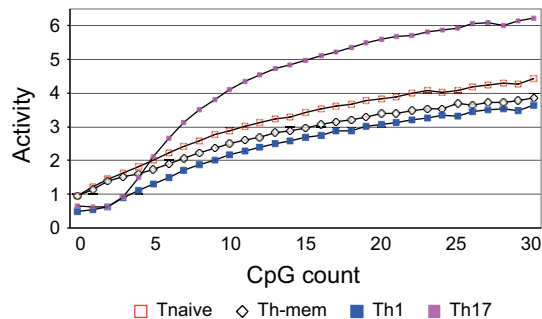
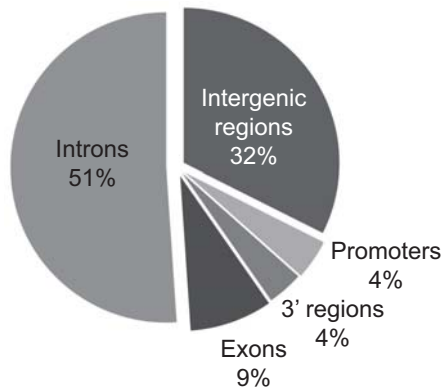


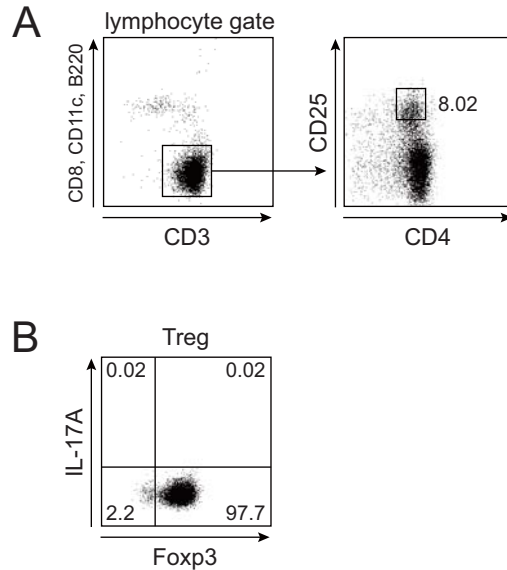
Supplemental Figure 1: Phenotype of *in vitro* generated Th cell subsets. Histograms and FACS plots of *in vitro* generated Th cell subsets show (A) IFN γ expression in Th1 cells, (B) IL-17A expression in Th17 cells and (C) mRFP expression in Tregs from FIR reporter mice. (A and B) Red lines display negative staining control. Blue lines depict cells of interests. IL-17A-expressing cells in Th1 culture and IFN γ -expressing cells in Th17 culture were always below 0.5 % (Data not shown). (C) *In vitro* generated Foxp3⁺ Tregs were sorted by flow cytometry. Three independent experiments were performed.



Supplemental Figure 2: Correlation between activity value and CpG counts in CD4⁺ T cell subsets. The quantity of sequences that were mapped to the same chromosomal location was translated into an activity value. Average activity values for regions from naive T cells, Th mem, Th1 or Th17 cells were plotted against the number of CpG motifs per region.

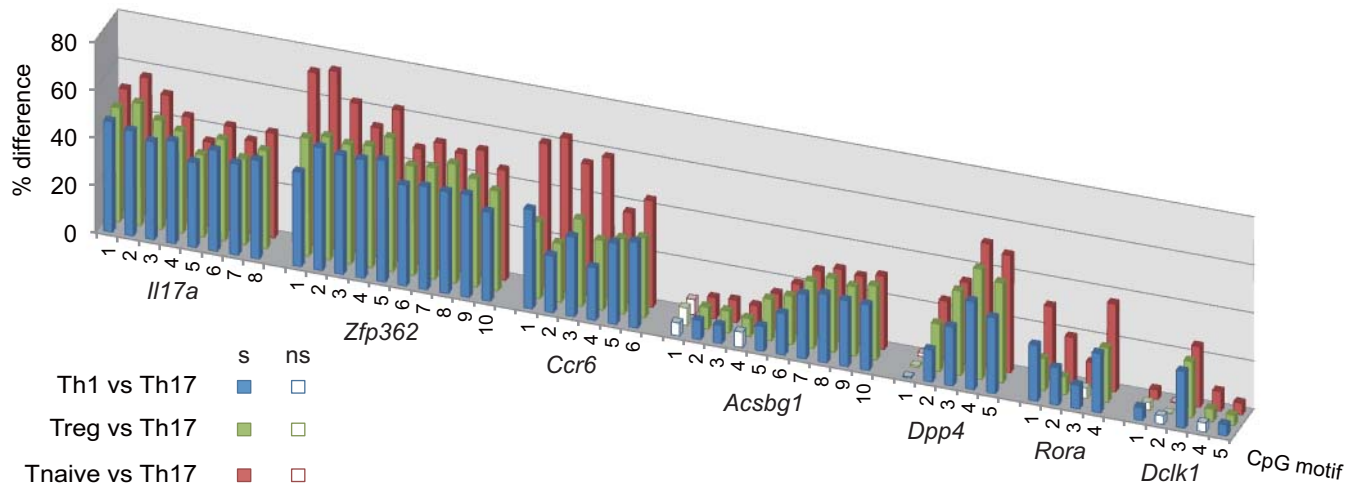


Supplemental Figure 3: Localization of demethylated regions within the mouse genome. The diagram depicts the distribution of demethylated regions identified in T cell subsets dependent on their genomic localization.

