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Supplementary Information for

Cochaperone Mzb1 is a key effector of Blimp1 in plasma cell differentiation and β1 integrin function

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Figs. S1 to S3

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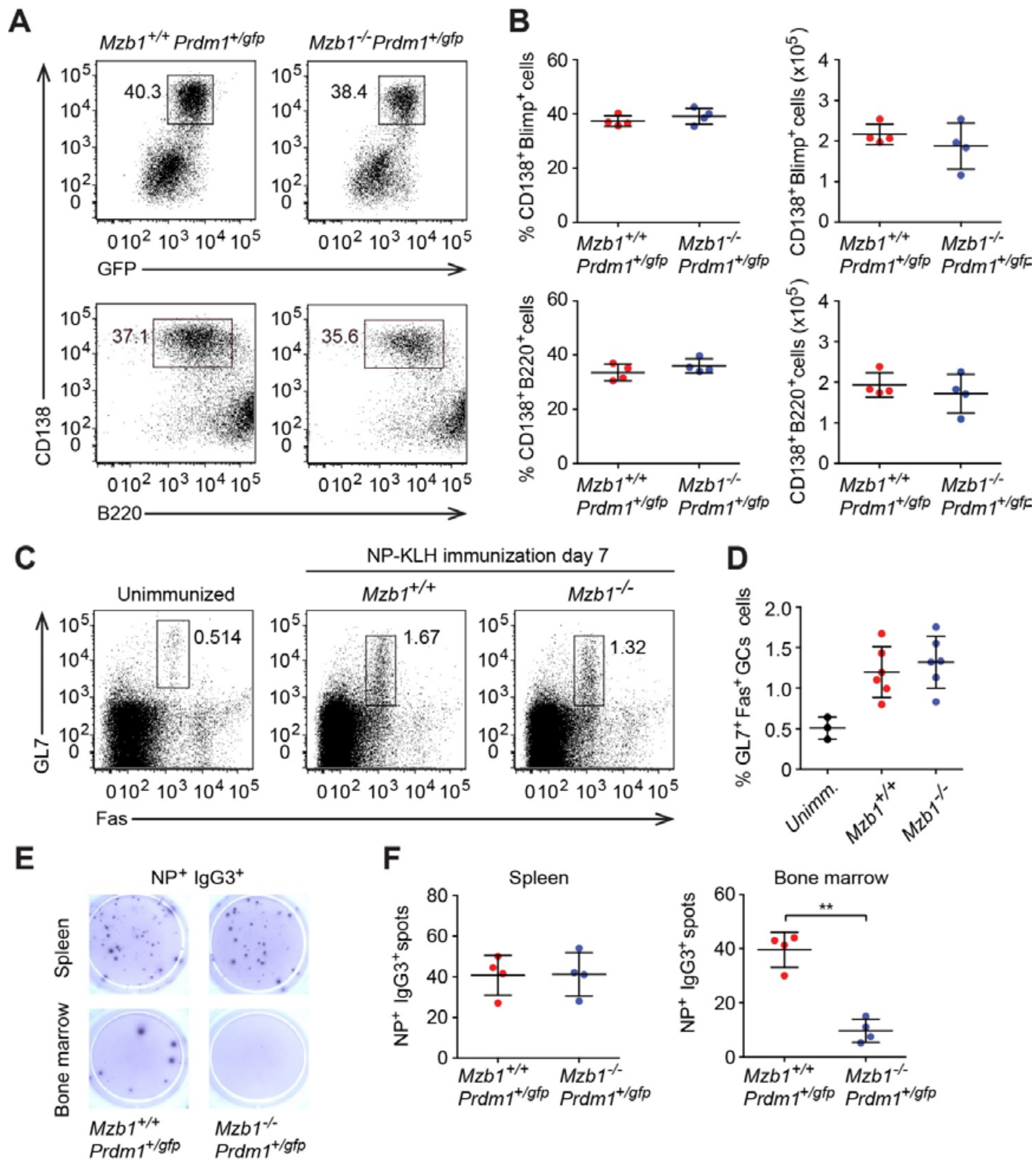

Figure S1 (related to Figure 1 and Figure 2)

(A) Flow cytometry to identify CD138⁺Blimp-GFP⁺ cells (top) and CD138⁺B220⁺ cells (bottom) among B220⁺ $Mzb1^{+/+}Prdm1^{+/gfp}$ and $Mzb1^{-/-}Prdm1^{+/gfp}$ splenocytes that were stimulated with CD40L, IL4 and IL5 in vitro for 5 d. Numbers represent cell frequencies.

