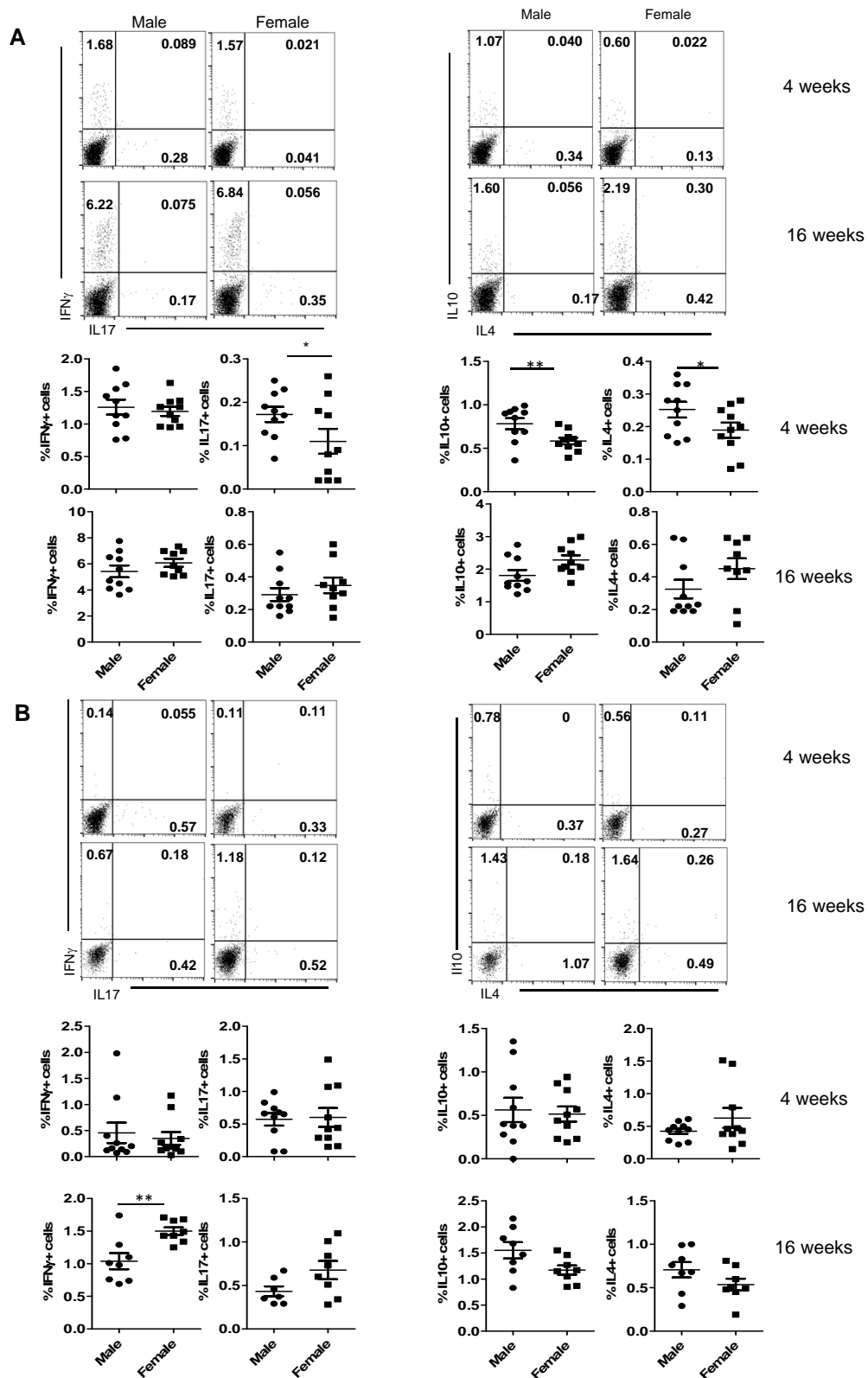