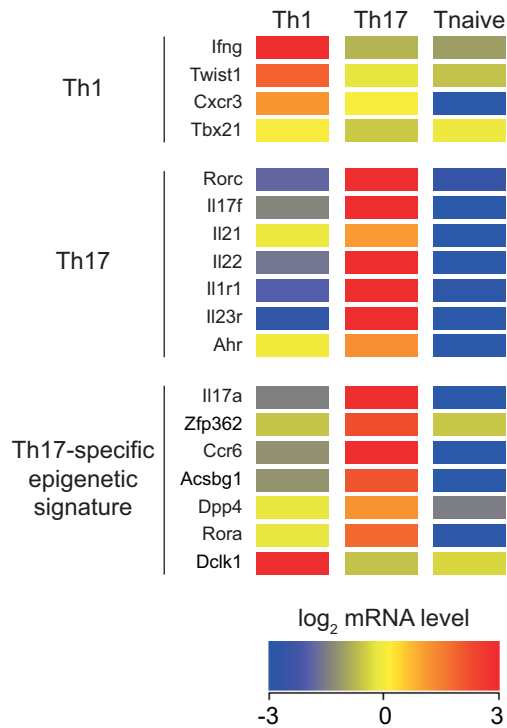


Supplemental Figure 4: Sorting of Tregs from female aged Balb/c donors.

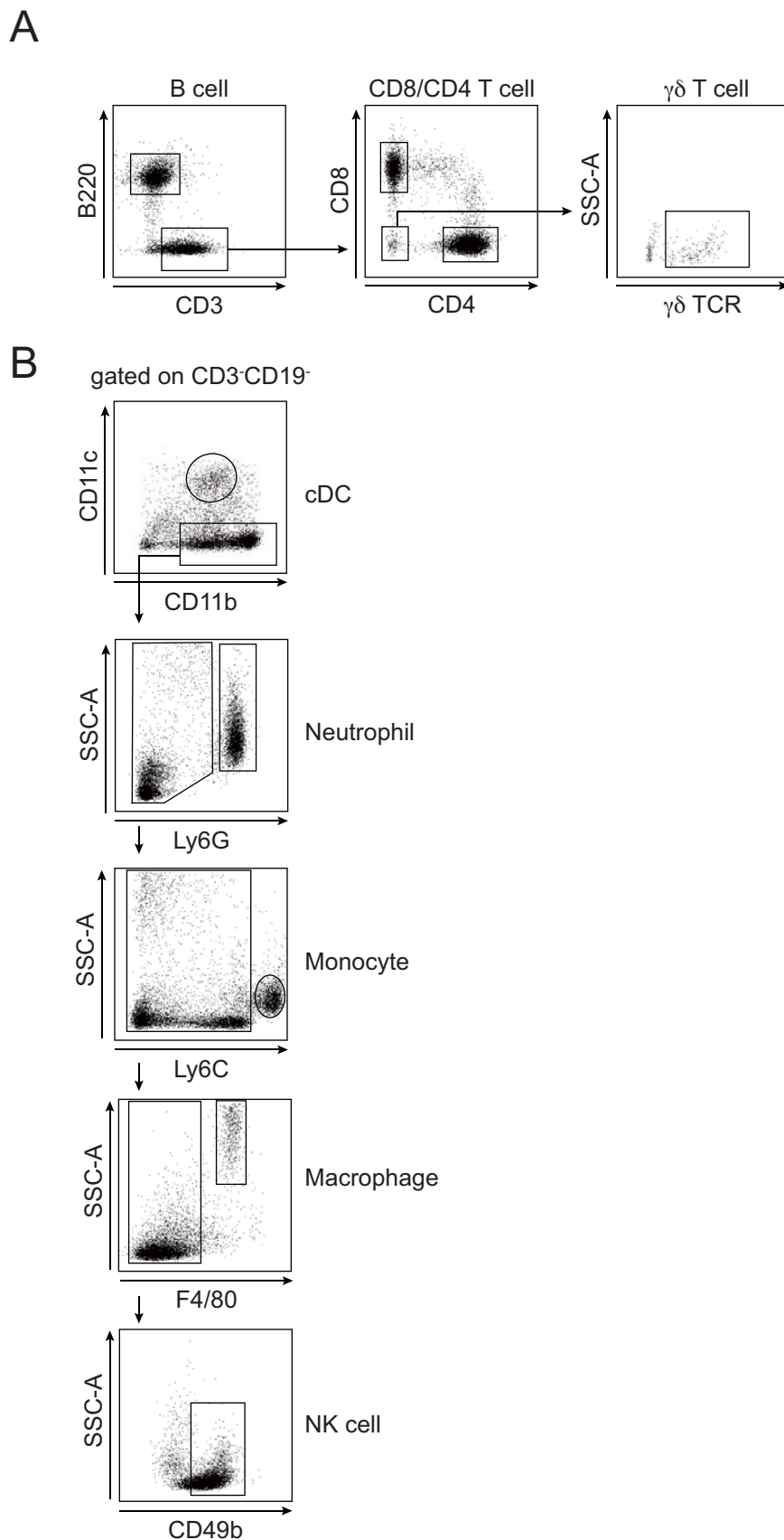
(A) CD4⁺-enriched cells from lymph nodes and spleen of Balb/c mice were used for ex vivo isolation of Tregs (CD3⁺CD8⁻CD11c⁻B220⁻CD4⁺CD25^{high}). Rectangles in the plots indicate the sorting gates. The number indicates the frequency of gated cells. (B) Reanalysis of sorted Tregs after PMA/ionomycin stimulation. Numbers indicate the frequency of cells in quadrants. Representative plots of three experiments are shown.



Supplemental Figure 5: Methylation rate differences in DMRs between *ex vivo* isolated Th17 cells and naive T cells, Th1 cells or Tregs. Methylation rate differences within the indicated DMRs are shown for three pairwise-comparisons. Each 3D-bar graph represents a single CpG motif. The results are based on averaged methylation rates of three independent experiments using genomic DNA from independent sorts. Significance of the methylation rate differences between compared subsets was calculated using 2-way ANOVA with Bonferroni's multiple comparisons test. Filled-coloured bars depict significant differences (s), non-filled bars not significant differences (ns).



Supplemental Figure 6: mRNA expression levels of Th17-specific epigenetic signature genes in Th1, Th17 and naive T cells. Microarrays were performed with mRNA of *ex vivo* isolated naive T cells, Th1 and Th17 cells. The log₂-normalized mRNA expression levels ($p < 0.05$) are shown for known Th1 and Th17 signature genes and for the Th17-specific epigenetic signature genes in naive T cells, Th1, and Th17 cells with a colour coded expression scale from blue (-3) via yellow up to red (+3). Mean values generated from three independently performed RNA microarrays are depicted.



