Supplemental Figures and Figure legends:

Sup Fig. 1. Presence of mixed chimerism 15 days post HCT

TBI-conditioned BALB/c recipients were transplanted with $50x10^6$ DBA/2 splenocytes. Three, seven, or fifteen days after HCT, splenocytes from the recipients were stained for CD4, TCRβ, and donor T cell marker CD5.1. Gated $CD4^+TCR\beta^+$ cells are shown as CD4 versus CD5.1. One representative of three replicate experiments is shown.

Sup Fig. 2. Converted Treg cells comprised a similarly small percentage of Treg cells in both WT and $B7H1^{-/-}$ recipients.

TBI-conditioned BALB/c recipients were transplanted with GFP-depleted splenocytes ($50x10^6$) from Foxp3gfp/KI DBA/2 mice. Seven days after HCT, mononuclear cells from the spleen and liver of the recipients were stained for CD4 and donor T cell marker CD5.1. Gated $CD4^+CD5.1^+$ cells are shown as CD4 versus GFP. One representative of three replicate experiments is shown.

Sup Fig. 3. Regulation of donor Treg cell expansion by IFN-γ is dependent on host tissue expression of B7H1.

TBI-conditioned $B7H1^{-/-}$ recipients were transplanted with splenocytes ($50x10^6$) from Foxp3gfp/KI DBA/2 mice and then treated with anti-IFN-γ as described in Fig.1. Eight days after HCT, mononuclear cells from the spleen and liver of the recipients were stained for CD4 and TCRβ. Gated $CD4^+TCR\beta^+$ cells are shown as CD4 versus GFP-Foxp3. One representative of three replicated experiments is shown.

Sup Fig. 4. Treg cells from $B7H1^{+/+}$ or $B7H1^{-/-}$ recipient had no difference in *in vitro* suppression capacity or expression of IL-35 mRNA.

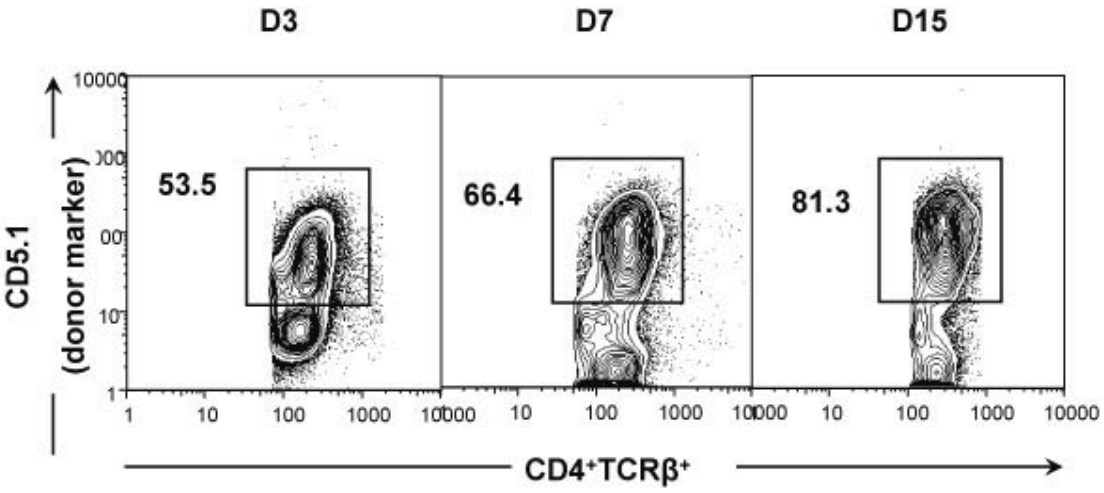
TBI-conditioned B7H1$^{+/+}$ or B7H1$^{-/-}$ BALB/c recipients were transplanted with splenocytes (50x10^6) from Foxp3gfp/KI DBA/2 donors. Eight days after HCT, Foxp3-GFP$^+$ Treg cells from recipient spleen were sorted by flow cytometry for *in vitro* suppression assay and real-time PCR of Ebi3 and IL-12α mRNA. **(A)** Graded numbers of sorted Treg cells were added into a MLR culture of irradiated host-type CD11c$^+$ DCs stimulator (0.1 x10^6) and donor-type CD4$^+$ T cell responder (0.2 x10^6). 7 days later, ^{3}H-TDR incorporation was measured. Mean (± SE) of triplicate cultures of one representative experiment is shown for two replicate experiments. **(B)** RNA of sorted donor-type Foxp3-GFP$^+$ Tregs from B7H1$^{+/+}$ or B7H1$^{-/-}$ recipients was extracted. Quantitative real-time PCR analysis was performed for expression levels of Ebi3 and IL-12α relative to HPRT. Naïve donor CD4$^+$ T cells were used as an additional control. Mean (±SE) of four individual samples from each group is shown.

