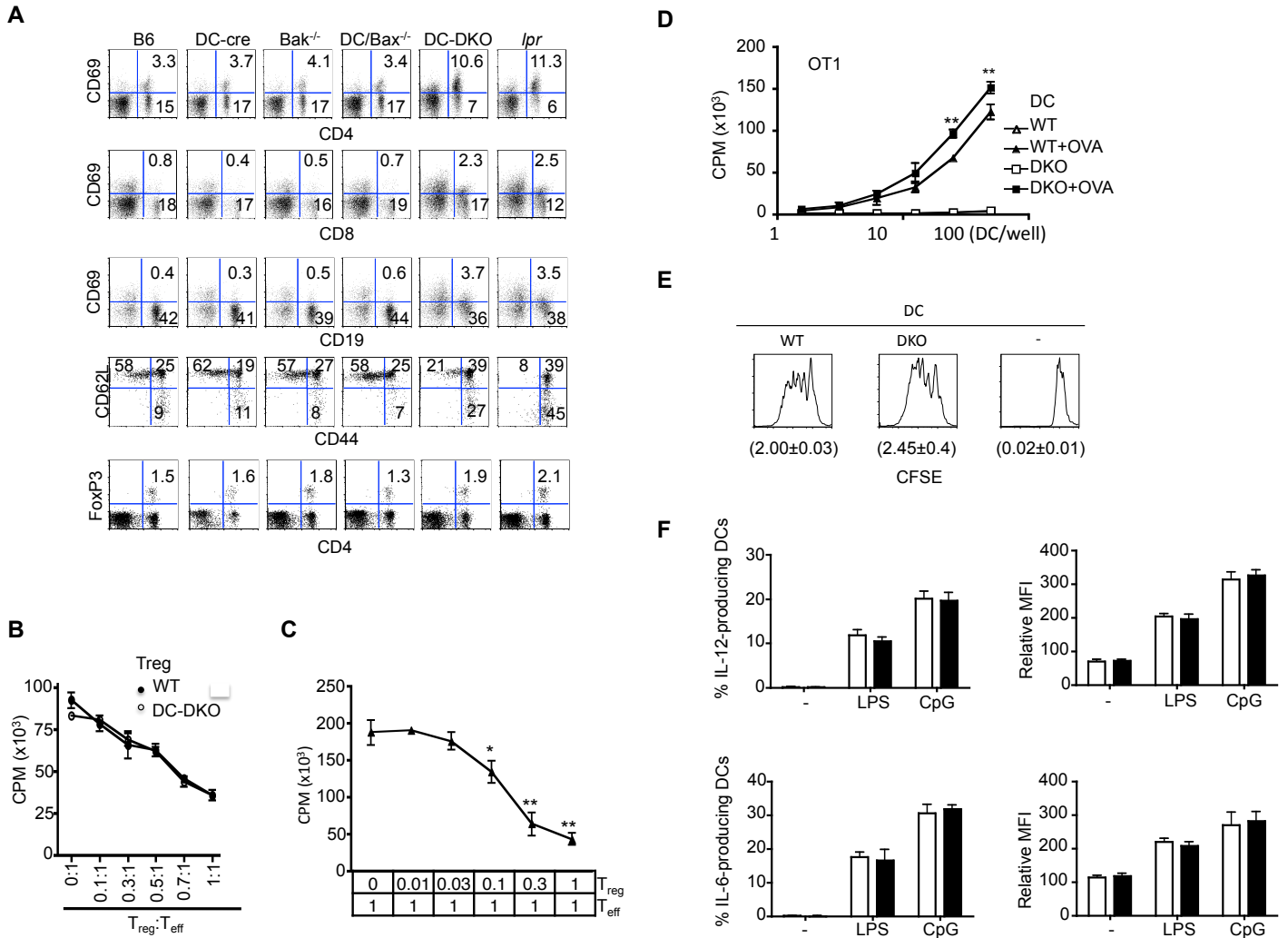
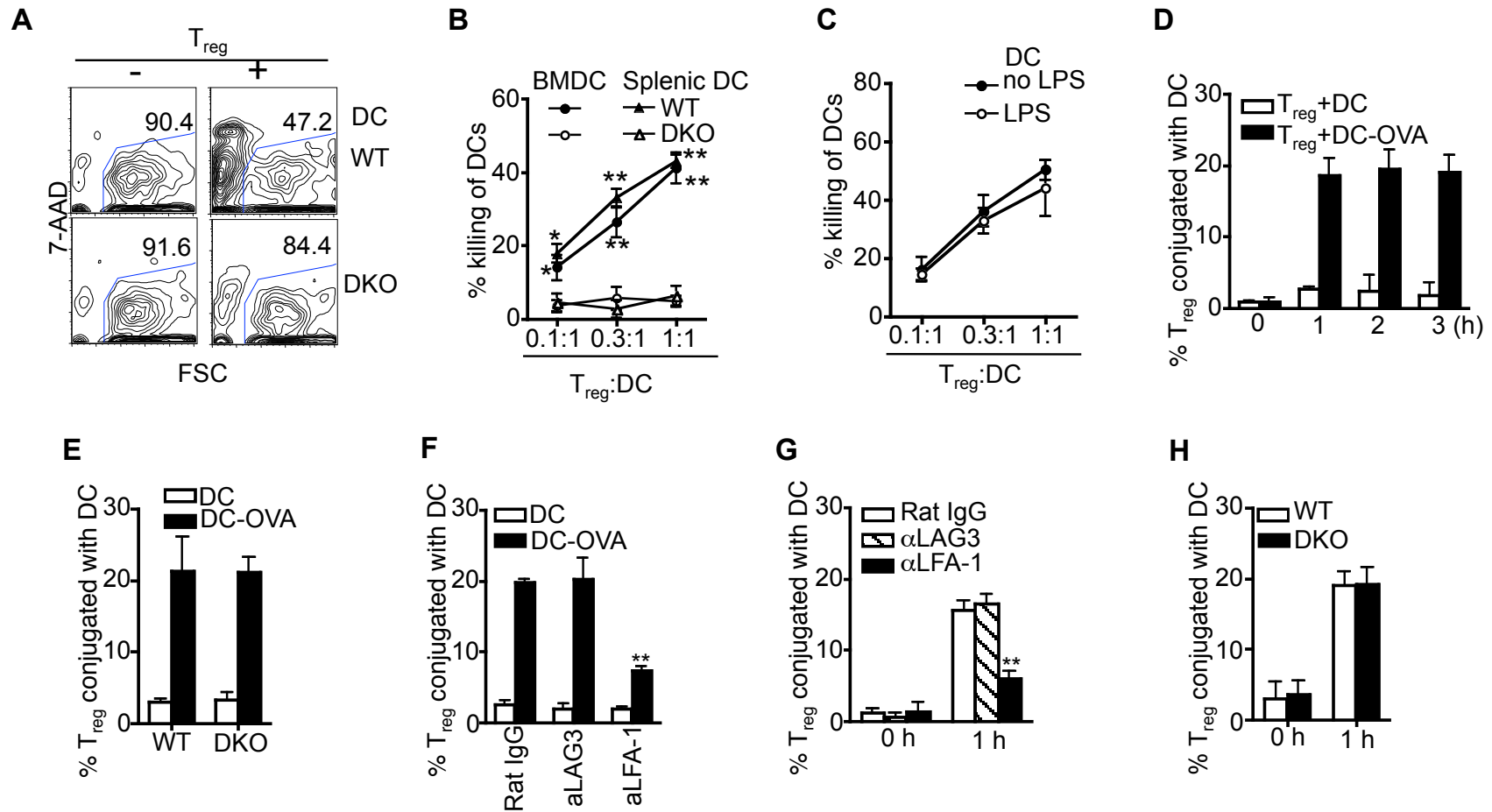


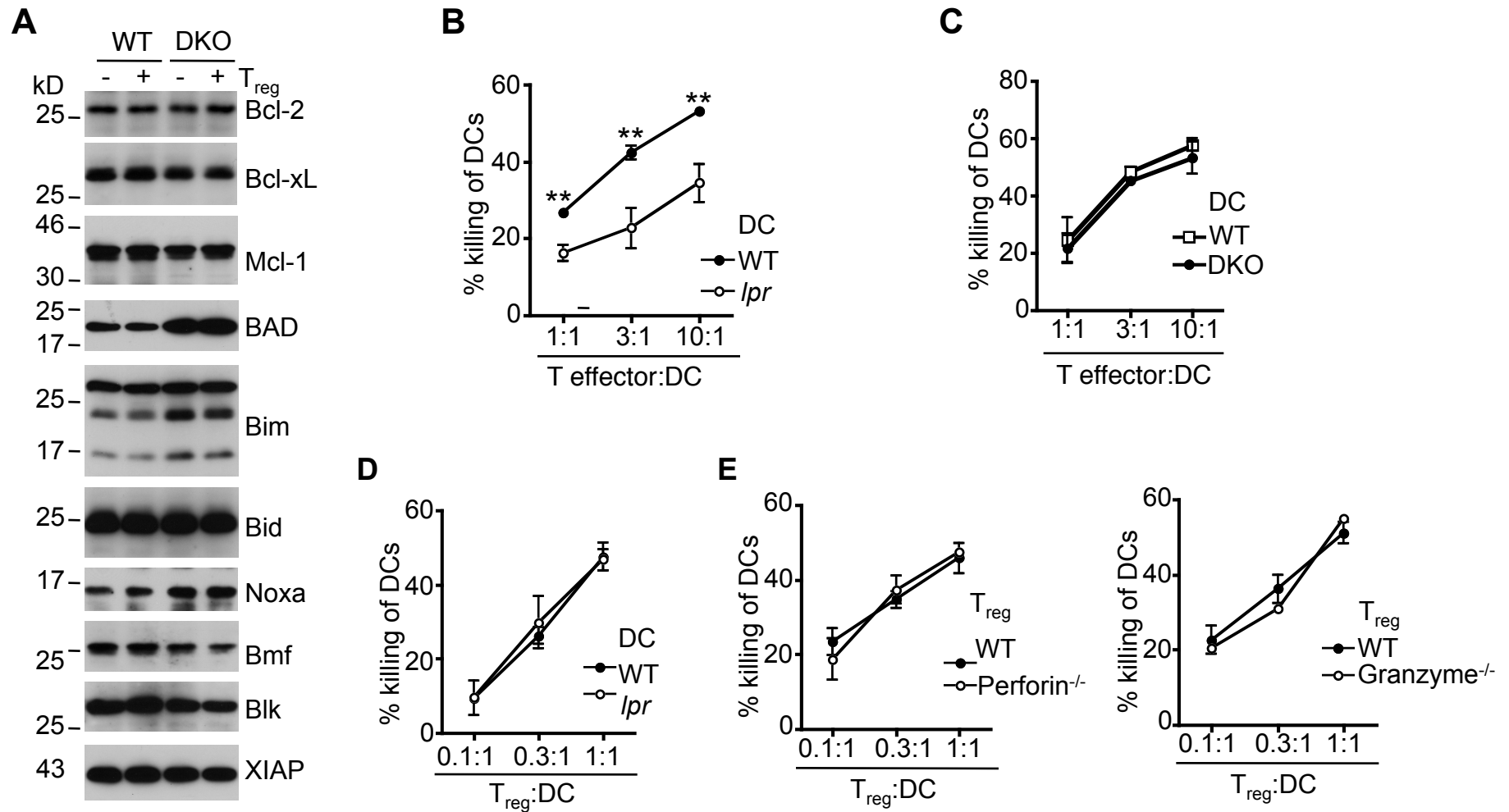
**Supplemental Figure 1. Analyses of DC-DKO mice.** (A) Western blot for Bax and Bak in DCs, T cells in DC-DKO mice or controls. Bax is deleted in DCs, but not in lymphocytes in DC-DKO mice. (B) Enlargement of the spleen and inguinal lymph nodes in six-month-old DC-DKO mice (N=7). (C) Splenocytes from mice labeled with BrdU for 3 or 6 days were stained with antibodies to CD11c and CD11b, followed by intracellular staining with FITC-anti-BrdU. Percentages of BrdU labeling of CD11c<sup>+</sup>CD11b<sup>+</sup> DCs (mean  $\pm$  SD) were determined by flow cytometry (6 mice/group). (D) Splenocytes of WT and DC-DKO mice were stained with APC-anti-CD11c and PE-conjugates anti-TCR $\beta$ , anti-DX5 $\alpha$  or anti-CD19, followed by flow cytometry. The expression of CD11c or GFP under the control of the transgenic CD11c promoter (CD11c-cre-IRES-GFP) versus other cell surface markers was plotted. (E) Expression of