

Supplementary Figure 1. Expression of selected genes in the spleen. Expression of different genes in the spleens of the mice treated with Ad-IFN $\alpha$  alone and harvested at weekly intervals (n = 5-8 per group) or together with 5 weeks of TACI-Ig (n = 3) or CTLA4Ig (n = 5). Mice treated with the same dose of Ad-LacZ (n=4) were used as controls. Bars represent fold expression normalized against the mean expression in 17 week old naïve mice (n=5), mean + 1SD shown. p values are compared with naïve controls except for the mice treated with TACI-Ig or CTLA4Ig, which are compared with 6wk Ad-IFN $\alpha$  treated mice. \*: p < 0.05, ‡: p < 0.02, †: p < 0.01. Groups with significantly higher gene expression compared to the naïve controls also show significantly higher expression compared with the Ad-LacZ controls.

Supplementary Figure 2. Effects of treatments at Day 21 on the survival and proteinuria of Ad-IFN $\alpha$  treated NZB/W F1 mice. Proteinuria onset (A) and survival (B) of different groups of mice. Treatments were started 21 days after Ad-IFN $\alpha$  injection. p = 0.0444 (survival), low dose CTLA4Ig treated mice; p = 0.0216 (proteinuria) and p = 0.0199 (survival), cyclophosphamide treated mice; p = 0.0008 (proteinuria and survival), CTLA4Ig/cyclophosphamide treated mice. p values are compared with Ad-IFN $\alpha$  only controls and only significant p values are shown. Data are pooled from five experiments with total of 10-38 mice per group.

Supplementary Figure 3. Effects of treatments on the expression of selected genes in the kidney. Expression of different genes in the kidneys of the mice treated with Ad-IFN $\alpha$  alone (n = 8) or together with 5 weeks of TACI-Ig (n = 3) or 23 weeks of high dose CTLA4Ig (n = 8). Bars represent fold expression, mean + 1SD shown. p values are compared with Ad-IFN $\alpha$  treated controls. Ad-IFN $\alpha$  treated controls show significantly higher expression of all these genes in the kidneys compared to 17 week old naïve controls (n = 11). \*: p < 0.05, \*\*: p < 0.02, †: p < 0.01 for genes significantly downregulated compared with IFN $\alpha$  treated controls.