(B) Mean (±SD) frequencies and numbers of CD138⁺Blimp-GFP⁺ cells (top) and CD138⁺B220⁺ cells (bottom), as gated in A. Data represent three independent experiments.

(C-D) Flow cytometry to determine the frequencies of GL7⁺Fas⁺ germinal center (GC) B cells in $Mzb1^{+/+}$ and $Mzb1^{-/-}$ mice 7 d after immunization with NP-KLH. Representative dot plots (C) and mean (±SD) frequencies (D) of GL7⁺Fas⁺ GC B cells in unimmunized and NP-KLH-immunized mice. Data are representative of three different experiments with 3-5 mice per group. Representative ELISpot (E) and mean (±S.D.) numbers (F) of NP⁺IgG3⁺ CD138⁺Blimp-GFP⁺ cells in spleen (top) and BM (bottom) 3 d p.i. with NP-Ficoll. n= 4. **p<0.01.

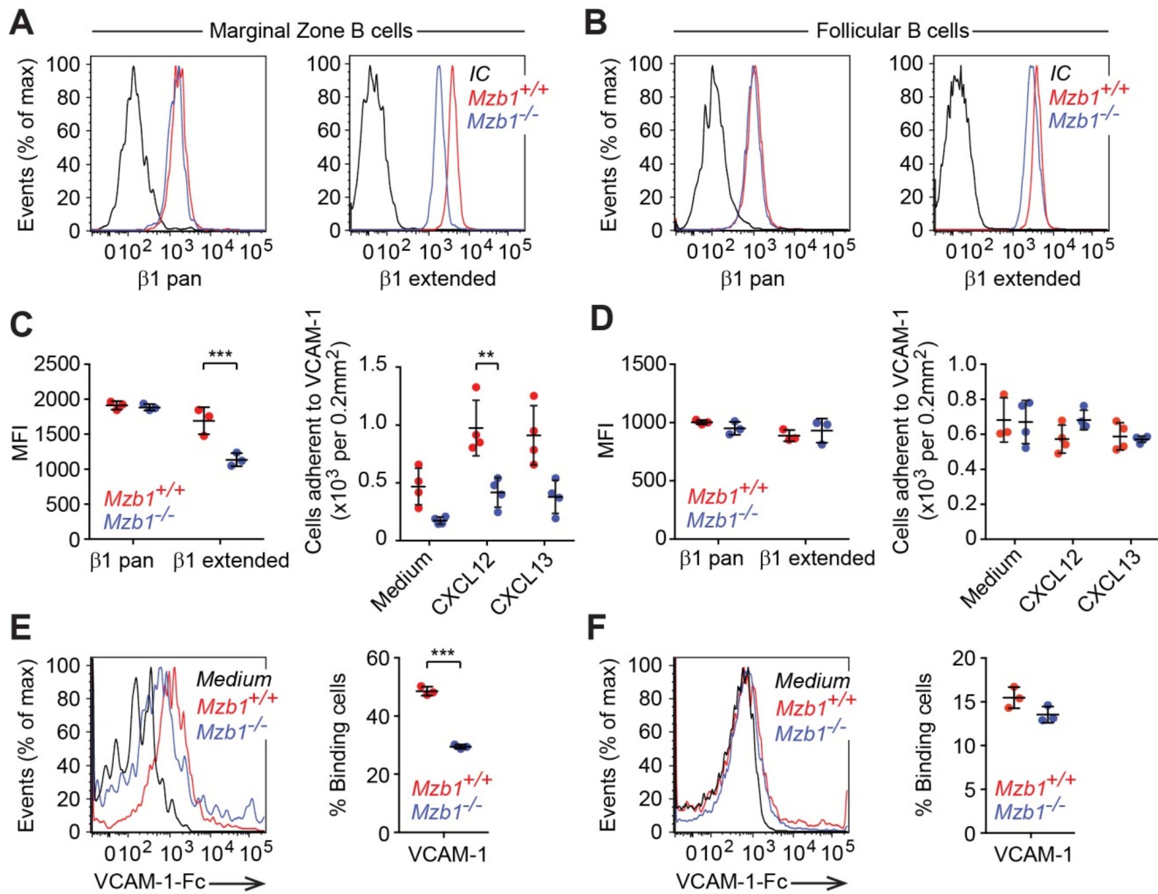

Figure S2 (related to Figure 4)
Representative histograms of total β1 (β1 pan) and extended β1 integrin in *Mzb1*$^{+/+}$ and *Mzb1*$^{-/-}$ marginal zone (MZ) B cells (A) and Follicular (Fo B) B cells (B). IC: Isotype Control. (C) Quantification of the data shown in A by determining the mean fluorescence intensities (MFI) ± S.D. (left) and analysis of adhesion of *Mzb1*$^{+/+}$ and *Mzb1*$^{-/-}$ MZ B cells to slides coated with VCAM-1 after stimulation with CXCL12 and CXCL13 (right). (D) Quantification of the data shown in B (left) and adhesion of *Mzb1*$^{+/+}$ and *Mzb1*$^{-/-}$ Fo B