Sup Fig. 5. Donor Treg cells from B7H1$^{-/-}$ recipients expressed reduced Bcl-xl as compared with WT control.

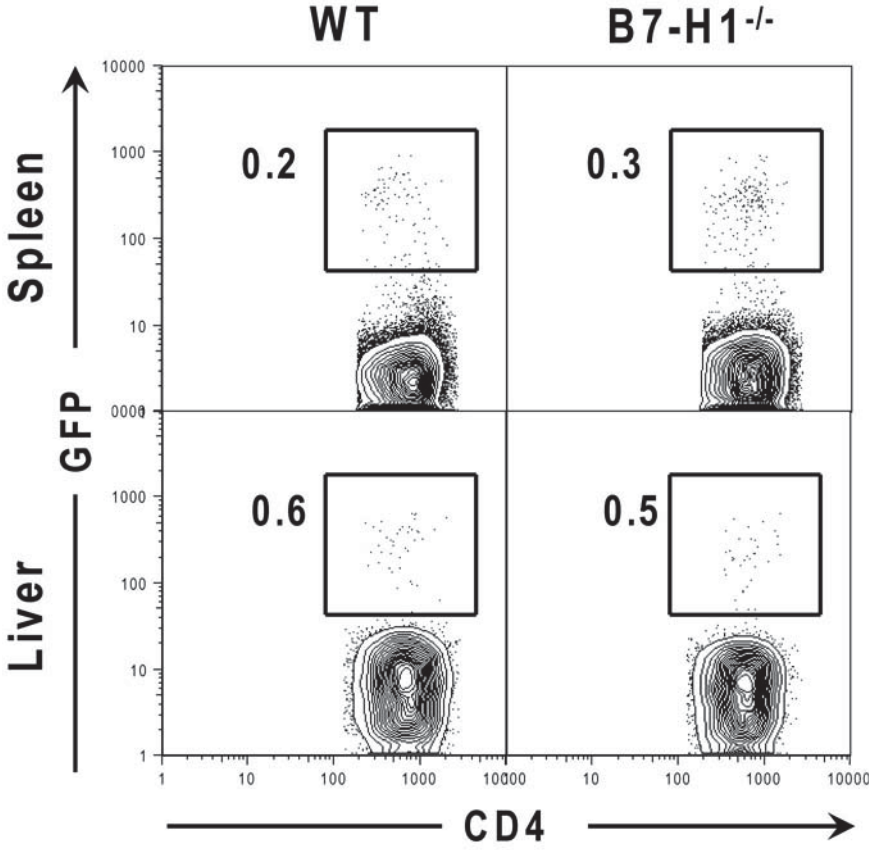
TBI-conditioned WT or B7H1$^{-/-}$ BALB/c recipients were transplanted with whole splenocytes (50x10^6) from Foxp3gfp/KI DBA/2 mice. Eight days after HCT, GFP$^+$CD4$^+$ Treg cells from pooled spleen cells from four recipients were sorted and Bcl-xl expression in Treg cells from WT or B7H1$^{-/-}$ recipients were compared by real-time RT-PCR. One representative of two replicate experiments is shown.

Sup Fig. 6. There were high serum levels of IL-6 in recipients given DBA/2 donor spleen cells.

TBI-conditioned BALB/c recipients were transplanted with DBA/2 splenocytes (50x10^6). Five days after HCT, serum levels of IL-6 of recipients and control BALB/c were measured. Mean (±SE) of 4mice/group is shown.



