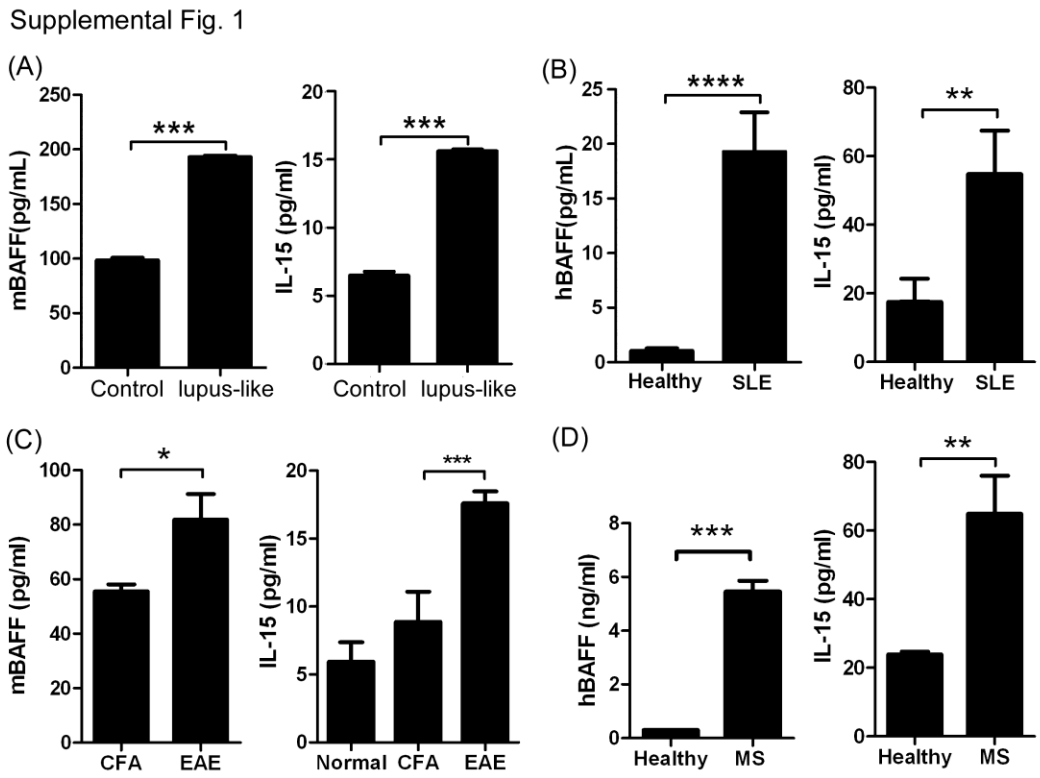
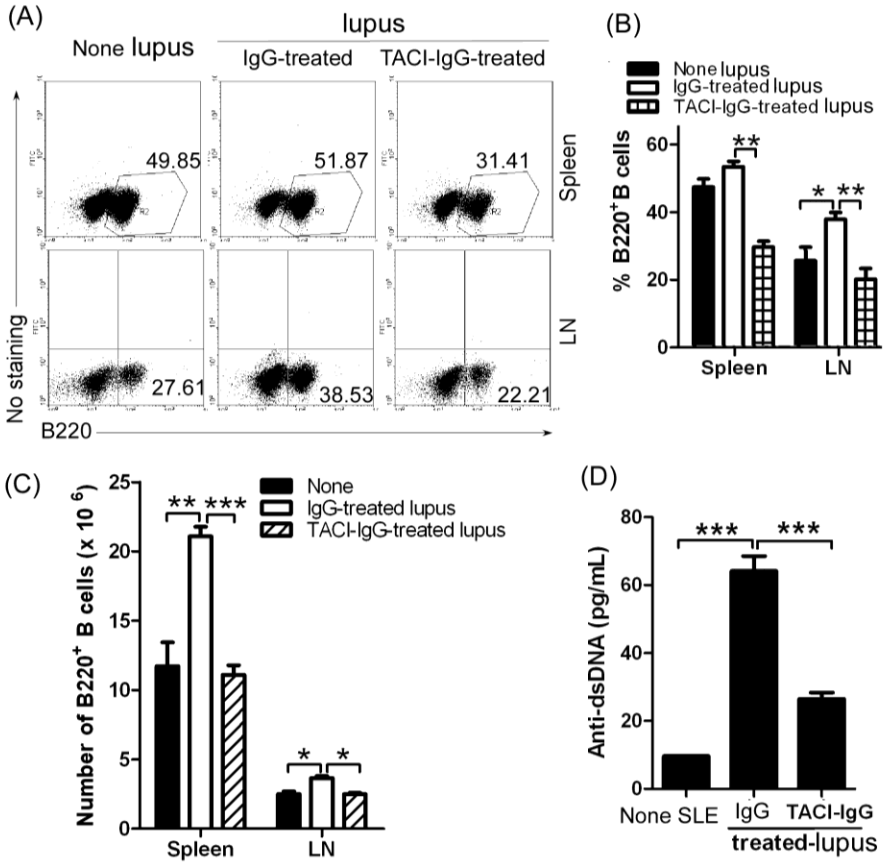
Supplemental Data