cells to slides coated with VCAM-1 after stimulation with CXCL12 and CXCL13 (right). Representative histograms showing the ability of *Mzb1*$^{+/+}$ and *Mzb1*$^{-/-}$ MZ B cells (E) and Fo B cells (F) to bind soluble VCAM-1 (left) and quantification of the frequency of the binding cells (right). Data are representative of three different experiments. **p<0.01, ***p<0.001.

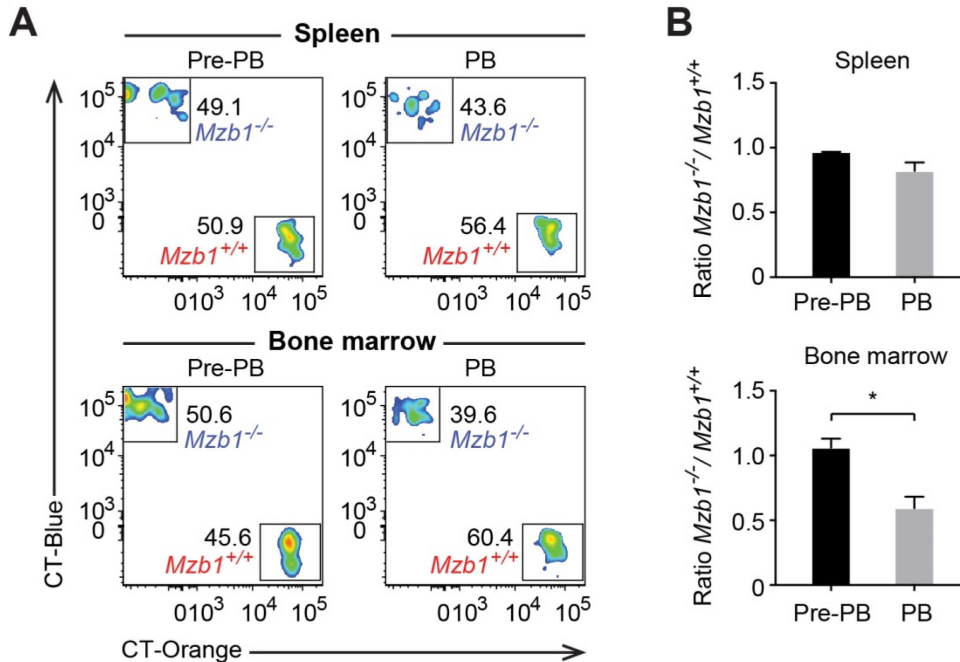

Figure S3 (related to Figure 6)
(A) Flow cytometry to assess trafficking of *in vitro* generated Pre-PB and PB after adoptive transfer into recipient mice. $CD138^{-}$Blimp-GFP^{+} Pre-PB and $CD138^{+}$Blimp-GFP^{+} PB were generated by LPS stimulation of $B220^{+}$ splenic cells from *$Mzb1^{+/+}Prdm1^{+/gfp}$* and *$Mzb1^{-/-}$ $Prdm1^{+/gfp}$* mice. After FACS sorting, cells were fluorescently labeled with cell tracker (CT) orange (*$Mzb1^{+/+}$*) and CT blue (*$Mzb1^{-/-}$*) and adoptively transferred in wild type recipients. The appearance of *$Mzb1^{+/+}$* and *$Mzb1^{-/-}$* cells in spleen (top) and BM (bottom) of the recipient mice was analyzed. The numbers in each contour plot represent cell frequencies. (B) Ratios (±S.D) between *$Mzb1^{-/-}$* and *$Mzb1^{+/+}$* Pre-PB and PB that migrated to the spleen (top) and BM (bottom). Data represent 2 independent experiments. n=3. $*p<0.05$, $**p<0.01$.