Supplemental Figure 7: Sorting strategy for major immune cell subsets. Single cell suspensions from lymph nodes and spleen of Balb/c mice were used for FACS-isolation of (A) B cells, CD4⁺ T cells, CD8⁺ T cells or $\gamma\delta$ T cells and (B) cDCs, neutrophils, monocytes, macrophages or NK cells. Involved markers and sorting strategies are depicted. Rectangles in the plots indicate the sorting gates. Representative FACS plots of two independent experiments are shown.

Supplemental Table 1: Primers for MS-HRM and pyrosequencing. Targeted gene loci, primer names, orientation, and primer sequences are depicted.

Primers for MS-HRM			
Gene	name		sequence
Xist	mXist_F1	Forward	AAGAGGAGTGGTTATAAAGATTGTAAT
	mXist_bR1	Reverse	AAACATTTCTACCCTTTCCTCTC
Itga4	mItga4_F1	Forward	GGAGGTTAGGTTGTGAGTTATTGTATTA
	mItga4_bR1	Reverse	ACCACTAACCAAAATTACACAAAATAC
Il17a	Il17a(p)-3F	Forward	TGTTGATTTTATTTGAGGATGGAAT
	Il17a(p)-3R	Reverse	ACAAATTCATAAACCCCAACAATA
Ifng	mIfng(p)_F1	Forward	TTTTTATGGTTGTTTTTGGTTGTTATTGT
	mIfng(p)_bR1	Reverse	AATCAATAAACACCTCTCCAACAAAT
Dclk1	Dclk1-1F	Forward	TTTATGGAGTTGATATTTAATTATTAAGA
	Dclk1-1R	Reverse	TATAAACCTATTCCATAAAACACTACTAC
Dpp4	Dpp4-1F	Forward	TTTTTTTTAGGTGGATTTAGGGTTT
	Dpp4-1R	Reverse	AATATATCTTCCCTACCAAAAAAATACC
Zfp362	32980905-2_F1	Forward	TGGATGTTTAGGATTTGTGGGTATA
	32980905-2_R1	Reverse	CTCTCACCTCCAAATCTTTACACTTA
Ccr6	33914405_F1	Forward	AATTGAGTAGGGTAGGTTTTAGTTT
	33914405_R1	Reverse	AACCCCTAAACTATCTCTCCAACCTCCA
Acsbg1	33379415_F1	Forward	AGGATAGGGATGTTTATTTTTGAGG
	33379415_R1	Reverse	CAACCACCAATAAAAACTTTACAAACTC
Rora	33392047_F1	Forward	AAGTGGTTTTGTTTATGTGTTTTAGTAGTT
	33392047_R1	Reverse	CCATAAATAATAACCCACCTCCTC
Primers for Bisulfite pyrosequencing			
Gene	name		sequence
Il17a	mIl17a(p)_bF1	Forward	ATAAAGGGGTGGTTTTGTGTTGAT
	mIl17a(p)_R1	Reverse	ACTCACCACAAATAAACTCTCCCTAAC
	mIl17a(p)_S1	Sequencing	AAAATAATACTCCTTTCTCTC
	mIl17a(p)_S2	Sequencing	CTCTCCCTAAACTCATATT
	mIl17a(p)_F2	Forward	TAGGGAGAGTTTTATTTGTGGTGAGT
	mIl17a(p)_bR2	Reverse	ATTTTCATCACAACAACCCCTCAAT
	mIl17a(p)_S3	Sequencing	GTGGTGAGTTTTGTATTAA
	mIl17a(p)_bF1.1	Forward	AATTTGGTAGAAAAGTGAGAAAGATTAAGT
	mIl17a(p)_S1.1	Sequencing	AACACAAAACCCACCC
Zfp362	mZfp362_F1	Forward	TTTGGTATAGTATAGGATTGAGTAAATG
	mZfp362_bR1	Reverse	CTCACCTCCAAATCTTTACACTT
	mZfp362_S1	Sequencing	AAATGTTTGTATATGGATGAATTA
	mZfp362_S2	Sequencing	ATTTATTTTATAAATATTTAATAG
	mZfp362_S2.1	Sequencing	TTTAATAGAAGTTTAAATATTTATG
	mZfp362_S3	Sequencing	GATATTAAGGTTTGGTTTGT
	mZfp362_S4	Sequencing	TGTGGGTATATAGAAGTTATATT
mZfp362_S4.1	Sequencing	GGAAGAGGTGTAGAAGA	
Ccr6	mCcr6-LS_bF1	Forward	ATTTAGGGGTTTTTTGTAAGAATAAGTG
	mCcr6-LS_R1	Reverse	CAAAACAAATTCTAATTTTCCTCTCACATT
	mCcr6-LS_S2	Sequencing	ATATCCAAACTAAACCAATC
	mCcr6-LS_S3	Sequencing	AAATCTATCAACCCTACT
	mCcr6-LS_S4	Sequencing	ATTTCTAAAACCTTACTTCC
	mCcr6-LS_S5	Sequencing	ACAATTCTATAAATCTATACTTCTC
Acsbg1	mAcsbg1_bF1	Forward	AGGATAGGGATGTTTATTTTTGAGG
	mAcsbg1_R1	Reverse	CAACCACCAATAAAAACTTTACAAACTC
	mAcsbg1_S1	Sequencing	ACTAACTACACACAATAACATA
	mAcsbg1_S1.1	Sequencing	ATACTAACCACTTCTCTACATC
	mAcsbg1_S2	Sequencing	AACAAAACCTATAAAACCAT
	mAcsbg1_S3	Sequencing	AAAACATAAATCAAATACAAAT
mAcsbg1_S4	Sequencing	CCTAACCTTCTCTTTTAT	
Dpp4	mDpp4_F1	Forward	AGGTGGATTTAGGGTTTTATTGTAGAAAAG
	mDpp4_bR1	Reverse	ACTTCTTTACTCTTTCATACTTCTTAAAC
	mDpp4_S1	Sequencing	ATAATTTTATAAATTAATAGAGA

