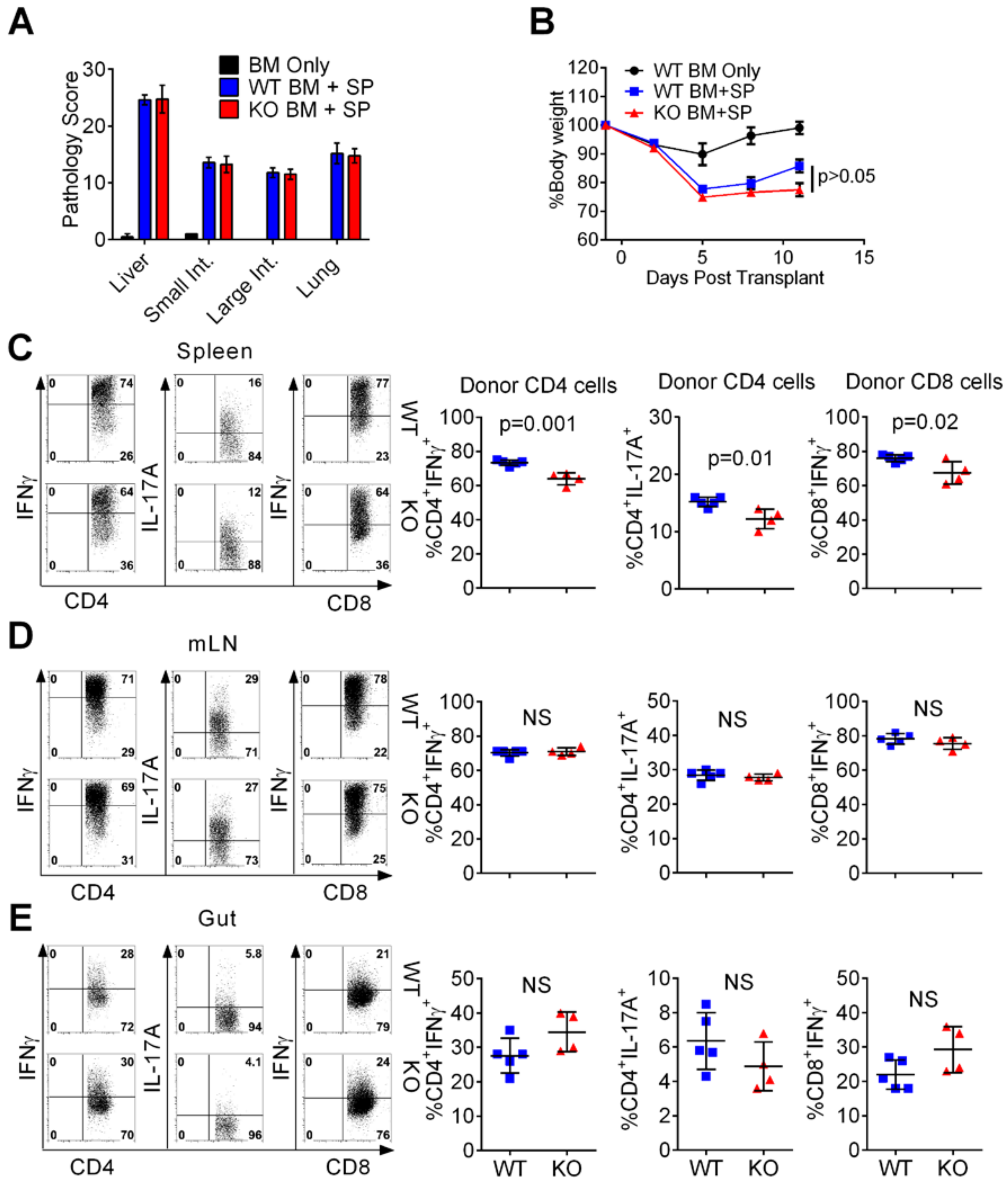
1 **Figure S1**




2 ***Figure S1. XBP-1 in B cells is dispensable for acute GVHD development.*** Lethally irradiated

3 B6D2F1 mice were transplanted with TCD-BM at 5 x $10^6$ per mouse alone or together with

4 $10x10^6$ whole splenocytes from XBP-1flox/floxCD19Cre- (n=5) or XBP-1flox/floxCD19Cre+

1 (n=5) donors on a B6 background. Fourteen days post transplant, recipient mice were euthanized
2 and indicated tissues were stained for H&E and analyzed for acute GVHD histological scores by
3 an independent pathologist **(A)**. Recipients were monitored twice weekly for body weight loss
4 beginning after transplant until day 12 **(B)**. Indicated statistical analysis was performed using a
5 paired t test of the entire experimental time-course. IFNγ producing CD4 and CD8, and IL-17A
6 producing CD4 cells were analyzed by flow cytometry from spleens **(C)**, mesenteric lymph
7 nodes **(D)**, and isolated lymphocytes from gut **(E)**. Quantified flow cytometry data from each
8 organ and T-cell subset are shown after each representative flow cytometry diagram. Data were
9 collected from n=11 mice from one representative experiment.

