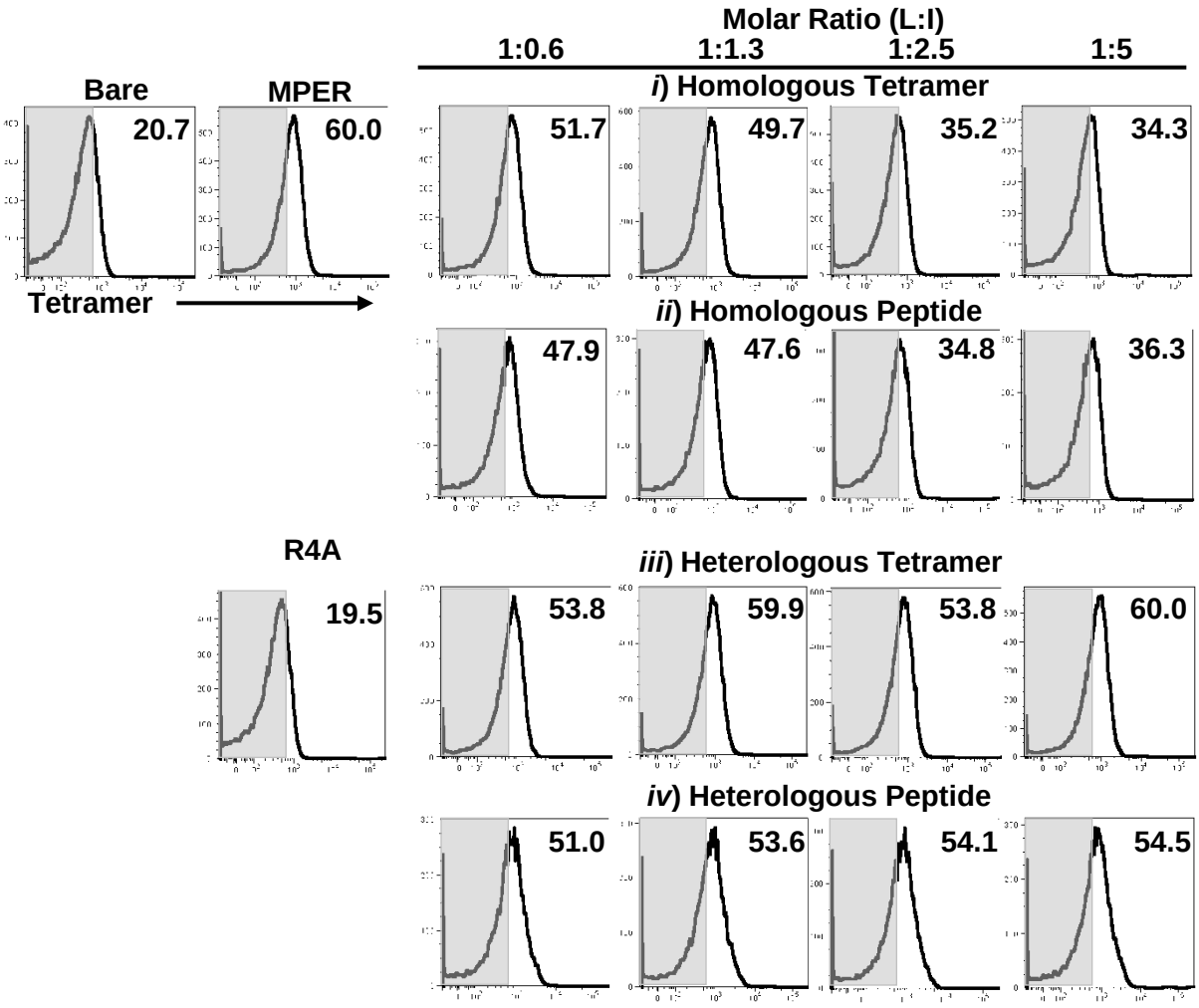

Supplemental Figure 1. Specific labeling of B-cell lines by MPER tetramer. 13H11 cells (1-1.3 x 10^6) were incubated in PBS + 3% FCS alone or buffer containing equivalent molar excess amounts of either *i)* unlabeled MPER-tetramer, *ii)* MPER peptide, *iii)* unlabeled R4A tetramer or *iv)* R4A peptide for 30 min. at 0° C. Unlabeled peptide and tetramer concentrations were established to represent 0.6, 1.3, 2.5 and 5.0 M excess of tetramer-associated peptide epitope. Subsequently, cells were labeled with 125 ng of APC-conjugated MPER-tetramer for 30 min. at 0° C. Independent aliquots of 13H11 cells were labeled with APC-conjugated Empty-tetramer as a negative control for peptide-independent binding. 13H11 cells were subsequently analyzed by flow cytometry and the fraction of tetramer binding cells (inset no.) and the M.F.I. of tetramer$^+$ cells were determined compared to unlabeled controls. Each histogram is representative of at least 3 independent measurements ($n \geqq 3$) compiled over 2 independent experiments. All data was acquired using a BD LSRII cytometer and histograms were created using FlowJo software.