surface molecules on DCs in DC-DKO vs WT mice (N=5). CD40, I-A<sup>b</sup>, CD80 CD86 and ICAM-1 on CD11c<sup>+</sup>CD11b<sup>+</sup> DCs (solid lines) were examined by flow cytometry. Dotted lines: isotype control. (F) Immunohistochemistry analyses for T cells (CD3<sup>+</sup>), B cells (B220<sup>+</sup>) and DCs (CD11c<sup>+</sup>) in the spleens of 6-month-old DC-DKO and control mice (N=6). Scale bar: 50  $\mu$ m. (G) Sections of lungs, livers and kidneys of 6-month-old DC-DKO or control mice (N=6) were stained with H&E. Scale bar: 50  $\mu$ m. (H) Kidney sections of 6-month-old DC-DKO or control mice were stained with Alexa Fluor 594-conjugated anti-mouse IgG. Scale bar: 50  $\mu$ m.



**Supplemental Figure 2. Activation of T cells and cytokine production by DCs.** (A) Splenocytes from 6-month-old DC-DKO and control mice were stained with antibodies to different markers and analyzed by flow cytometry. CD69 expression on CD4<sup>+</sup> T cells, CD8<sup>+</sup> T cells and CD19<sup>+</sup> B cells and CD44 and CD62L expression