

**Supplementary Table S2: Description of all Illumina sequencing experiments generated for this study (GSE53595)**

GEO accession #	Exp. #	Sample description	Genotype	Cell preparation	Sequencing protocol	Mapped reads (x Mio)
GSM1296533	8677	PU.1 Bio-ChIP-seq pro-B	Spi1(ihCd2/ihCd2) R26(BirA/BirA)	5 day culture	36 bp single read	27.8
GSM1296535	9102	Ikaros Bio-ChIP-seq pro-B	Ikzf1(ihCd2/ihCd2) R26(BirA/BirA) Rag2(-/-)	6 day culture	100 bp paired end	180.4
GSM1296544	11890	Ikaros Bio-ChIP-seq B cell progenitors	Ikzf1(ihCd2/ihCd2) R26(BirA/+) Ebf1(fl/fl) Vav-Cre	5 week culture	50 bp single read	55.7
GSM1296538	11263	Ikaros bio-ChIP-seq DP-T	Ikzf1(ihCd2/ihCd2) R26(BirA/BirA)	Ex vivo, MACS-sorted	36 bp single read	38.3
GSM1296534	8844	IRF4 ChIP-seq pro-B	Rag2(-/-)	4-5 day culture	76 bp paired end	22.5
GSM1296532	8659	EBF1 V5-ChIP-seq pro-B	Ebf1(Bio/Bio)	4-5 day culture	36 bp single read	22.8
GSM1296550	13309	Mi-2β (CHD4) ChIP-seq Ikzf1(Δ/+) pro-B	Ikzf1(fl/+) Cd79(cre/+)	7 day culture	50 bp single read	28.4
GSM1296551	13310	Mi-2β (CHD4) ChIP-seq Ikzf1(Δ/+) pro-B	Ikzf1(fl/-) Cd79(cre/+)	10 day culture	50 bp single read	31.5
GSM1296572	15831	H3K9ac ChIP-seq Rag2(-/-) Ikzf1(Δ/+) pro-B	Rag2(-/-) Ikzf1(fl/+) Cd79a(Cre/+)	7 day culture	50 bp single read	30.1
GSM1296573	15832	H3K9ac ChIP-seq Rag2(-/-) Ikzf1(Δ/+) pro-B	Rag2(-/-) Ikzf1(fl/+) Cd79a(Cre/+)	10 day culture	50 bp single read	31.4
GSM1296574	15833	H3K9ac ChIP-seq Rag2(-/-) Ikzf1(Δ/-) pro-B	Rag2(-/-) Ikzf1(fl/-) Cd79a(Cre/+)	9 day culture	50 bp single read	27.8
GSM1296575	15834	H3K9ac ChIP-seq Rag2(-/-) Ikzf1(Δ/-) pro-B	Rag2(-/-) Ikzf1(fl/-) Cd79a(Cre/+)	12 day culture	50 bp single read	29.2
GSM1296576	15839	H3K4me3 ChIP-seq Rag2(-/-) Ikzf1(Δ/+) pro-B	Rag2(-/-) Ikzf1(fl/+) Cd79a(Cre/+)	7 day culture	50 bp single read	56.5
GSM1296577	15840	H3K4me3 ChIP-seq Rag2(-/-) Ikzf1(Δ/+) pro-B	Rag2(-/-) Ikzf1(fl/+) Cd79a(Cre/+)	10 day culture	50 bp single read	57.1
GSM1296578	15841	H3K4me3 ChIP-seq Rag2(-/-) Ikzf1(Δ/-) pro-B	Rag2(-/-) Ikzf1(fl/-) Cd79a(Cre/+)	9 day culture	50 bp single read	31.7
GSM1296579	15842	H3K4me3 ChIP-seq Rag2(-/-) Ikzf1(Δ/-) pro-B	Rag2(-/-) Ikzf1(fl/-) Cd79a(Cre/+)	12 day culture	50 bp single read	34.8
GSM1296537	10195	ChIP input pro-B	Rag2(-/-)	4 day culture	76 bp paired end	37.5
GSM1296536	9908	ChIP input DN3	Rag2(-/-)	Ex vivo	76 bp paired end	43.0
GSM1296539	11597	RNA-seq pro-B (c-Kit high)	Ikzf1(fl/-) Cd79a(Cre/+)	Ex vivo, FACS-sorted	50 bp single read	11.2
GSM1296545	12072	RNA-seq pro-B (c-Kit high)	Ikzf1(fl/-) Cd79a(Cre/+)	Ex vivo, FACS-sorted	50 bp single read	16.6
GSM1296546	12073	RNA-seq pro-B (c-Kit high)	Ikzf1(fl/+) Cd79a(Cre/+)	Ex vivo, FACS-sorted	50 bp single read	16.7
GSM1296549	12806	RNA-seq pro-B (c-Kit high)	Ikzf1(fl/+) Cd79a(Cre/+)	Ex vivo, FACS-sorted	50 bp single read	2.8
GSM1296540	11598	RNA-seq pro-B	Ikzf1(fl/+) Cd79a(Cre/+)	5 day culture, FACS-sorted	50 bp single read	13.3