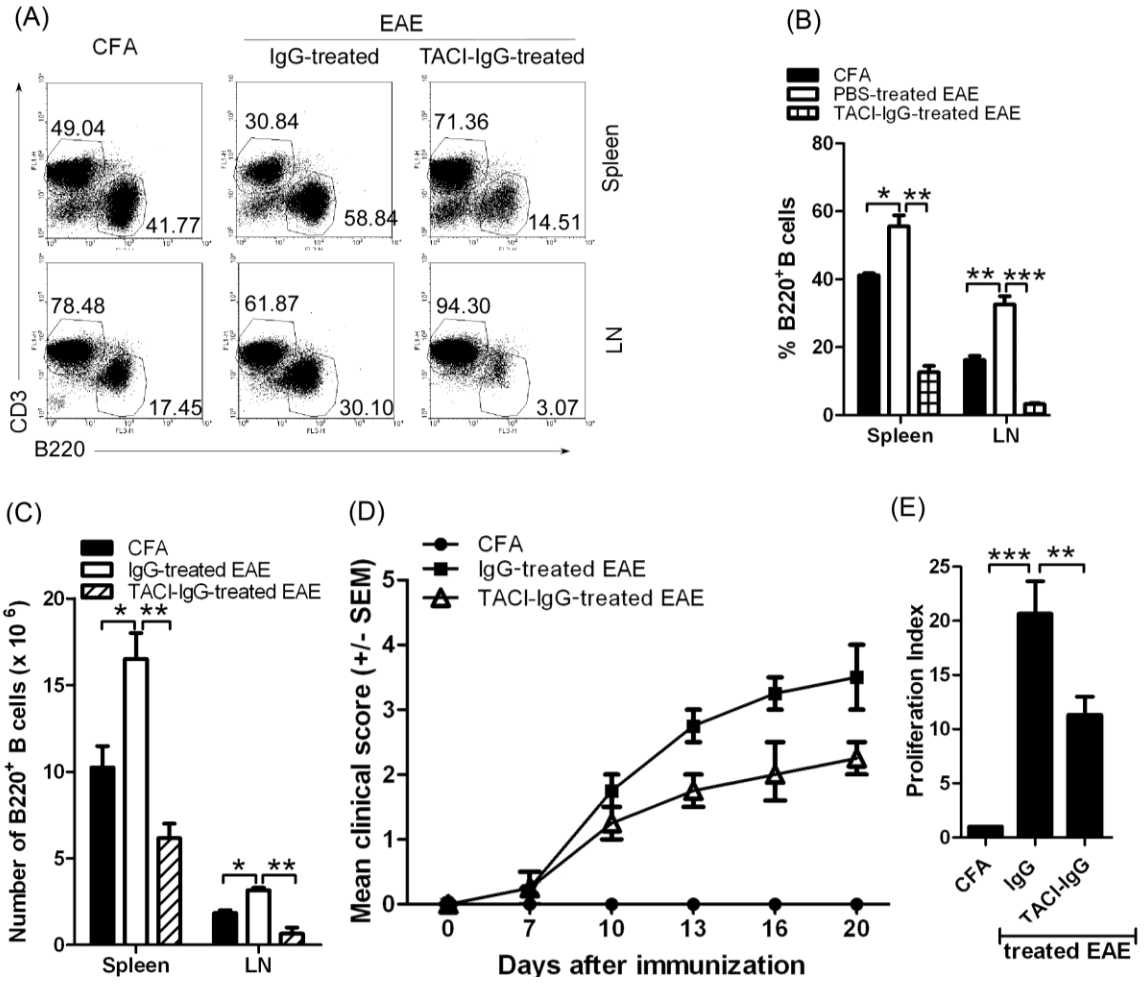
Supplemental Fig. 1. BAFF and IL-15 level increased in autoimmune diseases. Serum were collected from 12 control or 24 lupus-like (NZB/W F1) mice (A), 6 healthy donors or 10 SLE patients (B), 12 CFA or 24 EAE mice (C), and 10 healthy donors or 10 MS patients (D). BAFF and IL-15 level in the serum was determined by ELISA. The data represents at least four independent experiments (**P*<0.05; ***P*<0.01; ****P*<0.001; *****P*<0.0001).