on TCR $\alpha\beta$ <sup>+</sup> T cells were analyzed. Splenocytes were also stained with FITC-anti-CD4, followed by intracellular staining with PE-anti-FoxP3. Data are representative 5 mice per genotype. (B) CD4<sup>+</sup>CD25<sup>high</sup> T<sub>reg</sub> cells from DC-DKO and control mice were incubated with CD4<sup>+</sup>CD25<sup>-</sup> T<sub>eff</sub> cells at different ratios, and cultured in the presence of 0.25  $\mu$ g/ml soluble anti-CD3 and irradiated T-cell-depleted spleen cells. Proliferation was quantified by <sup>3</sup>H-thymidine incorporation 4 days later. (C) CD4<sup>+</sup>FoxP3<sup>+</sup> T<sub>reg</sub> cells expanded *in vitro* were mixed with freshly sorted CD4<sup>+</sup>FoxP3<sup>-</sup> T<sub>eff</sub> cells from GFP-FoxP3 mice at different ratios in the presence of 0.25  $\mu$ g/ml soluble anti-CD3 and irradiated spleen cells depleted of T cells and DCs (5x10<sup>4</sup>/well). Cell proliferation were quantitated 4 days later by <sup>3</sup>H-thymidine incorporation. Statistic comparison to control