	mDpp4_S1.1	Sequencing	TGTGATATTTTTTAAGATAGATATT
	mDpp4_bR2	Reverse	ACCCTTAATTTCTCACTCATTCCACAC
	mDpp4_S2	Sequencing	AGAGTAAAGAAGTAAGGTG
	mDpp4_S3	Sequencing	TGGTTAATTTTTTTGAGTTTAGT
Rora	mRora_F1	Forward	AAGTGGTTTGTTTATGTGTTTTAGTAGTT
	mRora_bR1	Reverse	CCATAAATAATAACCCACCTCCTC
	mRora_S1	Sequencing	TTTAGTAGTTATTGTTTTTATTTTT
	mRora_S2	Sequencing	ATTTTTTTTGTTTTAGGATTAGAT
	mRora_S3	Sequencing	GGGGTTGTTGTATTTTT
	mRora_S4	Sequencing	GGTAGTATTTATATTTATAAATGGG
Dclk1	mDclk1_F1	Forward	GGGTTAGGTTTTATGTTAGGGAATTAGA
	mDclk1_bR1	Reverse	CCACTTATAAACCTATTCCCATAAAACACT
	mDclk1_S1	Sequencing	TGGAGTTGATATTTAATTATTAAG
	mDclk1_S1.1	Sequencing	TGTAATTATATTGGTAATTTTGAAG
	mDclk1_F2	Forward	TGAGGTTAAATGGTAGGGGTTTGA
	mDclk1_S2	Sequencing	GGGGTTTGATTTAATTGTAT
	mDclk1_S2.1	Sequencing	AATATTTTTTTTTGTTTAGTTGTTT

Supplemental Table 2: Chromosomal localization of analyzed CpG motifs. Exact localizations of analyzed CpG motifs in mouse genome (GRCm38) are shown.

Region	CpG no.	Chr.	localization	Region	CpG no.	Chr.	localization	
Il17a	1	1	20 730 845	Acsbg1	1	9	54 614 744	
	2	1	20 730 872		2	9	54 614 748	
	3	1	20 730 917		3	9	54 614 766	
	4	1	20 730 953		4	9	54 614 780	
	5	1	20 730 955		5	9	54 614 812	
	6	1	20 731 014		6	9	54 614 870	
	7	1	20 731 038		7	9	54 614 892	
	8	1	20 731 048		8	9	54 614 927	
Zfp362	1	4	128 785 419	Dpp4	9	9	54 614 934	
	2	4	128 785 467		10	9	54 614 949	
	3	4	128 785 483		1	2	62 369 818	
	4	4	128 785 491		2	2	62 369 881	
	5	4	128 785 543		3	2	62 369 987	
	6	4	128 785 678		4	2	62 370 038	
	7	4	128 785 689		5	2	62 370 049	
	8	4	128 785 697		Rora	1	9	69 353 601
	9	4	128 785 717			2	9	69 353 673
	10	4	128 785 735			3	9	69 353 706
Ccr6	1	17	8 243 835	Dck1	4	9	69 353 772	
	2	17	8 243 779		1	3	55 492 099	
	3	17	8 243 766		2	3	55 492 164	
	4	17	8 243 709		3	3	55 492 211	
	5	17	8 243 695		4	3	55 492 257	
	6	17	8 243 659		5	3	55 492 277	

