Supporting Information

Do et al. 10.1073/pnas.1207219109

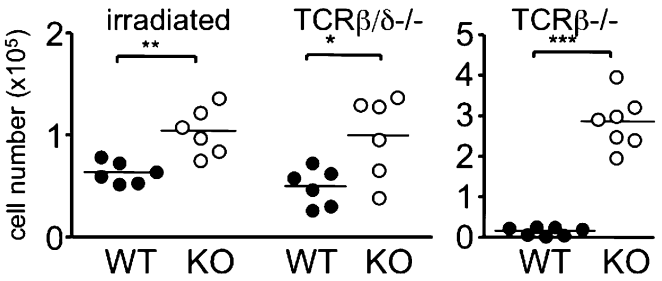

Fig. S1. Naïve CD8 T cells derived from MHC II$^{-/-}$ mice expand greater than WT naïve CD8 T cells. A total of 1×10^6 naive Thy1.1 WT and MHC II$^{-/-}$ CD8 T cells were transferred into indicated lymphopenic recipients. Recipients were killed at 7 d posttransfer. Donor CD8 T-cell numbers in the lymph nodes (LNs) were enumerated by flow analysis. Each symbol represents an individually tested mouse.

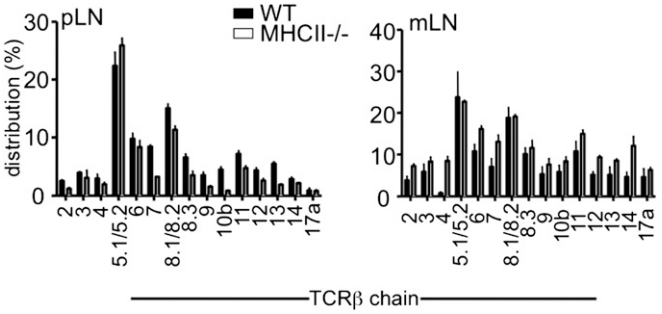

Fig. S2. TCR-Vβ expression of WT and MHC II$^{-/-}$ naïve CD8 T cells after transfer into lymphopenic recipients. A total of 1×10^6 naive Thy1.1 WT and MHC II$^{-/-}$ CD8 T cells were transferred into TCR-β$^{-/-}$ recipients. TCR distribution of the Thy1.1$^+$ donor CD8 T cells in the peripheral LNs and mesenteric LNs were examined at 7 d after transfer. The results shown are representative of three individually tested recipients.

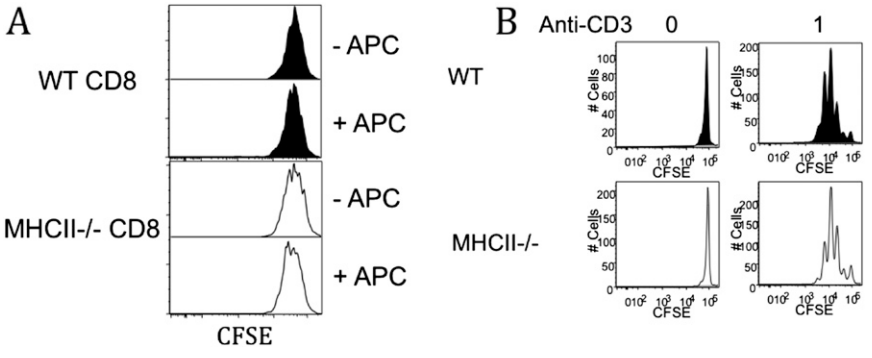

Fig. S3. In vitro proliferation of WT and MHC II$^{-/-}$ CD8 T cells (*A*) WT and MHC II$^{-/-}$ CD8 T cells transferred into TCR-β$^{-/-}$ recipients were FACS-sorted from the recipients at 7 d posttransfer, CFSE-labeled, and cultured with MHC II-expressing splenocytes for 3 d. (*B*) FACS-sorted naïve WT and MHC II$^{-/-}$ CD8 T cells were stimulated with immobilized anti-CD3 and anti-CD28 (0.5 μg/mL) mAbs for 3 d. CFSE profiles were subsequently analyzed by FACS.