with no T<sub>reg</sub> cells: \**P*<0.05, \*\**P*<0.01. (D) WT or DKO BMDCs were unpulsed or pulsed with OVA<sub>SINFEKL</sub> peptide. Various numbers of DCs were then incubated with MACS beads purified OVA-specific CD8<sup>+</sup> transgenic OT1 T cells (5x10<sup>4</sup>/well). Cell proliferation was measured by <sup>3</sup>H-thymidine incorporation 3 days later. WT+OVA versus DKO+OVA: \*\**P*<0.01. (E) CFSE-labeled CD8<sup>+</sup> OT1 T cells (5x10<sup>4</sup>/well) were labeled with CFSE and incubated with DCs pulsed with OVA<sub>SINFEKL</sub> peptide (300 DCs/well). Cell proliferation was measured by CFSE dilution 4 days later. Average numbers of cell cycle  $\pm$  SD are shown. WT versus DKO: *P*=0.03. (F) WT or DKO BMDCs were stimulated with LPS or CpG for 24 h, followed by intracellular staining of IL-12 or IL-6. The percentage of IL-12- or IL-6-producing cells and the mean fluorescence staining (MFI) (means  $\pm$  SD) for IL-12 or IL-6 staining were plotted. The statistic difference between WT and DKO: not significant.