Supplemental Table 3: Rate of DNA methylation at each CpG motif in ex vivo isolated or in vitro generated Th cell subsets. DNA methylation rates at each CpG motif for the experiments depicted in Figure 6 are listed.										
Il17a										
	CpG01	CpG02	CpG03	CpG04	CpG05	CpG06	CpG07	CpG08		
ex vivo Tnaive-1	82.04	81.8	82.89	93.33	92.63	90.31	77.57	68.82		
ex vivo Tnaive-2	81.74	84.82	86.05	92.52	91.45	89.9	79.78			
ex vivo Tnaive-3	85.31	81.42	84.28	92.48	93.31	91.89	80.16	69.38		
ex vivo Th17-1	37.09	31.34	38.52	52	58.5	46.98	42.32	28.69		
ex vivo Th17-2	33.46	25.76	31.42	49.54	59.36	50.44	42.67	27.57		
ex vivo Th17-3	26.04	19.52	28.95	44.91	54.23	45.16	36.27	18.24		
ex vivo Th1-1	76.28	69.46	73.06	92.34	93.75	89.73				
ex vivo Th1-2	78.86	68.45	75.59	89.45	91.43	88.25	79.38	65.71		
ex vivo Th1-3	79.68	70.17	72.56	92.59	92.96	90.63	80.96	70.75		
ex vivo Treg-1	79.91	77.78	77.6	89.36	91.1	90.21	74.35			
ex vivo Treg-2	77.54	77.27	80.36	92.16	91.33	89.08				
ex vivo Treg-3	81.38	74.14	77.06	92.21	92.28	89.81	77.62	67.95		
in vitro Th17-1	31.42	35.17	43.91	70.62	82.95	83.56	73.24	55.85		
in vitro Th17-2	16.1	29.95		66.74	79.69	80.11	65.14	51.48		
in vitro Th17-3	6.54	8.65		13.04	13.41	79.48	70.56	55.23		
in vitro Th1-1	81.08	72.37	80.27	90.37	91.4	88.85	79.83			
in vitro Th1-2	82.83	75.71	80.34	91.06	92.35	87.73	77.53	66.79		
in vitro Th1-3	82.8	73.13	79.59	91.72	93.08	90.44	79.37	67.25		
in vitro Treg-1	81.43	79.99	79.68	91.22	91.22	91.36	76.32	67.31		
in vitro Treg-2	83	78.84	82.12	91.21	90.45	89.12	77.53			
in vitro Treg-3	81.43	78.13	80.02	92.02	92.95	89.22	77.84	68.89		
Zfp362										
	CpG01	CpG02	CpG03	CpG04	CpG05	CpG06	CpG07	CpG08	CpG09	CpG10
ex vivo Tnaive-1	87.66		87.6	85.64	94.19	93.11	93.47	100	94.91	88.87
ex vivo Tnaive-2	89.36		89.4	87.76	94.29	92.48	92.82	100	100	88.13
ex vivo Tnaive-3	87.84	93.67	90.81	83.07	92.33	89.97	100	100	100	87.55
ex vivo Th17-1	18.72	27.98	30.84	35.85	31.07	42.05	43.51	49.12	44.41	41.04
ex vivo Th17-2	17.43		22.19		29.73	44.74	41.89	50.61	44.7	42.25
ex vivo Th17-3	12.5	20.79	27.16	26.75	31.46	43.83	44.17	51.6	48.62	43.84
ex vivo Th1-1	51.64	70.22	72.41	75.57	78.65	81.68	83.18	86.74	86.23	77.09
ex vivo Th1-2	55.68	76.48	77.05	81.97	81.82	88.29	87.36	100	89.72	81.76
ex vivo Th1-3	59.33	78.15	79.75	85.62	83.82	86.58	87.92	91.78	90.24	79.69
ex vivo Treg-1	65.71	72.73	75.59	84.71	87.92	88.96	90.21	100	90.93	83.59
ex vivo Treg-2	68.13	78.8	79.11	80.11	87.06	89.29	89.8	100	92.48	83.8
ex vivo Treg-3	62.41	73.38	74.57	81.98	84.32	89.1	88.8	100	89.36	84.24
in vitro Th17-1	54.38	52.37	68.76	70.8	75.14	89.16	90.82	100	92.83	82.18
in vitro Th17-2	56.11	58.25	71.61	79.54	79.7	88.99	91.79	100	92.49	86.48
in vitro Th17-3	67.09	71.6	76.64	78.39	85.28	90.46	92.45	100	94.34	88.45
in vitro Th1-1	82.04	93.14	89.87	87.02	91.35	93.16	93.43	100	100	87.17
in vitro Th1-2	84.4	91.11	88.46	83.87	93.74	91.77	93.58	100	100	88.11
in vitro Th1-3	83.45	93.9	89.91	81.59	92.08	93.35	93	100	100	87.71
in vitro Treg-1	81.37	85.52	87.09	81.14	91.42	92.07	93.72	100	94.02	86.17
in vitro Treg-2	77.89	87.72	86.2	81.14	89.83	91.63	93.89	100	94.88	87.59
in vitro Treg-3	75.12	84.95	82.01	88.75	89.95	91.71	93.67	100	94.76	88.43
Ccr6										
	CpG01	CpG02	CpG03	CpG04	CpG05	CpG06				
ex vivo Tnaive-1	86.89	80.82	89.74	82.15	95.84	95.17				
ex vivo Tnaive-2	87.48	78.64	90.47	80.65	94.93	94.07				
ex vivo Tnaive-3	87.5	79.28	92.43	81.6	95.91	94.65				
ex vivo Th17-1	30.49	16.74	39.75	23.92	56.95	50.55				
ex vivo Th17-2	27.52	15.94	36.59	22.66	58.38	49.9				
ex vivo Th17-3	23.68	14.07	32.02	21.01	58.41	50.49				
ex vivo Th1-1	68.98	39.81	70.79	45.51	92.93	87.54				
ex vivo Th1-2	68.29	38.5	67.81	45.52	91.28	85.33				
ex vivo Th1-3	68.6	39.57	69.14	42.7	90.97	85.38				
ex vivo Treg-1	58.47	41.6	77.1	55.61	90.02	84.76				
ex vivo Treg-2	61.9	40.01	70.58	52.67	88.79	84.66				
ex vivo Treg-3	57.18	38.48	68.97	46.15	88.78	81.23				
in vitro Th17-1	88.06	79.66	88.52	75.94	94.07	93.89				
in vitro Th17-2	90.46	81.69	92.53	79.49	94.63	95.24				
in vitro Th17-3	90.93	82.14	92.86	80.98	95.51	94.62				
in vitro Th1-1	90.39	81.9	91.01	78.03	92.78	93.45				
in vitro Th1-2	86.22	81.4	91.4	79.59	94.26	93.7				
in vitro Th1-3	88.83	80.71	91.64	78.15	93.73	94.72				
in vitro Treg-1	91.13	82.12	92.38	83.71	94.19	95.23				
in vitro Treg-2	91.74	84.25	91.82	84	95.15	94.92				
in vitro Treg-3	91.18	82.96	91.82	82.49	95.76	94.14				
Acsbg1										
	CpG01	CpG02	CpG03	CpG04	CpG05	CpG06	CpG07	CpG08	CpG09	CpG10

