Supporting Information

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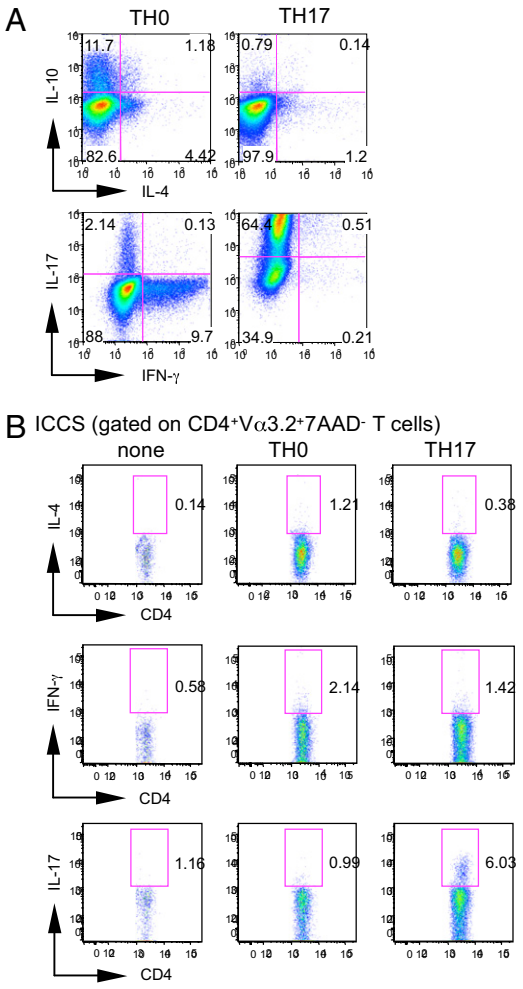

Fig. S1. (*A*) $CD4^+$ T cells were stimulated with anti-CD3 (2.5 μg/mL) and IL-6 (25 ng/mL) plus TGF-β (2.5 ng/mL) for T helper type 17 (TH17) cells or no cytokines for the TH0 condition in the presence of irradiated CD4-depleted antigen-presenting cells. On day 3, cells were stimulated with phorbol 12-myristate 13-acetate (PMA) (50 ng/mL) and ionomycin (1 μg/mL) in the presence of monensin (1 μl/mL), and cytokine production was analyzed by intracellular cytokine staining for IL-4 and IL-10 or IFN-γ and IL-17. The gate was set on $CD4^+$ T cells. (*B*) WT B6 mice were immunized with 50 μg recombinant myelin oligodendrocyte glycoprotein emulsified in incomplete Freund's adjuvant s.c. in both flanks and received at the same time 5×10^6 differentiated 2D2 T-cell receptor transgenic TH0 or TH17 cells i.v. Lymph node cells were purified 7 d after transfer/immunization and stimulated for 4.5 h with PMA (50 ng/mL) and ionomycin (1 μg/mL) in the presence of monensin (1 μL/mL). Subsequently, cytokine production was determined by intracellular staining for IL-4, IFN-γ, and IL-17. Gate was set on $V\alpha3.2^+CD4^+7AAD^-$ T cells.