Sup Fig. 1



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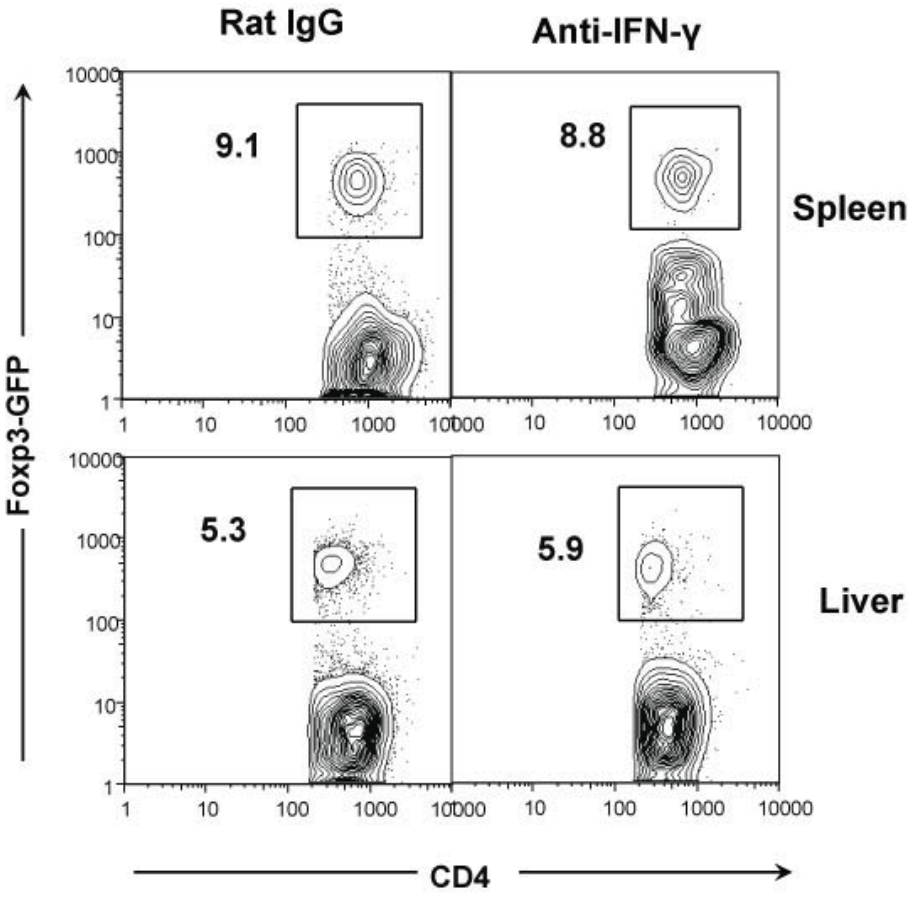

