

SUPPLEMENTARY INFORMATION

Supplementary Table 1. List of siRNA sequences used for transient *Foxp1* silencing (Life Technologies)

siRNA ID	Sequence (sense)	Sequence (antisense)
MSS246912	GGUUCACACGAAUGUUUGCUUACUA	AAGUAAGCAAACAUCGUGUGAACC
MSS246913	CCAUGACAGAGAUUACGAAGACGAA	UUCGUCUUCGUAAUCUCUGUCAUGG

Note: siRNA MSS246912 is designated si*Foxp1* #1 in the text and figures, siRNA MSS246913 is designated si*Foxp1* #2.

Supplementary Table 2. List of antibodies used for Western blotting, flow cytometry and immunohistochemistry.

Antibody	Isotype	Use	Supplier
Mouse & human FOXP1	Mouse IgG2a	Western blot (1:30)	Banham lab (University of Oxford) Clone JC12
Mouse MHC Class II (I-A) conjugated to PE	Rat IgG2b	Flow cytometry (1:500)	eBioscience 12-5322-81 clone NIMR-4
Mouse Cd74 conjugated to APC	Rat IgG1	Flow cytometry (0.1 ug + 5 ul mouse serum)	R&D Systems FAB7478A
Mouse & human FOXP1	Rabbit IgG	Western blot (1:2000), IHC (1:100)	Cell Signaling Technology D35D10
Nucleophosmin (Npm)	Mouse IgG1	Western blot (1:1000)	Banham lab (University of Oxford) Clone NA24
PE Isotype control	Rat IgG2b	Flow cytometry (1:500)	eBioscience 12-4031-82 clone eB149/10H5
PE Isotype control	Rat IgG2a	Flow Cytometry (10ug/ml)	eBioscience 12-4321-81 Clone eBR2a
APC isotype control	Rat IgG1	Flow cytometry (1:500)	eBioscience 17-4301-82 Clone eBRG1
Mouse Cd19 conjugated to PE	Rat IgG2a	Flow cytometry (10ug/ml)	eBioscience 12-0193-81 Clone eBio1D3
Beta-actin (mammalian)	Mouse IgG1	Western blot (1:20 000)	Sigma-Aldrich AC-15

Abbreviations: APC: allophycocyanin; PE: phycoerythrin.

Supplementary Table 3. Primers for SYBR Green qPCR

Gene	Forward primer sequence (5'-3')	Reverse primer sequence (5'-3')
<i>Cd19</i>	CCTGGGCATCTTGCTAGTGA	CCGGAACATCTCCCCACTAT
<i>Phyhip</i>	ACACAGAGTCTCTCCCTTCC	TGGTTTGGCTCCTGGCT
<i>Iglv2</i>	TTCCCAGGCTGTTGTGACTC	ACTAGTTGTAACAGCCCCAGT
<i>Lgr6</i>	GAGTTGGAATGCCATCCGTG	AGTCAGGTCCAGCTTAACCAA
<i>Hprt</i>	TGGGCTTACCTCACTGCTTT	TCATCGCTAATCACGACGC
<i>B2m</i>	TCACACTGAATTCACCCCA	TCTCGATCCCAGTAGACGGT

Supplementary Table 4. Taqman primers and probes (Life Technologies)

Taqman assay ID	Gene name	Fluorophore
Mm00474854_m1	<i>Foxp1</i> (forkhead box P1)	FAM-MGB
4318839	18S (18S ribosomal RNA)	VIC

Supplementary Table 5. Guide sequences for CRISPR/Cas9 genome editing, targeting murine *Foxp1* (Sigma-Aldrich).

<i>Foxp1</i> exon targeted	Strand	Sequence
Exon 5	Top strand	CACCGGTGGATTAAAGTCTCCCAAG
Exon 5	Bottom strand	AAACCTTGGGAGACTTTAATCCACC
Exon 6	Top strand	CACCGAGTGGCTATGATGACACCTC
Exon 6	Bottom strand	AAACGAGGTGTCATCATAGCCACTC
Exon 7	Top strand	CACCGCTTCTCCAACAGCAACATGC
Exon 7	Bottom strand	AAACGCATGTTGCTGTTGGAGAAGC

Supplementary Table 6. List of primer sequences used for sequencing CRISPR DNA plasmid in bacterial colonies and minipreps (Sigma-Aldrich)

Forward primer used is specific to pX330 vector backbone (ampicillin resistance gene) and reverse primer is specific to guide sequence.

Primer name	Direction	Sequence
Fwd PX330 Amp	Forward	AACGTTTTCCAATGATGAGC
<i>Foxp1</i> E5 bottom strand	Reverse	CCACCTAATTTTCAGAGGGTTCCAAA
<i>Foxp1</i> E6 bottom strand	Reverse	CTCACCGATACTACTGTGGAGCAAA
<i>Foxp1</i> E7 bottom strand	Reverse	CGAAGAGGTTGTTCGTTGTACGCAAA

Supplementary Table 7. Differentially expressed genes (Excel file)

Differentially expressed genes (FDR adjusted p -value, $p < 0.05$) in each of the four *Foxp1* CRISPR clones (down or upregulated) with \log_2 fold change values (LFC). These lists were used to create the Venn diagrams in Figure 4A.

Supplementary Table 8. Differentially expressed genes in Hallmark pathways (Excel file)

Differentially expressed genes found in Hallmark pathways from gene set enrichment analysis. Genes are ordered by \log_2 fold change (LFC).