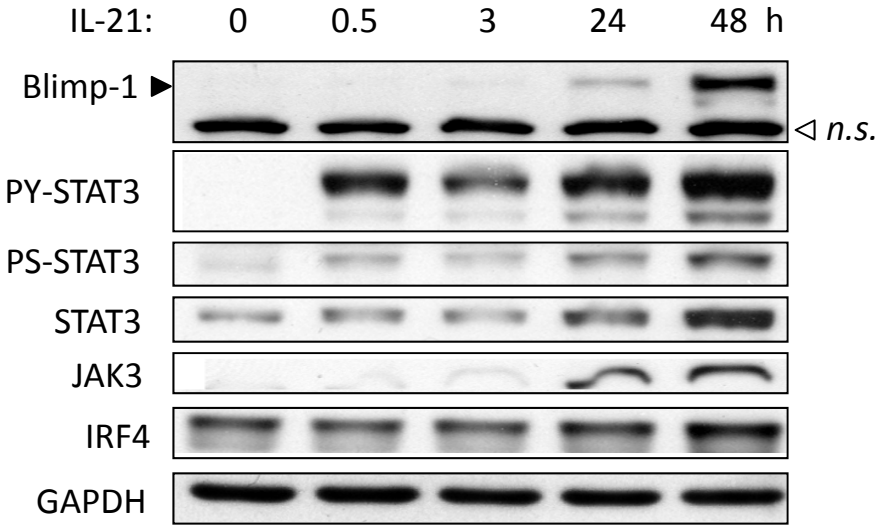
Ding et al, Supplementary Figure S1.

A. Related to Fig. 2. Changes in the expression of selected protein markers in IL-21 stimulated Ly7 cells. Whole cell lysates were used in Western Blot analysis. *n.s.*, Non-specific band.