ex vivo Tnaive-1	90.4	95.68	91.25	91.12	80.51	78.67	92.79	92.45	91.19	93.15
ex vivo Tnaive-2	89.68	95.87	91.92	91.55	81.73	79.4	94.11	91.92	90.38	94.14
ex vivo Tnaive-3	90.19	94.7	92.23	89.84		74.93	91.59	92.22	89.73	94.13
ex vivo Th17-1	82.28	86.3	81.63	80.93	63.05	50.81	55.98	51.9	53.2	56.29
ex vivo Th17-2	82.81	84.14	80.01	80.64	67.12	56.11	61.62	60.4	60.2	60.72
ex vivo Th17-3	86.28	89.8	86.05	85.31	70.22	63.88	77.04	74	71.56	72.94
ex vivo Th1-1	88.48	94.91	89.3	88.61	75.97	72.98	91.54		88.41	89.84
ex vivo Th1-2	89.65	94.57	90.8	88.25	77.24	76.69	91.03	90.39	88.88	90.3
ex vivo Th1-3	89.39	94.79	90.38	89.16	78.09	73.09	92.8	91.21	90.39	91.87
ex vivo Treg-1	91.3	95.72	91.53	90.12	84.34	78.5	93.38	92.61	91.17	94.49
ex vivo Treg-2	91.46	96.12	92.27	89.35	84.34	76.44	91.87	93.14	90.25	93.7
ex vivo Treg-3	90.19	95.66	91.36	90.12	83.32	76.03	93.04	92.83	90.49	93.94
in vitro Th17-1	93.25	94.99	91.4	89.97	83.65	78.26	92.82	92.64	90.42	93.98
in vitro Th17-2	91.58	95.38	91.84	89.51	83.66	77.46	92.29	92.19	90.22	93.85
in vitro Th17-3	90.72	95.9	91.93	88.86	82.52	78.28	92.74	93.27	91.07	94.56
in vitro Th1-1	90.96	96.72	91.21	89.6	76.52	81.82	93.04	92.55	89.86	93.17
in vitro Th1-2	90.26	96.14	91.04	90.49	80.18	82.22	92.16	92.23	91.84	92.66
in vitro Th1-3	91.38	95.72	90.46	89.35	78.76	79.12	92.24	93.3	89.74	92.2
in vitro Treg-1	89.48	96.08	90.15	90.33	83.12	78.6	92.23	91.92	92	94.65
in vitro Treg-2	92.86	95.9	89.78	89.58	82.53	76.5	89.39	93.68	90.25	93.65
in vitro Treg-3	91	95.52	91.23	90.71	81.84	78.62	90.52	92.91	89.89	94.12
	Dpp4									
	CpG01	CpG02	CpG03	CpG04	CpG05					
ex vivo Tnaive-1	91.56	94.27	89.68	85.87	87.61					
ex vivo Tnaive-2	94.79	94.76	93.14	84.81	87.92					
ex vivo Tnaive-3	93.5	95.72	91.89	85.62	85.47					
ex vivo Th17-1	91.24	73.26	56.37	33.27	42.24					
ex vivo Th17-2	93.12	70.76	58.4	32.61	34.1					
ex vivo Th17-3	91.32	66.02	57.08	34.39	38.14					
ex vivo Th1-1	91.91	80.92	80.88	64.9	66.88					
ex vivo Th1-2	92.09	85.29	82.88	70.55	71.34					
ex vivo Th1-3	93.13	83.98	81.93	75.13	70.96					
ex vivo Treg-1	90.87	91.32	91.7	78.66	79.65					
ex vivo Treg-2	94.99	89.01	91.57	77.51	81.33					
ex vivo Treg-3	91.84	88.92	93.91	81.58	78.63					
in vitro Th17-1	92.55	92.92	92.81	83.05	85.73					
in vitro Th17-2	93.65	94.89	94.89	84.76	88.41					
in vitro Th17-3	92.34	91.1	97.12	84.72	88.22					
in vitro Th1-1	92.38	88.96	100	85.5	88.02					
in vitro Th1-2	90.94	92.22	94.94	83.29	87.22					
in vitro Th1-3	93.32	90.4	91.33	88.37	82.63					
in vitro Treg-1	91.96	91.24	93.19	92.05	87.14					
in vitro Treg-2	92.03	91.35	92.32	84.25	87.94					
in vitro Treg-3	93.12	94.58	93.53	88.11	83.87					
	Rora									
	CpG01	CpG02	CpG03	CpG04						
ex vivo Tnaive-1	91.91	88.99	89.34	90.57						
ex vivo Tnaive-2	89.77	89.01	91.27	90.53						
ex vivo Tnaive-3	90.76	84.28	87.28	100						
ex vivo Th17-1	57	65.2	75.53	54.81						
ex vivo Th17-2	58.32	67.89	77.73	56.13						
ex vivo Th17-3	65.01	71	83.32	60.41						
ex vivo Th1-1	82.6	83.46	89.47	80.39						
ex vivo Th1-2	86.24	83.96	87.09	83.23						
ex vivo Th1-3	81.42	83.2	89.48	81.83						
ex vivo Treg-1	72.92	75.03	84.28	79.53						
ex vivo Treg-2	72.95	76.48	82.5	81.4						
ex vivo Treg-3	74.62	74.61	82.95	78.4						
in vitro Th17-1	87.64	83.3	83.73	88.88						
in vitro Th17-2	90.98	85.5	91.5	88.54						
in vitro Th17-3	92.57	85.85	90.69	89.2						
in vitro Th1-1	89.55	85.82	91.29	89.37						
in vitro Th1-2	91.1	88.73	93.93	89.52						
in vitro Th1-3	94.76	89.29	92.99	90.19						
in vitro Treg-1	94.28	85.9	89.4	90.12						
in vitro Treg-2	92.5	88.11	96.2	89.14						
in vitro Treg-3	93.15	87.14	90.87	89.32						
	Dclk1									
	CpG01	CpG02	CpG03	CpG04	CpG05					
ex vivo Tnaive-1	82.04	81.45	88.25	87.3	97.13					
ex vivo Tnaive-2	80.61	85.5	85.1	88.41	98.19					
ex vivo Tnaive-3	84.54	81.64	91.3	87.86	99.28					
ex vivo Th17-1	79.29	83.16	64.5	78.97	92.89					
ex vivo Th17-2	78.43	81.28	65.66	80.8	97.31					

exvivo_Th17-3	77.3	83.69	58.83	79.54	89.79					
ex vivo Th1-1	82.88	86.28	87.4	83.91	99.56					
ex vivo Th1-2	83.45	85.86	85.15	84.24	96.42					
ex vivo Th1-3	84.84	86.73	87.27	82.71	97.92					
ex vivo Treg-1	81	79.62	85.9	85.97	95.83					
ex vivo Treg-2	82.9	83.43	88.95	84.05	97.85					
ex vivo Treg-3	80.31	85.5	84.27	84.66	98.9					
in vitro Th17-1	84.61	78.13	84.06	81.19	97.85					
in vitro Th17-2	83.24	71.29	83.79	83.94	93.3					
in vitro Th17-3	84.68	78.62	79.6	87.77	92.49					
in vitro Th1-1	85.17	76	73.45	86.27	93.9					
in vitro Th1-2	82.77	79.32	85.21	84.91	96.79					
in vitro Th1-3	76.44	75.17	78.89	81.37	94.1					
in vitro Treg-1	76.77	75.11	82.77	89.25	95.93					
in vitro Treg-2	81.78	81.18	83.05	83.75	95.56					
in vitro Treg-3	82.6	74.25	80.51	85.63	92.8					