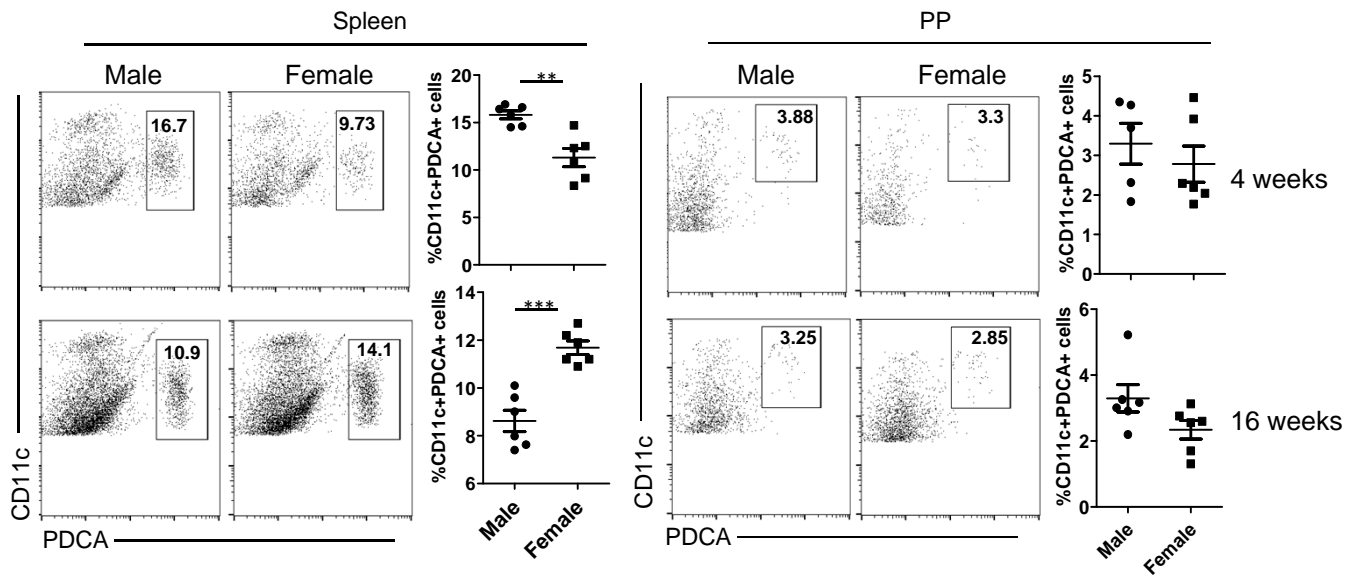


