

cells/spleen (G), and T_{REG} cells/spleen (H) in all mice. P values for linear regression analyses are shown within each graph.

Figure 8. PR deficiency alters splenic APC activation and *ifng* and *esr1* mRNA expression in aged *Nba2* mice. **A**, CD86 expression on splenic APC subsets from female (black) and male (grey) PR^{-/-} mice relative to PR^{+/+} controls assessed on the same day. Shown are means ± standard error, n = 3 per group. *, *p* < 0.05 one sample t test. **B**, IFN-γ (*ifng*), T-bet (*tbx21*) and ER-α (*esr1*) gene mRNA levels in freshly frozen splenic leukocytes from 10 mo.-old mice. Shown are means (lines) and individual values (symbols). *, *p* < 0.05 unpaired t test.

Supplementary Figure 1. Glomerular histology. Shown are representative images of Mac-2⁺ macrophages within glomeruli (black arrows), and glomerular structural damage as revealed by Jones stain, both 40x. Non-specific staining of renal tubule cells by anti-Mac-2 Ab indicated by white arrows.

Supplementary Figure 2. PR protein expression in kidneys from 10 mo.-old female *Nba2*.PR^{+/+} mice and uterus control tissues. Binding of rabbit anti-PR polyclonal IgG to sections of freshly frozen uterus from B6 mice (positive control tissue) (**A - C**) and B6.PR^{-/-} mice (negative control tissue) (**D**) visualized with either fluorescein-conjugated goat-anti-rabbit IgG (green) (**A**) or biotin-conjugated goat anti-rabbit IgG followed by streptavidin-conjugated to Alexa Fluor® 555 (red) (**B - F**). **E** and **F** are representative images of PR staining in sections from 10 mo.-old *Nba2*.PR^{+/+} mice showing high glomerular inflammation scores. *, glomerulus; #, renal tubule. All sections were counterstained with DAPI (blue) to label nuclei. Insets show rabbit IgG isotype control staining.

Supplementary Figure 3. Effects of PR deficiency on spleen mass and proportions of major splenic leukocyte subsets in 10 mo.-old *Nba2* mice. Shown are means (lines) and individual values (symbols) for splenic mass (**A**) and various subsets as a percentage of total splenic leukocytes: B cells

(B220^{hi}CD11c^{lo}mPDCA1⁻) (**B**), CD4⁺ T cells (CD3⁺CD4⁺) (**C**), mDCs (B220⁻CD11c^{hi}mPDCA1⁻) (**D**), pDCs (B220⁺CD11c^{lo}mPDCA1⁺) (**E**), and macrophages (F4/80^{hi}) (**F**). *, p < 0.05; **, p < 0.01, unpaired t test.

Supplementary Figure 4. PR deficiency increases the proportions of splenic T_{FH} cells in 10 mo.-old female *Nba2* mice but decreases this variable in age-matched male *Nba2* mice. (**A – F**) Shown are means (lines) and individual values (symbols) for various subsets as expressed as percentages of splenic CD4⁺ T cells or their T_{FH} and non-T_{FH} subsets (as indicated by arrows): T_{FH} cells (A), T_{FREG} cells (B), T_{FH1} cells (C), non-T_{FH} CD4⁺ T cells (D), T_{REG} cells (E) and T_{H1} cells (F). *, p < 0.05, **, p < 0.01, unpaired t test.

Supplementary Figure 5. Relationships between serum autoAb levels and T_{FH}/non-T_{FH} CD4⁺ T cell or T_{FH}/B cell ratios in spleens of 10 mo.-old *Nba2* mice. Shown are linear regression analyses of serum autoAb levels at 10 mo. (A and B) or serum AUC autoAb levels at 8 mo. (C and D) vs. T_{FH}/non-T_{FH} CD4⁺ T cell ratios (A and C) or T_{FH}/B cell ratios (B and D) for all animals. P values for linear regression analyses are shown within each graph.

Supplementary Figure 6. Effects of PR deficiency on body mass of *Nba2* mice between 4 and 10 mo. age. Shown are means (lines) and individual values (symbols) for body mass at indicates time points. *, p < 0.05, unpaired t test.