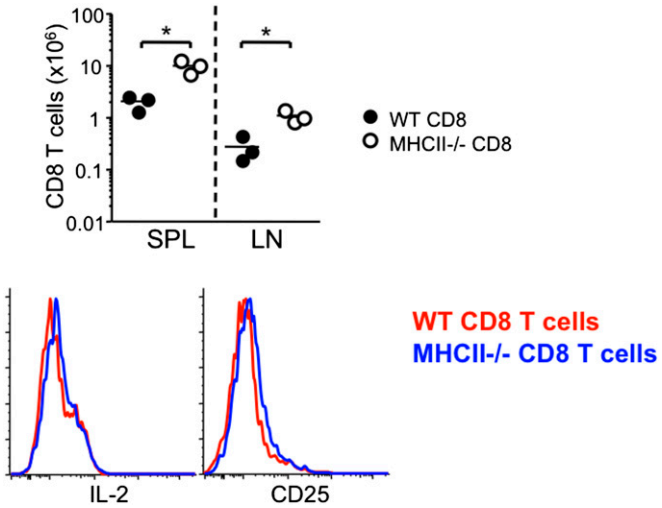

Fig. S4. T-cell responses at 14 d posttransfer. WT and MHC II$^{-/-}$ CD8 T cells transferred into TCR-β$^{-/-}$ recipients were analyzed at 14 d posttransfer. Total cellularity, surface CD25 expression, and intracellular IL-2 expression were examined.

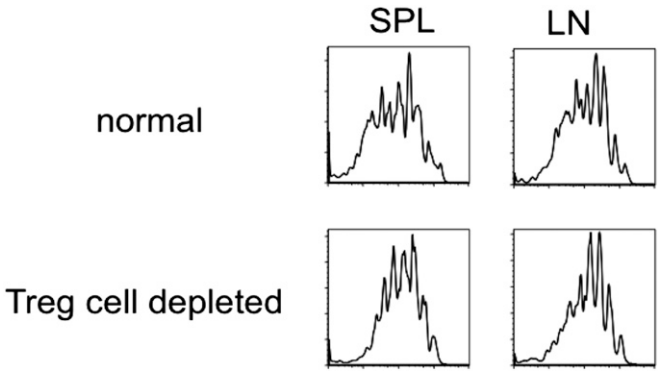

Fig. S5. Regulatory T cells have little role in CD8 T-cell hyperresponses. WT mice were treated with anti-CD25 Abs (250 μg per mouse) every 3 d to deplete CD25^{+} regulatory T cells for 3 wk. Naïve CD8 T cells were then sorted from the Ab-treated mice and transferred into Rag$^{-/-}$ recipients. CFSE profiles of the donor cells in the spleen and LN were examined at 7 d after transfer. The results shown are representative of three individually tested recipients.

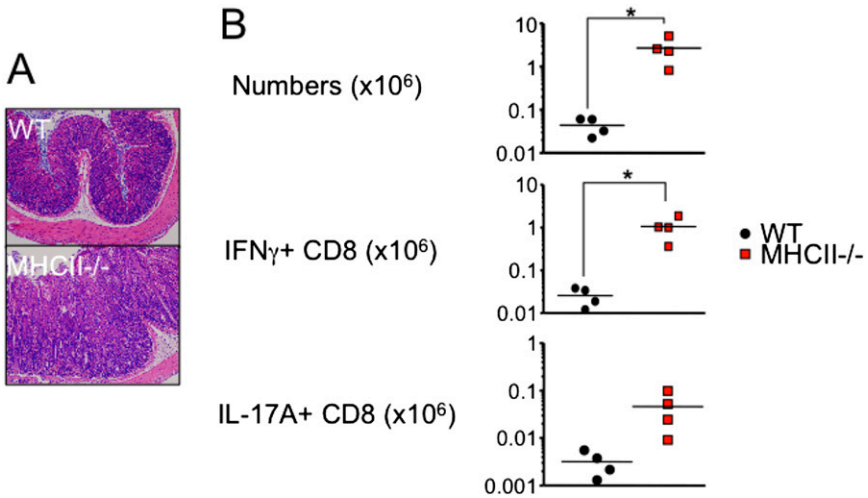

Fig. S6. Severe inflammation in the colon after MHC II$^{-/-}$ CD8 T-cell transfer. (*A*) A total of 1×10^6 naive Thy1.1 WT and MHC II$^{-/-}$ CD8 T cells were transferred into TCR-β$^{-/-}$ recipients. Shown is H&E staining of the colon tissues at 8 wk after transfer. (Original magnification, 10×). (*B*) mLN cells were isolated at 5 wk posttransfer, and cytokine expression was analyzed by intracellular cytokine staining. Total IFN-γ– and IL-17A–producing Thy1.1 CD8 T cells were enumerated. Each symbol represents an individually tested mouse. *$P < 0.05$.