**Supplemental Figure 3. T<sub>reg</sub> cells in the killing of and conjugate formation with DCs.** (A) BMDCs were incubated in the absence or presence of Treg cells. An example of forward scattering (FSC) versus 7-AAD staining of DCs was plotted. (B) T<sub>reg</sub> cells in the killing of BMDCs or splenic DCs from wild type or DC-DKO mice. WT versus DKO: \**P*<0.05, \*\**P*<0.01. (C) T<sub>reg</sub> cells in the killing of BMDCs with or without LPS stimulation. (D) OT2 FoxP3<sup>+</sup> Treg cells and DCs labeled with CFSE and CMTMR, respectively, were mixed (1:1) and centrifuged at 500 g for 5 min, followed by incubation at 37 °C for different time. The cells were collected and analyzed by flow cytometry. Percentage of T<sub>reg</sub> cells that formed conjugates with DCs was plotted. Groups with OVA versus no OVA at 1, 2 and 3 h, *P*<0.01. (E) Percentages of OT2 FoxP3<sup>+</sup> Treg cells forming conjugates with OVA-pulsed WT or DKO DCs after 1 h of incubation. (F) OT2 FoxP3<sup>+</sup> T<sub>reg</sub> cells and OVA-pulsed DCs were labeled with CFSE and CMTMR, respectively, and cultured as in (D) in the presence of 10 μg/ml of different antibodies for 1 h. Anti-LFA-1 versus IgG: \*\**P*<0.01. Each group with DC-OVA versus no OVA: *P*<0.01. (G) CD4<sup>+</sup>FoxP3<sup>+</sup> T<sub>reg</sub> cells expanded *in vitro* were mixed with DCs in the presence of rat IgG, anti-LAG3 or anti-LFA-1 for 1 h, followed by quantification of cell conjugates. Anti-LFA-1 versus IgG: \*\**P*<0.01. (H) Percentages of CD4<sup>+</sup>FoxP3<sup>+</sup> T<sub>reg</sub> cells as in (G) forming conjugates with WT or DKO DCs.



**Supplemental Figure 4. T<sub>reg</sub>-mediated cell death in DCs.** (A) Wild type or DKO BMDCs were incubated with or without T<sub>reg</sub> cells (T<sub>reg</sub>:DC at 0.5:1) for 6 h. CD11<sup>+</sup> DCs were isolated using MACS beads and lysed for Western blot. Data are representative of 2 independent experiments. (B, C) CD4<sup>+</sup>FoxP3<sup>-</sup> T effector cells were activated with anti-CD3/anti-CD28 Dynabeads and incubated with wild type or *lpr* (B) or *Bax*<sup>-/-</sup>*Bak*<sup>-/-</sup> (C) BMDCs in the presence of 1 μg/ml anti-CD3 for 4 h. Killing of DCs was measured by flow cytometry. WT versus *lpr*. \*\**P*<0.01. (D) Killing of wild type or *lpr* BMDCs by activated CD4<sup>+</sup>FoxP3<sup>+</sup> T<sub>reg</sub> cells. (E) T<sub>reg</sub>-mediated killing of DCs. WT and PFP<sup>-/-</sup> (left panel) or granzyme A<sup>-/-</sup>/granzyme B<sup>-/-</sup> (right panel) T<sub>reg</sub> cells were incubated with CFSE-labeled DCs at a ratio of 0.1:1, 0.3:1 or 1:1 for 6 h, followed by measurement of killing of DCs.