GSM1296541	11599	RNA-seq pro-B	Ikzf1(fl/+) Cd79a(Cre/+)	5 day culture, FACS-sorted	50 bp single read	11.8
GSM1296542	11600	RNA-seq pro-B	Ikzf1(fl/-) Cd79a(Cre/+)	7 day culture, FACS-sorted	50 bp single read	14.1
GSM1296543	11601	RNA-seq pro-B	Ikzf1(fl/-) Cd79a(Cre/+)	7 day culture, FACS-sorted	50 bp single read	12.8
GSM1296552	15260	RNA-seq pro-B	Ikzf1(fl/+) Cd79a(Cre/+) Rag2(-/-)	5 day culture, FACS-sorted	50 bp single read	34.1
GSM1296553	15261	RNA-seq pro-B	Ikzf1(fl/+) Cd79a(Cre/+) Rag2(-/-)	11 day culture, FACS-sorted	50 bp single read	30.4
GSM1296554	15262	RNA-seq pro-B	Ikzf1(fl/-) Cd79a(Cre/+) Rag2(-/-)	7 day culture, FACS-sorted	50 bp single read	38.0
GSM1296555	15263	RNA-seq pro-B	Ikzf1(fl/-) Cd79a(Cre/+) Rag2(-/-)	13 day culture, FACS-sorted	50 bp single read	38.4
GSM1296547	12078	RNA-seq pre-B	Wild-type	Ex vivo, FACS-sorted	50 bp single read	27.2
GSM1296548	12079	RNA-seq pre-B	Wild-type	Ex vivo, FACS-sorted	50 bp single read	14.9
GSM1296556	15270	RNA-seq Ikaros KD empty vector control pre-pro-B	Ebf1(-/-)	4 days Dox induction, FACS-sorted	50 bp single read	20.2
GSM1296560	15276	RNA-seq Ikaros KD empty vector control pre-pro-B	Ebf1(-/-)	4 days Dox induction, FACS-sorted	50 bp single read	20.1
GSM1296564	15282	RNA-seq Ikaros KD empty vector control pre-pro-B	Ebf1(-/-)	4 days Dox induction, FACS-sorted	50 bp single read	39.5
GSM1296568	15288	RNA-seq Ikaros KD empty vector control pre-pro-B	Ebf1(-/-)	4 days Dox induction, FACS-sorted	50 bp single read	31.4
GSM1296557	15271	RNA-seq Ikaros KD Ren713 control pre-pro-B	Ebf1(-/-)	4 days Dox induction, FACS-sorted	50 bp single read	21.9
GSM1296561	15277	RNA-seq Ikaros KD Ren713 control pre-pro-B	Ebf1(-/-)	4 days Dox induction, FACS-sorted	50 bp single read	20.7
GSM1296565	15283	RNA-seq Ikaros KD Ren713 control pre-pro-B	Ebf1(-/-)	4 days Dox induction, FACS-sorted	50 bp single read	38.6
GSM1296569	15289	RNA-seq Ikaros KD Ren713 control pre-pro-B	Ebf1(-/-)	4 days Dox induction, FACS-sorted	50 bp single read	31.3
GSM1296558	15272	RNA-seq Ikaros KD Ik4056 pre-pro-B	Ebf1(-/-)	4 days Dox induction, FACS-sorted	50 bp single read	20.3
GSM1296562	15278	RNA-seq Ikaros KD Ik4056 pre-pro-B	Ebf1(-/-)	4 days Dox induction, FACS-sorted	50 bp single read	23.1
GSM1296566	15284	RNA-seq Ikaros KD Ik4056 pre-pro-B	Ebf1(-/-)	4 days Dox induction, FACS-sorted	50 bp single read	36.5
GSM1296570	15290	RNA-seq Ikaros KD Ik4056 pre-pro-B	Ebf1(-/-)	4 days Dox induction, FACS-sorted	50 bp single read	36.3
GSM1296559	15273	RNA-seq Ikaros KD Ik2709 pre-pro-B	Ebf1(-/-)	4 days Dox induction, FACS-sorted	50 bp single read	19.0
GSM1296563	15279	RNA-seq Ikaros KD Ik2709 pre-pro-B	Ebf1(-/-)	4 days Dox induction, FACS-sorted	50 bp single read	21.0
GSM1296567	15285	RNA-seq Ikaros KD Ik2709 pre-pro-B	Ebf1(-/-)	4 days Dox induction, FACS-sorted	50 bp single read	40.9
GSM1296571	15291	RNA-seq Ikaros KD Ik2709 pre-pro-B	Ebf1(-/-)	4 days Dox induction, FACS-sorted	50 bp single read	36.8