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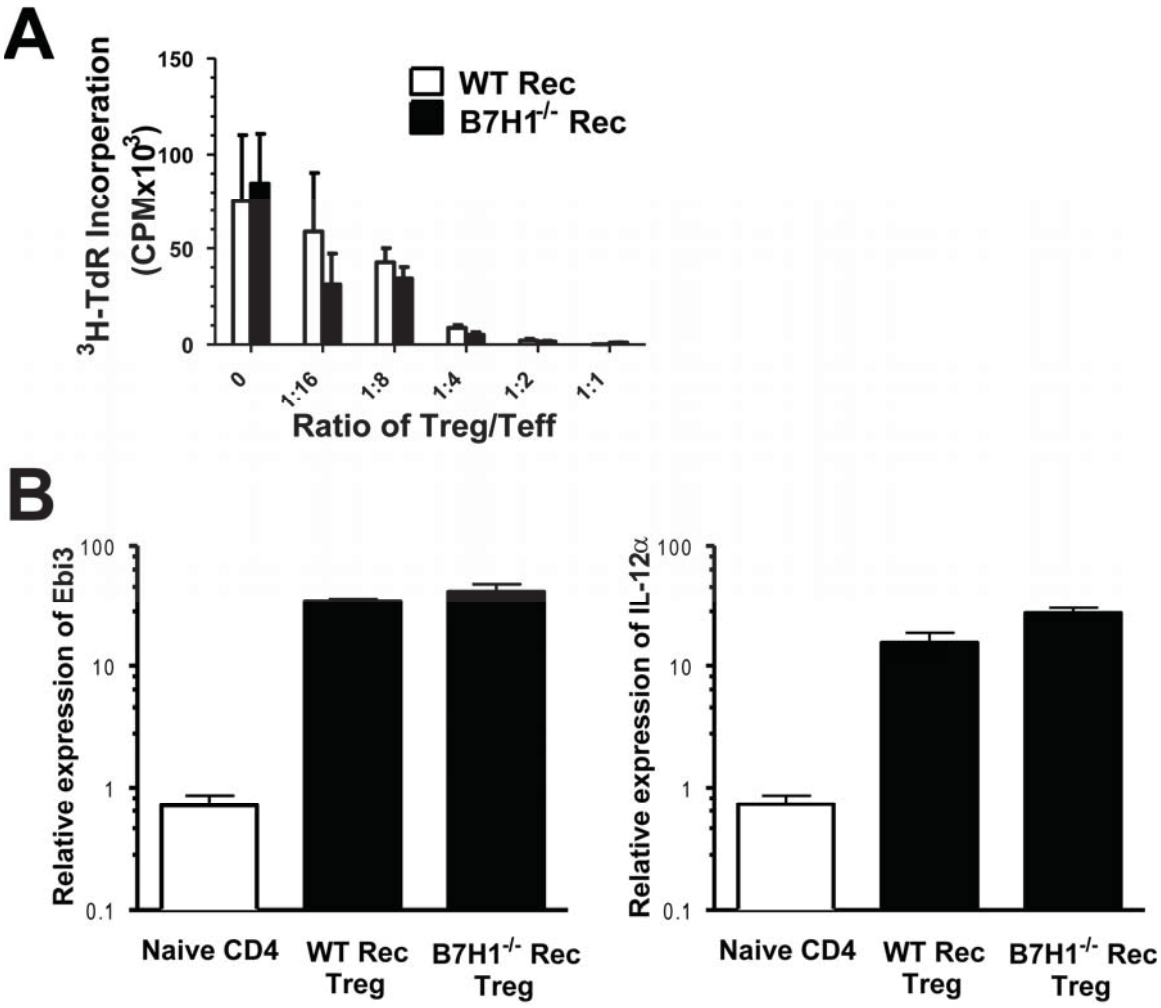

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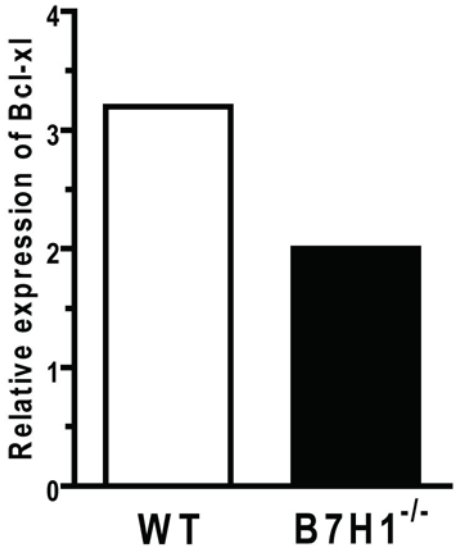
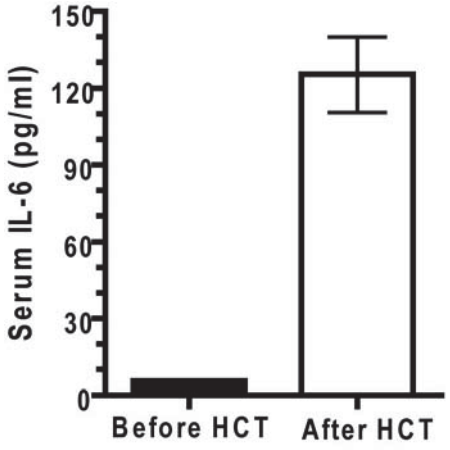


Sup Fig. 5



Sup Fig. 6