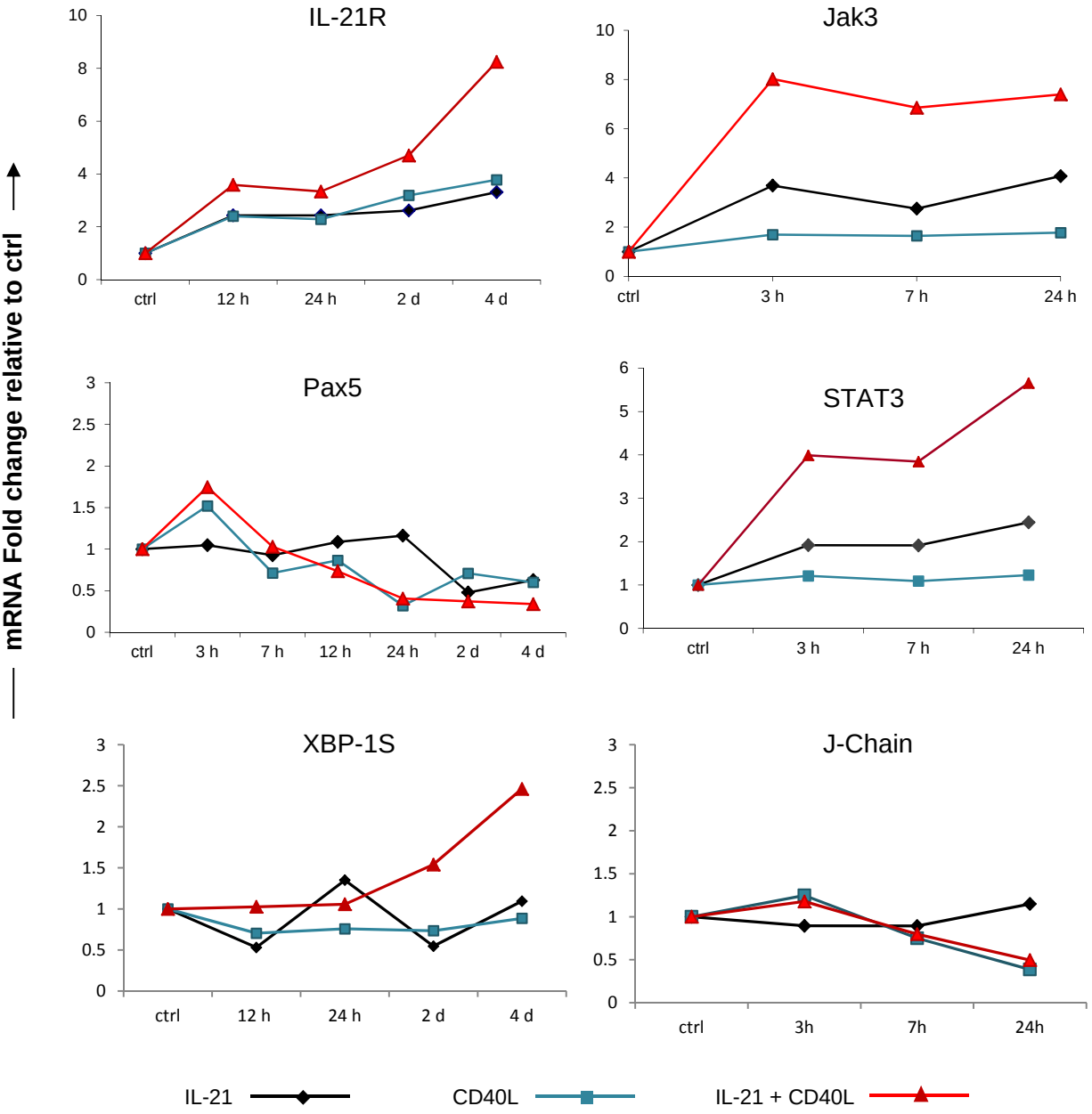


B. Related to Fig. *3B*. IRF4 protein expression changes in the Ly7 differentiation culture. The histogram function of the Photoshop program was used to quantify the intensity of each band. The numbers for each IRF4/Mum1 band was first normalized to the GAPDH loading control and then to the un-stimulated control sample (ctrl), which was set as 1.0.

(Fig. 3B)

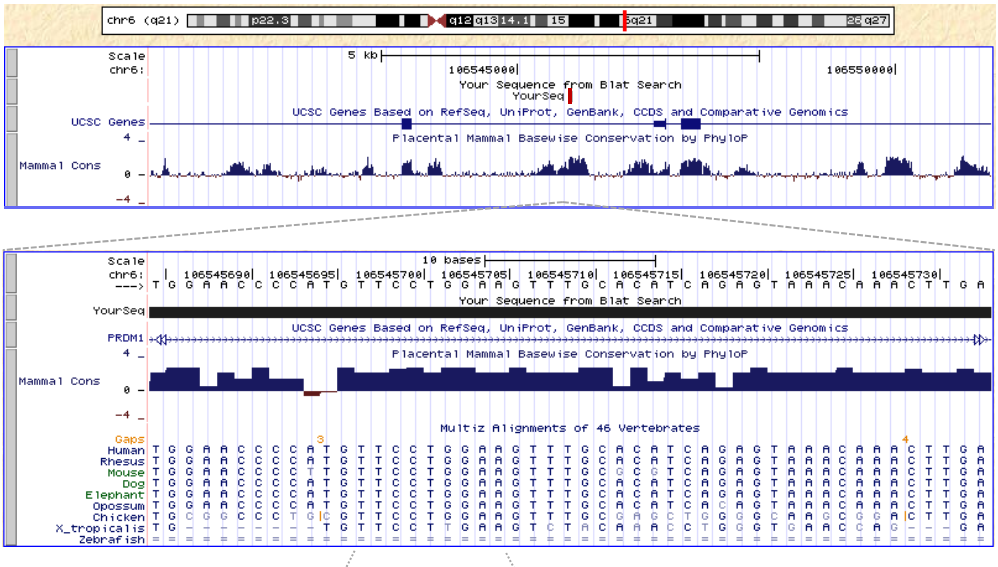
Ding et al, Supplementary Figure S2.

Related to Fig. 3. Changes in the mRNA for IL-21R, Jak3, STAT3, and spliced XBP-1 (XBP-1S) during treatment with either IL-21, CD40L or IL-21+CD40L (double). All values were normalized to that in the untreated cells defined as 1.0.