*Supplemental Figure 1: Female SNF1 mice show higher number of plasma cells.* Spleen cells of 4 and 16 weeks old male and mice were stained for surface CD19, CD138 and IgM, and analyzed by FACS. A) The frequencies of CD138 single positive and CD138 and IgM double positive plasma cells are shown. Representative FACS plots (left panels) and mean  $\pm$ SEM of percentage values (right panels) are shown.



**Supplemental Fig. 2: Intracellular cytokine profiles of splenic and PP T cells.** Spleen (A) and PP (B) of 4 and 16 week-old male and female SNF1 mice were stained for indicated intracellular cytokines as described in materials and methods and analyzed by FACS. Representative FACS plots for male and female (upper panels) and mean  $\pm$ SEM of percentage values of cytokine positive cells (lower panels) are shown.



Supplemental Figure 3: Plasmacytoid dendritic cell (pDC) frequencies differ between male and female SNF1 mice. Spleen and PP of 4 and 16 weeks old SNF1 mice were stained using anti- mouse CD11c and PDCA-1 antibodies for FACS analysis. Representative FACS plots for male and female and mean  $\pm$ SEM values are shown.

A

4 weeks		16 weeks		
Male	Female	Male	Female	
1.19	1.00	1.05	1.57	Rorgt
1.14	1.00	1.00	1.02	Tbet
1.79	1.08	1.55	1.00	Gata3
1.23	1.00	1.88	1.43	Foxp3
1.32	1.13	1.0	1.43	Irf4
1.00	1.23	1.14	1.19	Il1b
1.61	1.00	3.18	2.63	Il4
1.00	1.36	1.56	4.23	Il6
1.00	1.07	2.81	4.31	Il9
1.04	1.00	1.62	2.86	Il10
1.24	1.00	4.81	4.67	Il12p70
1.00	1.06	1.55	2.62	Il17
1.00	1.06	3.44	5.15	Il21
1.12	1.37	1.00	1.75	Il22
1.43	1.00	1.33	2.79	Il23
1.00	1.03	1.03	1.22	Tgfb1
1.04	1.23	1.20	1.00	Tnfa
1.00	1.08	4.86	6.85	Ifna
1.00	1.00	1.21	1.63	Infb
1.00	1.06	1.70	3.27	Mig1
1.00	2.38	1.54	5.44	Ip10
1.00	1.01	1.08	1.23	Rantes
5.05	6.09	1.00	1.16	Mcp1
1.00	1.00	5.80	4.68	Mip1a
1.00	1.04	2.89	3.74	Ccl7
3.25	3.97	1.00	1.00	April
1.62	1.00	1.32	1.04	Fcgr3
1.19	1.00	4.03	2.70	Ido
1.020	1.21	1.65	1.53	Tlr3
1.00	1.38	1.18	1.63	Tlr7
1.10	1.23	1.00	1.12	Tlr8
1.07	1.00	1.20	1.09	Tlr9
1.21	1.19	1.33	1.00	Ifng

Row minimum                      Row maximum

B

	4 weeks		16 weeks	
	Male	Female	Male	Female
Rorgt	1.25	1.09	0.95	1.17
Tbet	1.5	0.99	1.04	2.09
Gata3	0.55	1.70	1.48	3.17
Foxp3	0.80	1.00	0.85	1.40
Irf4	0.94	0.88	1.34	1.56
Il1b	1.65	1.57	1.53	0.83
Il4	2.29	1.66	0.31	0.63
Il6	0.99	2.56	2.69	5.72
Il9	0.99	4.21	1.57	2.99
Il10	0.96	3.35	1.91	6.43
Il12p70	0.80	3.89	1.26	2.56
Il17	0.99	3.37	2.13	4.30
Il21	1.00	3.6	1.51	1.61
Il22	0.88	3.38	4.67	6.56
Il23	0.69	2.74	4.11	2.46
Tgfb1	1.5	1.31	0.96	0.99
Tnfa	1.34	1.21	0.82	2.03
Ifna	1.00	9.19	1.21	3.48
Infb	0.99	4.73	7.23	9.34
Mig1	1.28	0.93	0.60	0.51
Ip10	1.67	0.52	0.64	0.23
Rantes	1.01	1.04	0.92	1.10
Mcp1	0.44	0.28	1.00	5.60
Mip1a	2.36	1.00	0.30	0.21
Ccl7	1.00	2.78	1.96	2.46
April	0.46	0.411	1.00	1.03
Fcgr3	0.67	1.60	0.75	1.11
Ido	1.42	1.47	0.31	0.37
Tlr3	0.99	1.97	1.03	1.19
Tlr7	1.00	1.42	1.93	5.31
Tlr8	0.90	1.83	2.60	4.05
Tlr9	0.92	5.19	2.23	5.16

### Supplemental fig. 4:

**A)** Spleen cells from adult female *SNF1* mouse express large number of pro-inflammatory factors. cDNA prepared from freshly isolated spleen cells and subjected to real-time quantitative PCR as described for Fig. 5. Expression levels of individual factors were calculated against the value of  $\beta$ -actin. Mean values of cells from 3-4 mice tested individually were used for generating the heat map. The lowest value of an individual factor among 4 groups of mice was considered as 1 (row minimum) for calculating fold expression values for each row. Factors that were undetectable or produced extreme low values were excluded from this analysis.

**B)** Comparison of expression profiles of various factors in small intestine and spleen. Relative expression ratios were calculated by dividing values of intestinal samples (presented in Fig. 5) with the respective values of spleen samples (supplemental fig. 4A) and shown. These intestine: spleen ratios indicate that majority of factors, Th17 and Th9 associated in particular, were expressed in the small intestine at profoundly higher levels than in the spleen of females even at prepubescent age.