**Figure S1.** B7-H4 inhibits allogenic responses *in vitro.*

Splenic leukocytes (2 × 10^5 cells) from BALB/c mice were co-cultured with 100 allogenic islets from either wild type C57BL/6 or RIP.B7-H4 mice for 4 days, followed by pulse with addition of 1 µCi [³H]-thymidine (PerkinElmer, Montreal, QC, Canada) in the last 18 h. [³H]-thymidine incorporation was measured by liquid scintillation counting and values are shown on the y axis. *p<0.05, n =4.
Figure S2. Immunofluorescence staining of CD4 plus Foxp3 in the allografts of RIP.B7-H4 and wild type (WT) recipients at two weeks post-transplant.

A. Representative Snap-frozen allografts from RIP.B7-H4 (left) or WT (right) at two weeks post-transplant were stained with CD4 (in green) and Foxp3 (BD Bioscience, in red). B. Accumulating data are shown in B. There is a significant increase of Foxp3 in RIP.B7-H4 recipients compared with that in WT mice (*p<0.05, n =3 in each group).