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# Figure S2

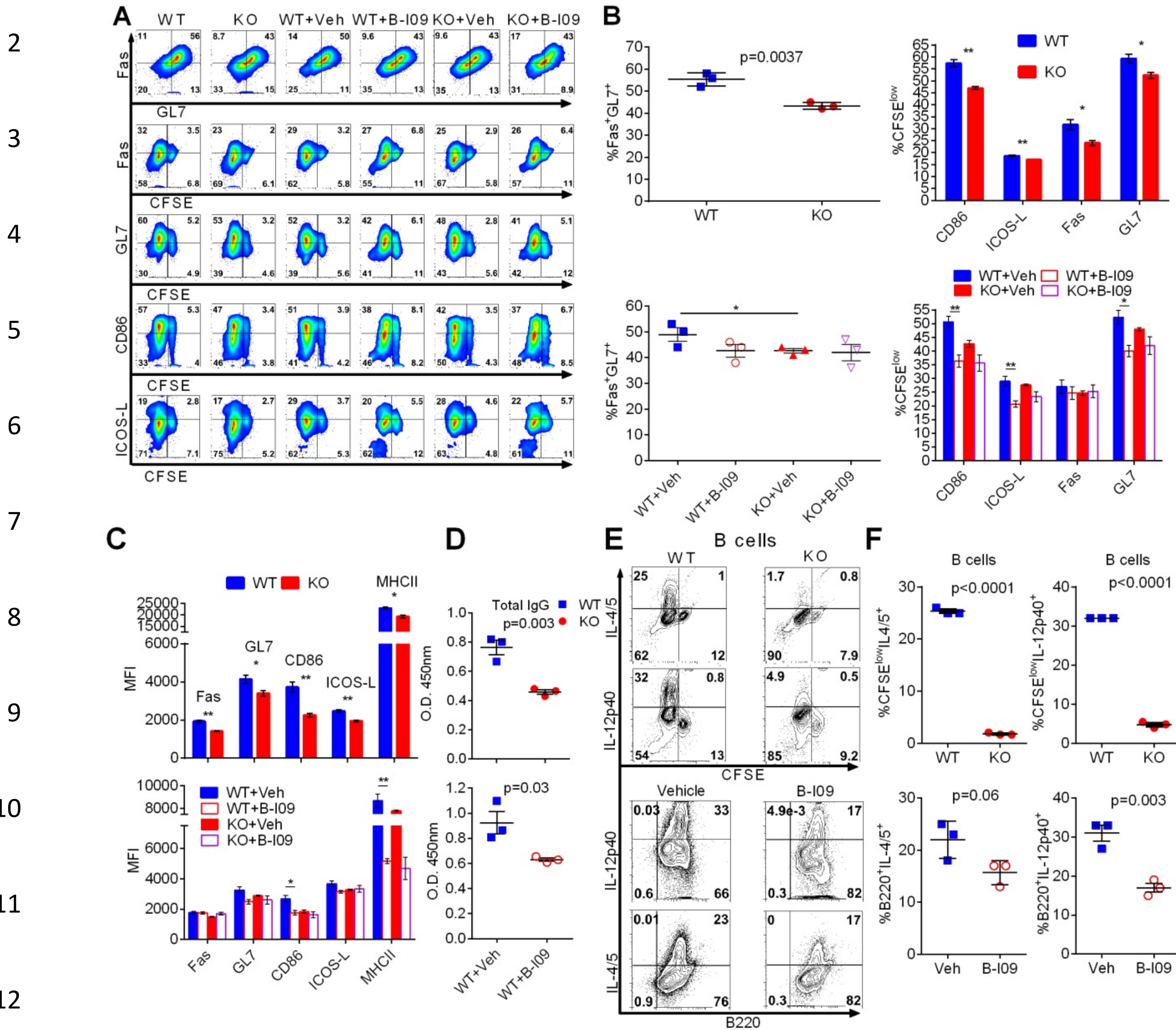


***Figure S2. XBP-1 is required for B-cell activation and differentiation.*** B cells were purified from XBP-1 WT or XBP-1 KO mice and left un-manipulated or CFSE labeled, and cultured at 2 x $10^5$ cells/ml for 4 days in the presence of LPS (10 µg/ml) and IL-4 (10 ng/ml). Some B cells were treated with B-I09 (10-20 µM) or vehicle (DMSO). On day 4, B cells were stained for Fas, GL7, CD86, ICOS-L, and MHCII against CFSE (**A**). Percentages of $Fas^{+}GL7^{+}$ GC B cells and percentages of Fas, GL7, CD86, and ICOS-L expressed on $CFSE^{low}$ proliferated B cells are quantified, and statistics of WT+Veh and KO+Veh were calculated using a one-tailed student's *t*