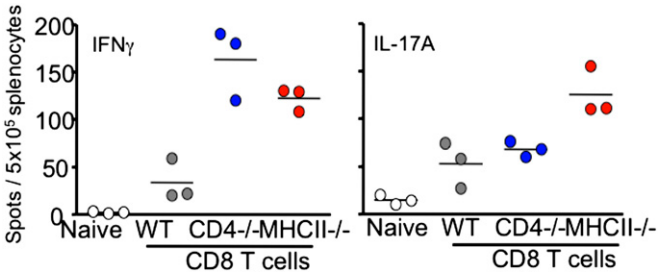

Fig. S7. Cytokine expression of hapten-sensitized CD8 T cells. WT, CD4$^{-/-}$, and MHC II$^{-/-}$ mice were sensitized with dinitrofluorobenzene as described in *Materials and Methods*. Draining LN CD8 T cells were isolated on day 5. Then 1×10^7 cells were transferred into naïve WT mice, and the recipients were subsequently challenged on each side of both ears with dinitrofluorobenzene. After 16 h, splenocytes were stimulated with hapten-pulsed syngenic T-cell–depleted splenocytes for enzyme-linked immunosorbent spot analysis. Each symbol represents an individually tested mouse.

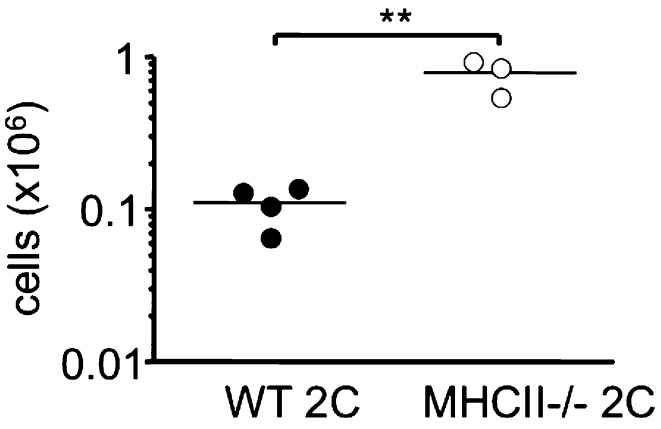

Fig. S8. Proliferative responses of MHC II$^{-/-}$ 2C TCR Tg cells. WT of MHC II$^{-/-}$ 2C TCR Tg naïve CD8 T cells were FACS-sorted and transferred into Rag$^{-/-}$ recipients. Donor T-cell recovery was examined at 7 d posttransfer. Data shown represent individually tested recipients (LNs).

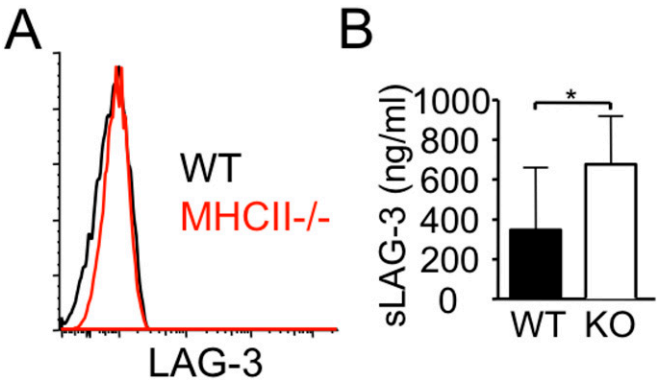

Fig. S9. LAG-3 expression in MHC II$^{-/-}$ CD8 T cells. (*A*) Naïve WT and MHC II$^{-/-}$ CD8 T cells were stained for surface expression of LAG-3. (*B*) Soluble LAG-3 was examined at 7 d after transfer into Rag$^{-/-}$ recipients by ELISA. *$P < 0.05$.