Supplemental Figure 1
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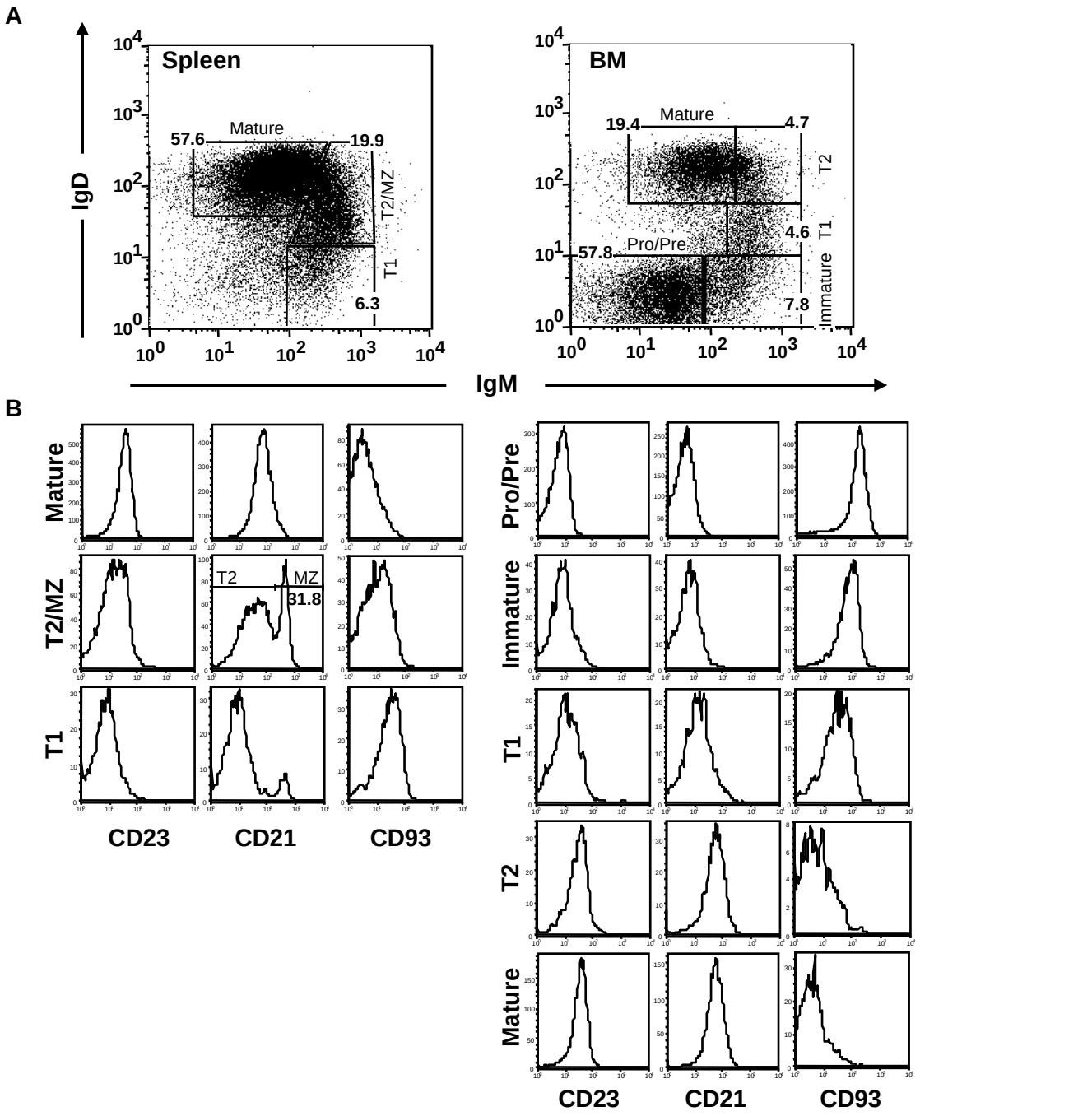

Supplemental Figure 2. Cell surface marker expressions on BM and splenic B cell populations. BM and spleen cells from BL/6 mice were labeled with mAb to B220, IgM, IgD, CD23, CD21 and CD93. Flow diagrams in panel A were pre-gated on live, single $B220^{+}$ cells. Specific B cell compartments in the BM and/or spleen were defined as: pro/pre B cells ($B220^{lo}IgM^{-}IgD^{-}$ $CD21^{-}CD23^{-}CD93^{hi}$); immature B cells ($B220^{lo}IgM^{+}IgD^{-}CD21^{-}CD23^{-}CD93^{hi}$) ; T1 B cells ($B220^{lo}IgM^{hi}IgD^{lo}CD21^{-}CD23^{lo}CD93^{hi}$) ; T2 B cells ($B220^{hi}IgM^{hi}IgD^{hi}CD21^{lo}CD23^{hi}CD93^{int}$) ; MZ B cells ($B220^{hi}IgM^{hi}IgD^{lo}CD21^{hi}CD23^{lo}CD93^{-}$), and mature B cells ($B220^{hi}IgM^{lo}IgD^{hi}$ $CD21^{lo}CD23^{hi}CD93^{-}$). When B cell tetramers were used to identify Ag-specific B cells, CD93 was replaced by tetramers, and only B220, IgM, IgD, CD21, and CD23 were used to characterize B cell development. Data were acquired using a BD LSRII flow cytometer and analyzed using FlowJo software.

Supplemental Figure 2
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