Supplemental Fig. 2



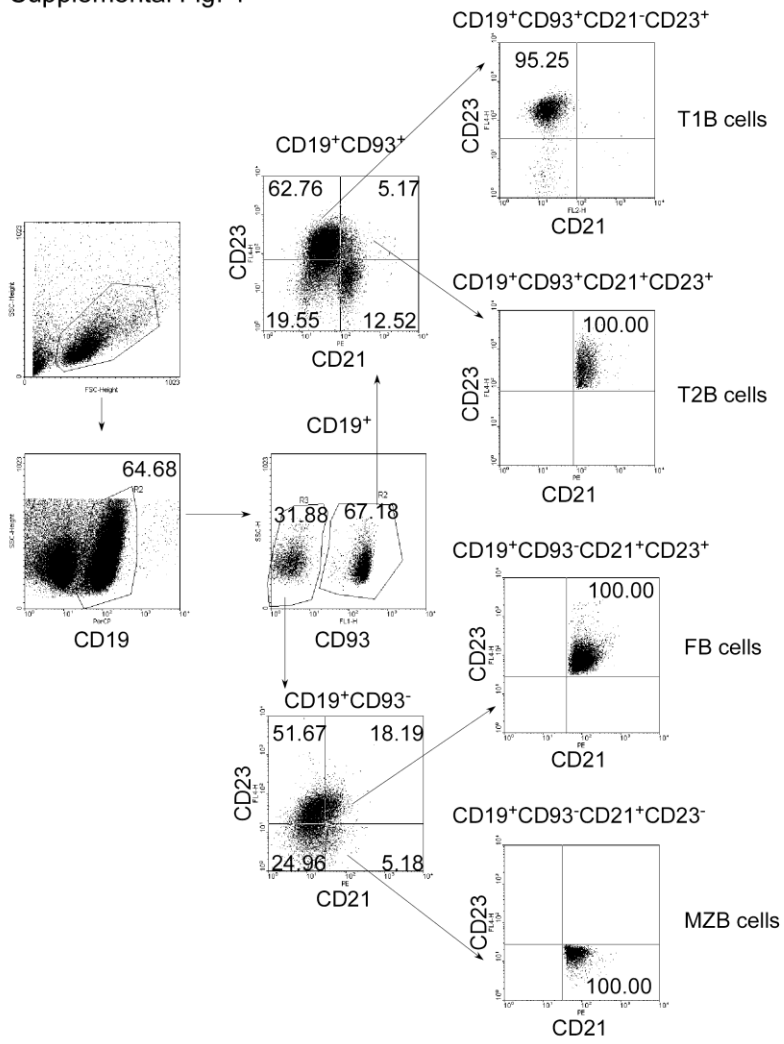
Supplemental Fig. 2. TACI-IgG was efficient in treating lupus-like mice. (A-C) TACI-IgG reduced B-cell number in lupus-like mice. Twelve lupus-like mice per group were i.p. injected with 5 mg/kg IgG or TACI-IgG at 1, 2, 3, 4 weeks (two times per week) after mice age got 6 months. On day 4-6 after therapy, mice were killed. Lymphocytes were collected from spleen and LN, and stained with anti-B220. The percentage of $B220^+$ cells, statistical results for the percentage of $B220^+$ cells and the absolute number of $B220^+$ cells were shown in (A), (B) and (C), respectively. The data represents at least four independent experiments (*P<0.05; **P<0.01; ***P<0.001). (D) **TACI-IgG reduced anti-ds DNA antibody in lupus-like mice.** Autoantibody anti-dsDNA antibody level in the serum was determined by ELISA. The data represents at least three independent experiments (***P<0.001).