Supplemental Table 4: Rate of DNA methylation at each CpG motif in immune cell subsets. DNA methylation rates at each CpG motif for the experiments depicted in Figure 7 are listed.										
Il17a										
	CpG01	CpG02	CpG03	CpG04	CpG05	CpG06	CpG07	CpG08		
γδ T-1	52.50	50.35	60.75	61.91	62.55	57.09	51.43	43.34		
γδ T-2	52.76	50.83	63.10	60.39	60.56	58.49	52.64	44.80		
CD4T-1	80.95	78.13	82.91	91.21	91.85	86.92	75.04	66.78		
CD4T-2	83.76	78.66	83.41	92.50	94.09	91.02		71.07		
CD8T-1	84.15	79.78	83.93	92.20	92.89	90.87	78.38	67.27		
CD8T-2	82.96	81.35	85.72	92.89	93.34	91.44	78.06	72.39		
B cell-1	84.71	81.57	84.95	92.55	94.32	89.52	76.79			
B cell-2	84.95	82.59	87.65	93.10	94.74	91.69	78.15	69.91		
Neutrophil-1	83.07	68.47	81.59	91.20	92.79	84.78	72.09			
Neutrophil-2	81.90	69.47	82.19	91.20	94.42	84.32	71.01	47.46		
Monocyte-1	67.39	53.81	71.89	81.43	86.41	57.71	38.57	15.20		
Monocyte-2		52.47	66.81	78.78	87.17	54.27	37.07	8.43		
Macrophage-1	74.95	51.91	64.97	82.15	89.28	69.00	63.58	22.49		
Macrophage-2	74.94	53.77	66.80	82.33	90.71	67.27		24.03		
cDC-1	76.69	70.21	81.70	91.37	92.67	83.87	69.37	47.72		
cDC-2	81.25	72.36	81.28	92.12	93.58	87.34	73.40			
NK-1	78.74	70.57	80.47	91.75	91.80	87.45	73.22			
NK-2	81.67	72.24	78.49	90.34	93.23	87.53	74.20	57.88		
Zfp362										
	CpG01	CpG02	CpG03	CpG04	CpG05	CpG06	CpG07	CpG08	CpG09	CpG10
γδ T-1	66.35	67.43	72.08	67.69	73.04	78.37	79.29	84.29	79.98	73.27
γδ T-2	64.88	66.97	64.81	64.75	74.08	79.21	76.19	81.96	80.62	74.81
CD4T-1	74.93	82.30	79.29	80.50	89.12	90.44	90.35		91.96	82.78
CD4T-2	76.03	85.05	80.63	77.13	87.76	89.57	89.64	100.00	91.44	81.34
CD8T-1	85.57	91.78	87.58	83.86	92.22	90.35	91.16	100.00	100.00	87.50
CD8T-2	88.39	92.83	89.52	81.70	93.13	93.08	100.00	100.00	93.65	85.33
B cell-1	79.05	79.49	80.49	77.77	86.60	68.87	76.98	83.44	67.29	69.03
B cell-2	80.61	80.74	80.78	76.86	84.13	69.28	79.16	79.53	68.00	68.52
Neutrophil-1	85.21	94.28	90.81	84.93	94.03	92.79	100.00	100.00	93.94	87.21
Neutrophil-2	84.64	93.66	90.18	85.01	93.08	92.56	100.00	100.00	94.49	86.42
Monocyte-1	79.08	94.44	90.36	83.67	93.13	93.55	92.30	100.00	94.87	87.46
Monocyte-2	85.13	92.93	89.44	82.95	92.32	91.00	92.50	100.00	91.81	86.29
Macrophage-1	78.25	95.07	91.19	83.52	93.06	90.53	92.21	100.00	100.00	87.68
Macrophage-2	77.73	93.78	90.01	83.25	92.31	93.26	92.90	100.00	94.74	86.87
cDC-1	89.38	100.00	88.95	88.29	92.49	89.94	93.09	100.00	91.87	85.73
cDC-2	86.96	92.53	89.09	82.09	94.27	89.00	93.16	100.00	91.61	86.53
NK-1	86.40	93.03	89.94	83.69	93.43	90.21	100.00	100.00	100.00	89.04
NK-2	85.16	91.61	90.87	82.17	92.88	91.23	91.59	100.00	93.11	88.38
Ccr6										
	CpG01	CpG02	CpG03	CpG04	CpG05	CpG06				
γδ T-1	56.25	50.45	60.62	49.75	74.02	67.48				
γδ T-2	56.89	48.24	60.02	49.69	72.10	67.59				
CD4T-1	77.51	62.23	84.35	68.29	93.30	90.07				
CD4T-2	77.80	61.63	82.26	69.23	92.74	90.97				
CD8T-1	81.73	74.20	89.98	76.95	95.04	94.15				