test in **(B)**. Median fluorescence intensity of indicated cell surface markers on gated B cells from XBP-1 WT vs. XBP-1 KO groups (top) or XBP-1 WT or XBP-1 KO cells treated with either vehicle or B-I09 (bottom) are quantified in **(C).** Culture supernatants were extracted on Day 4, and used in ELISA to determine levels of secreted total IgG relative to unstimulated B-cell control supernatants **(D).** On Day 4, B cells were stained intracellularly for IL-4, IL-5, and IL-12p40 cytokines with representative flow plots **(E)** and subsequent quantifications shown **(F)**. Data are representative of two similar experiments.

# Figure S3

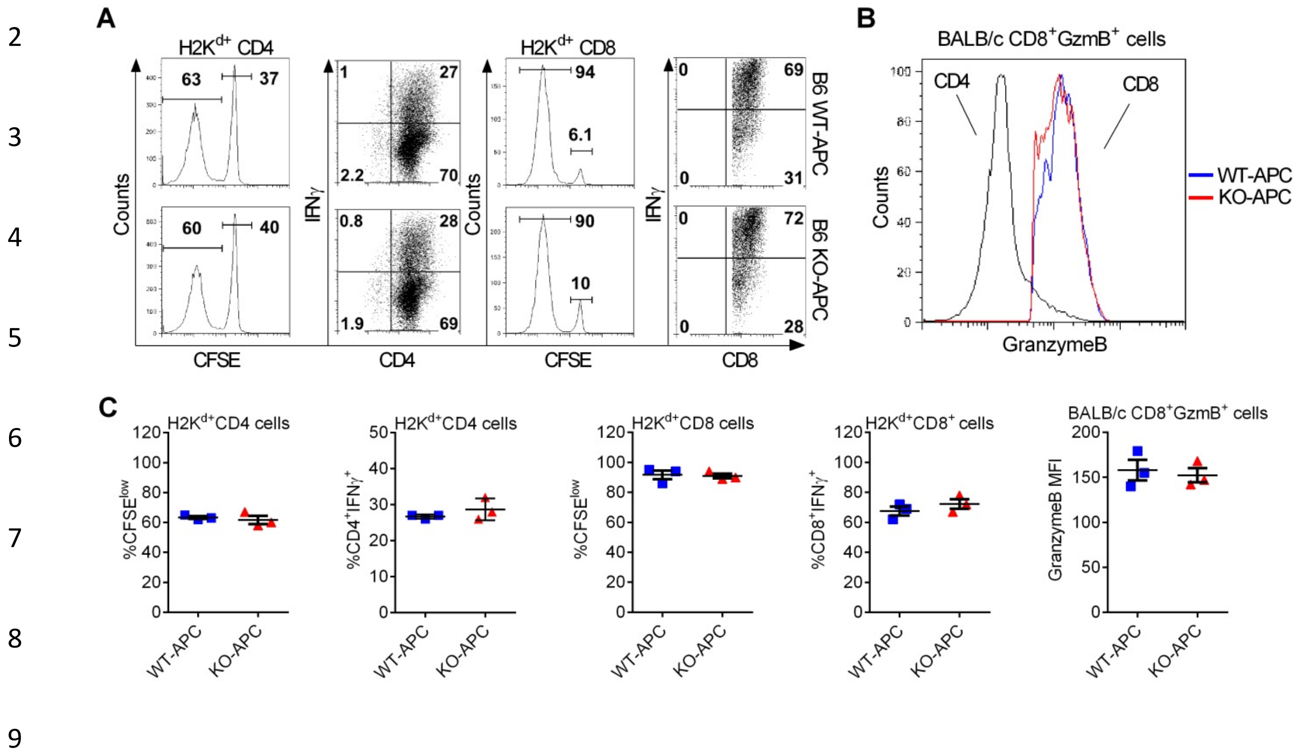


***Figure S3. XBP-1 in B cells is dispensable for early costimulation and activation of T cells.*** Naïve B cells were purified from spleens of XBP-1 WT or XBP-1 KO mice. Low-dose LPS activated (1 µg/ml for 48h) B cells were used to stimulate allogeneic CFSE labeled T cells from BALB/c mice at 3:1 B:T-cell ratio. After 3 days of co-culture with LPS activated B cells, T cells were harvested and analyzed for proliferation and IFNγ cytokine production **(A)** as well as production of Granzyme B **(B)** where the black line indicates Granzyme B expression on CD4 gated cells (negative control), blue and red lines indicate Granzyme B expression on gated CD8 T cells activated by WT or XBP-1 KO B cells, respectively. Accumulated data are quantified in (**C**). Data shown are representative of two similar experiments.