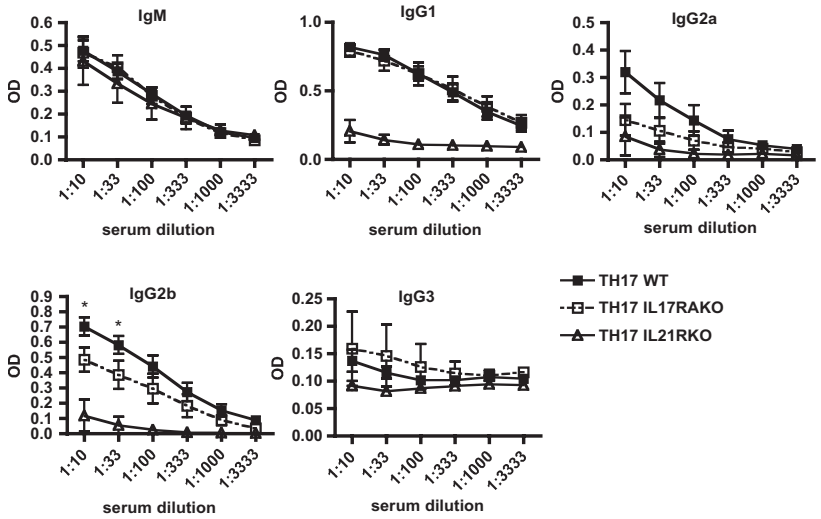

Fig. S2. Transferred T helper type 17 (TH17) cells help B cells to class switch in vivo. $CD4^+$ T cells from 2D2 myelin oligodendrocyte glycoprotein $(MOG)_{35-55}$-specific T-cell receptor transgenic mice were differentiated into TH17 cells. On day 4 of differentiation, 5×10^6 T cells were transferred i.v. into WT, IL-17RA KO, or IL-21R KO B6 mice. At the same time mice were immunized with 50 μg recombinant MOG emulsified in incomplete Freund's adjuvant s.c. in both flanks. Serum was obtained on day 7 after transfer/immunization, and MOG-specific antibody response and isotype switch was determined. Serum was applied in serial dilutions starting at 1:10. Each group represents three to five mice, and graphs show mean OD (at 450 nm) ± SEM. *$P < 0.05$, TH17 WT vs. TH17 IL-17RA KO.

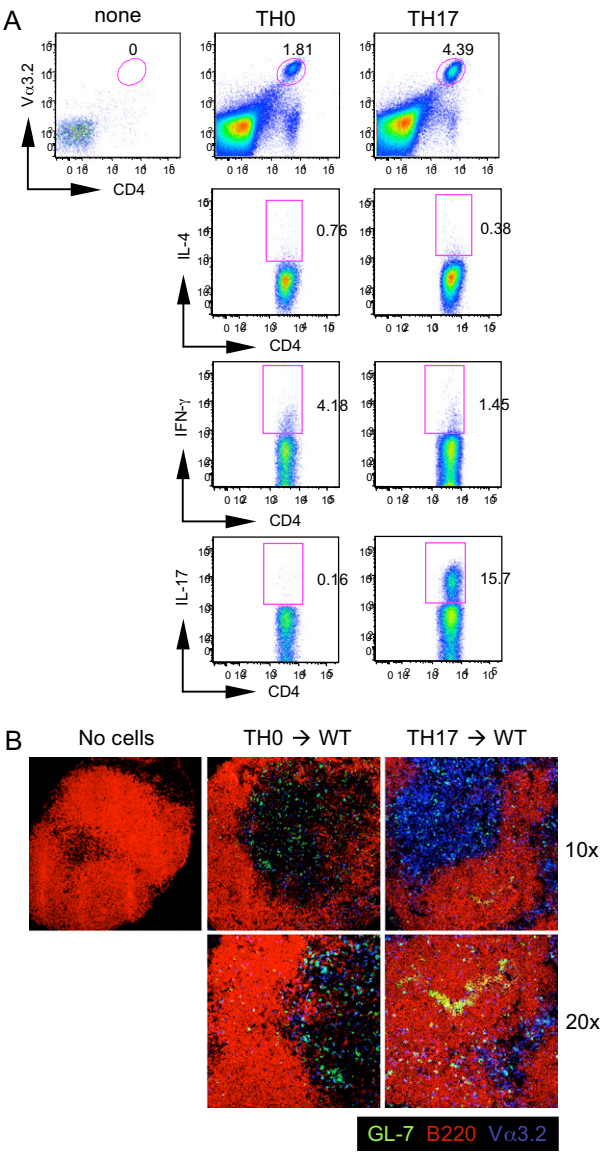

Fig. S3. T-cell receptor (TCR)α KO B6 mice were immunized with 50 μg recombinant myelin oligodendrocyte glycoprotein (MOG) emulsified in incomplete Freund's adjuvant s.c. in both flanks and received at the same time 5×10^6 differentiated 2D2 TCR transgenic TH0 or TH17 cells intravenously. (*A*) On day 7, single-cell suspension of the draining lymph nodes was prepared, and cells were stimulated with phorbol 12-myristate 13-acetate (50 ng/mL) and ionomycin (1 μg/mL) plus monensin (1 μL/mL). Top row shows percentage of $V\alpha3.2^+CD4^+$ T cells in TH0 and TH17 recipient mice or control mice that did not receive any T cells. Lower rows shows cytokine production (IL-4, IFN-γ, and IL-17) of $V\alpha3.2^+CD4^+$ T cells in TH0 and TH17 recipients. (*B*) On day 7, formation of germinal centers was analyzed by staining of lymph node sections for GL-7-FITC and B220-PE. Transferred T cells were detected with a Vα3.2 antibody. Lymph node sections were analyzed with a ×10 objective (*Upper*) and ×20 objective (*Lower*).