Supplemental Fig. 3



Supplemental Fig. 3. TACI-IgG was efficient in treating EAE mice. (A-C) TACI-IgG treatment reduced B-cell number in EAE mice. EAE were induced in 9 weeks of age C57Bl/6 mice by MOG35–55 peptide. Twelve EAE mice per group were i.v injected with 2 mg/kg IgG or TACI-IgG on day 4, 8, 12, 16 (one time per day) after EAE was induced. On day 21, mice were killed and lymphocytes were collected from spleen and LN and analyzed by FACS. The percentage of $B220^+$ cells, statistical results for the percentage of $B220^+$ cells and the absolute number of $B220^+$ cells were shown in (A), (B) and (C), respectively. The data represents at least six independent experiments (*P<0.05; **P<0.01; ***P < 0.001). **(D) TACI-IgG effectively suppressed EAE development.** Animals were weighed, monitored and clinically assessed according to Materials and Methods. TACI-IgG-treatment significantly reduced EAE development, compared with IgG-treated group (p<0.05). **(E) TACI-IgG effectively reduced response to autoantigen MOG35-55 in EAE mice.** Lymphocytes were stimulated with MOG35-55. 48 hours later, the cultures were pulsed with ^{3}H-thymidine (0.5 μCi) and data are mean CPM ± S.E. of responses of 5 replicate cultures. The results were expressed as the stimulation index (**P<0.01; ***P < 0.001).

Supplemental Fig. 4



Supplemental Fig. 4. Transitional 1 stage B (T1B), Transitional 2 stage B (T2B) cells, follicular B (FB) cells and marginal zone B (MZB) cells were sorted by flow cytometry. Splenic B cells were collected and stained with anti-CD19 or anti-CD93, anti-CD21, anti-CD23. For analysis of transitional B cells, multicolor flow cytometry was performed by gating on $CD19^+CD93^+$B cells that were either $CD21^-/CD23^+$ (T1B cells) or $CD21^+CD23^+$ (T2B cells). For analysis of mature B cells, multicolor flow cytometry was performed by gating on $CD19^+CD93^-$B cells that were either $CD21^+/CD23^+$ (Follicular B cells, FB cells) or $CD21^+CD23^-$ (Marginal zone B cells, MZB cells). All flow cytometry data were acquired with FACSCanto or FACSCantoII or FACSAria, gated on live lymphocyte-sized cells on the basis of forward and side scatter, and analyzed using FlowJo software.