CD8T-2	82.84	76.54	87.54	76.69	95.34	95.53				
B cell-1	0.00	3.38	0.00	0.00	5.31	5.49				
B cell-2	0.00	3.71	0.00	0.00	4.88	5.30				
Neutrophil-1	89.04	74.99	87.56	76.95	93.77	92.04				
Neutrophil-2	88.23	75.27	89.00	73.81	93.59	91.18				
Monocyte-1	88.56	68.45	84.62	59.57	89.10	85.30				
Monocyte-2	87.43	64.17	84.53	57.53	89.94	85.56				
Macrophage-1	83.30	77.02	88.48	76.42	93.77	90.39				
Macrophage-2	85.38	78.14	89.06	73.96	93.09	90.62				
cDC-1	81.93	57.00	85.35	54.05	91.40	84.62				
cDC-2	80.08	53.71	86.08	51.14	91.33	84.01				
NK-1	17.22	44.30	39.37	20.78	75.06	74.25				
NK-2	20.35	45.02	41.26	21.44	72.70	72.36				
	Acsbg1									
	CpG01	CpG02	CpG03	CpG04	CpG05	CpG06	CpG07	CpG08	CpG09	CpG10
γδ T-1	91.25	90.86	86.70	89.03	66.38	59.09	62.53	65.31	62.10	68.22
γδ T-2	89.94	90.37	87.90	87.13	67.18	59.72	62.03	67.45	63.75	68.44
CD4T-1	91.19	96.31	91.95	91.23	80.93	79.36	93.22	93.40	90.28	93.40
CD4T-2	90.88	94.89	91.45	90.10	80.95	78.35	91.21	91.67	89.04	92.37
CD8T-1	91.02	96.47	90.49	90.78	82.78	79.85	92.98	92.74	91.20	94.52
CD8T-2	91.86	96.10	91.99	89.63	82.66	80.68	93.21	92.47	90.90	93.67
B cell-1	91.21	96.64	91.07	89.29		79.50	92.65	93.77	91.99	93.48
B cell-2	91.47	95.44	91.91	89.73	80.79	76.08	93.59	93.47	90.46	93.83
Neutrophil-1	91.46	96.66	89.99	89.47	72.81	73.80	92.92	91.78	90.22	92.02
Neutrophil-2	89.97	95.95	92.34	90.04	75.68	76.62	92.19	90.76	89.81	92.11
Monocyte-1	89.06	96.58	91.56	86.92	71.31	79.68	91.69	90.91	90.09	92.77
Monocyte-2	90.34	95.11	92.04	90.15	69.08	78.25	92.30	89.93	88.97	88.79
Macrophage-1	92.03	95.08	90.47	89.74	70.46	80.17	91.94	91.20	89.64	91.39
Macrophage-2	87.94	96.33	88.57	90.22	71.14	80.56	91.29	89.58	88.71	89.41
cDC-1	92.05	96.50	92.37	91.48	76.04	79.49	91.80	91.24	89.55	92.82
cDC-2	90.57	96.56	90.93	90.15	74.59	80.45	93.35	91.53	88.90	92.28
NK-1	90.21	96.16	89.90	91.45	70.61	75.56	91.49	90.18	89.19	90.38
NK-2	90.35	95.48	90.20	90.34	72.32	72.24	87.55	87.87	86.55	88.98
	Dpp4									
	CpG01	CpG02	CpG03	CpG04	CpG05					
γδ T-1	92.40	84.91	91.40	77.85	83.00					
γδ T-2	92.97	81.04	90.57	84.22	85.49					
CD4T-1	92.39	87.89	88.94	76.61	79.32					
CD4T-2	94.77	89.39	90.87	77.84	80.29					
CD8T-1	95.10	93.39	95.96	84.91	84.21					
CD8T-2	92.05	91.25	92.09	87.88	89.00					
B cell-1	93.32	88.11	95.14	83.69	86.93					
B cell-2	95.57	90.20	95.73	83.36	87.17					
Neutrophil-1	93.90	83.01	91.55	82.43	86.27					
Neutrophil-2	91.91	82.37	88.51	80.14	86.12					
Monocyte-1	92.12	84.19	92.90	80.70	83.62					
Monocyte-2	91.79	85.02	87.22	81.16	83.66					
Macrophage-1	90.37	80.21	89.36	82.14	85.42					
Macrophage-2	91.15	77.92	84.64	83.85	86.72					

cDC-1	93.68	88.71	93.16	84.20	86.69					
cDC-2	95.83	89.52	90.77	81.45	87.35					
NK-1	91.53	84.64	97.66	85.28	88.27					
NK-2	94.48	83.43	89.73	82.07	88.14					
	Rora									
	CpG01	CpG02	CpG03	CpG04						
$\gamma\delta$ T-1	70.89	75.31	87.34	70.26						
$\gamma\delta$ T-2	69.16	71.49	84.05	68.33						
CD4T-1	83.00	75.74	84.48	80.80						
CD4T-2	86.09	78.40	89.30	80.30						
CD8T-1	90.68	85.28	87.31	100.00						
CD8T-2	88.81	83.38	88.72	100.00						
B cell-1	89.80	79.96	90.04	85.12						
B cell-2	82.88	82.98	85.06	85.11						
Neutrophil-1	89.96	82.36	84.56	85.09						
Neutrophil-2	89.62	81.80	89.48	86.72						
Monocyte-1	89.07	87.14	90.39	85.41						
Monocyte-2	89.54	75.67	82.30	79.31						
Macrophage-1	87.04	86.16	88.33	85.70						
Macrophage-2	91.57	86.08	87.08	83.45						
cDC-1	89.07	83.93	89.63	88.32						
cDC-2	90.10	82.47	86.81	85.69						
NK-1	91.45	84.75	90.01	85.48						
NK-2	93.13	87.09	92.98	85.06						
	Dcl1									
	CpG01	CpG02	CpG03	CpG04	CpG05					
$\gamma\delta$ T-1	81.30	80.84	73.71	81.20	100.00					
$\gamma\delta$ T-2	79.76	83.82	75.86	81.78	98.76					
CD4T-1	90.36	79.21	82.68	88.50	100.00					
CD4T-2	85.60	85.59	79.18	84.94	100.00					
CD8T-1	86.64	79.63	85.45	86.29	100.00					
CD8T-2	87.17	80.81	83.51	87.04	100.00					
B cell-1	87.40	78.01	80.51	85.94	100.00					
B cell-2	86.68	82.89	80.24	86.11	100.00					
Neutrophil-1	84.65	80.50	78.20	88.81	99.05					
Neutrophil-2	84.08	83.95	81.90	85.92	98.33					
Monocyte-1	80.80	77.02	79.66	86.10	97.25					
Monocyte-2	80.72	77.95	75.38	85.77	94.19					
Macrophage-1	78.79	79.60	67.48	83.97	93.67					
Macrophage-2	79.33	80.80	68.06	81.80	94.41					
cDC-1	84.27	79.58	77.16	90.04	100.00					
cDC-2	84.32	84.64	81.48	87.30	99.67					
NK-1	86.46	80.04	81.62	88.06	94.94					
NK-2	87.33	83.41	81.96	86.97	97.35					