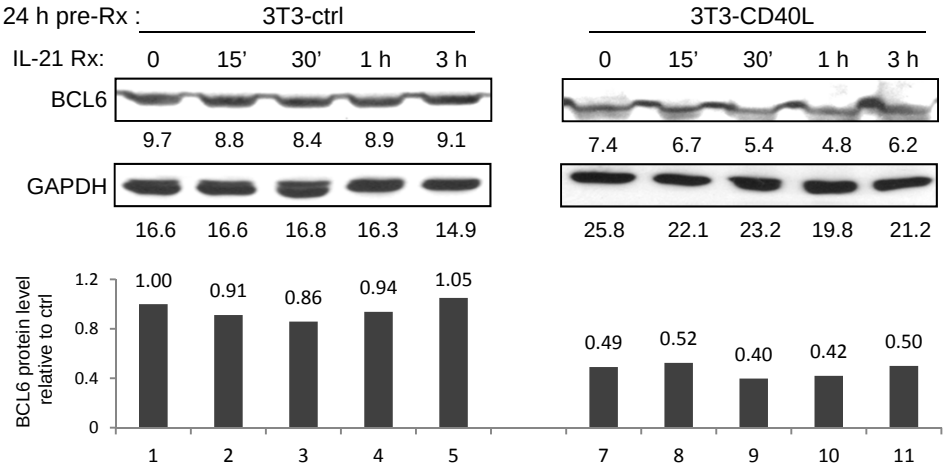
Ding et al, Supplementary Figure S3.

A. Related to Fig. 5*B*. Sequences surrounding the shared BCL6/STAT3 site in intron 3 of the human *PRDM1* locus. This motif corresponds to "site 7" identified by Kwon et al (ref. 23). Mammalian conservation score and alignment with other species are copied from the UCSC Genome Browser (http://genome.ucsc.edu; the human genome data is from the Feb. 2009 release).



Composite BCL6/STAT3 site : 5' TTCCTGGAA 3'
High affinity BCL6 site : 5' TTCCTaGAA 3'
High affinity STAT3 site : 5' TTCNNNGAA 3'

B. Related to Fig. 5*C*. BCL6 protein changes after IL-21 stimulation with or without CD40L pre-treatment. Quantification of the BCL6 and GAPDH bands were achieved via the infrared fluorescence- based Odyssey® Imaging System. Normalized BCL6 signals are plotted in the graphs below with the intensity of BCL6 band from untreated sample set as 1.00.



Supplementary Table S1. Sequences of Primers used in qRT-PCR and qChIP assays.

Gene/Motif		Sequence
qRT-PCR primers for the following human genes		
TBP (TATA box binding protein)	sense	5’ GCACAGGAGCCAAGAGTGAA 3’
	antisense	5’ TCACAGCTCCCCACCATATT 3’
PRDM1	sense	5’ ATGCGGATATGACTCTGTGGA 3’
	antisense	5’ CTGAACCGAAGTACCGCCATC 3’
IL-21R	sense	5’ CCCGACCTCGTCTGCTACA 3’
	antisense	5’ TGGTCTTGCCAGGTAAGGGT 3’
IRF4	sense	5’ GCCAAGATTCCAGGTGACTC 3’
	antisense	5’ ATCGTAGCCCCTCAGGAAAT 3’
J-chain	sense	5’ TGGGATTACAGCCCAAGAAG 3’
	antisense	5’ CCGGGCCGAAGAGATTTCTG 3’
Jak3	sense	5' CCCCAGCGCCTATCTTTCTC 3'
	antisense	5' GGGAAGTAAAAGCGAATCCTGTA 3'
Pax5	sense	5’ CAGCAGGACAGGACATGGAG 3’
	antisense	5’ CCTTGATGAGCAAGTTCCACT 3’
STAT3	sense	5’ ACCTGCAGCAATACCATTGAC 3’
	antisense	5’ AAGGTGAGGGACTCAAACTGC 3’
XBP-1s (spliced XBP-1)	Sense	5’ AGTCCGCAGCAGGTGCAGGCCCA 3’
	antisense	3’ ACTGGGTCCAAGTTGTCCAG 3’
qChIP primers for the human *PRDM1* locus		
5’ site B/C	sense	5’ AAGCAGCGAGTGTGTGCTAA 3’
	antisense	5’ AAGCAAAACAAAAGCCCAAC 3’
Intron 3 BCL6/STAT3 site	Sense	5’ GCACCGACATTGCTGTTTTT 3’
	antisense	3’ AGAGCTTTTGCGGTGTGTTT 3’