0038	GM-CSF (+)	0.3946	0.6708
IP-10/CXCL10 day 4	0.0002	0.0004	RANTES/CCL5 (-)	0.7123	0.8970
IP-10/CXCL10 day 7	0.0005	0.0009	RANTES/CCL5 (+)	0.5648	0.8143
KC/CXCL1 day 4	0.0030	0.0043	IL-12(p70) (-)	0.8679	0.9519
KC/CXCL1 day 7	0.0642	0.0753	IL-12(p70) (+)	0.7730	0.9063
MIP-2/CXCL2 day 4	0.3578	0.3578	MIG/CXCL9 (-)	0.5748	0.8143
MIP-2/CXCL2 day 7	0.0041	0.0056	MIG/CXCL9 (+)	0.8031	0.9102
IL-6 day 4	0.0330	0.0416			
IL-6 day 7	0.0360	0.0437			