

SUPPLEMENTARY DATA

**Supplementary Table 1.** Details of Applied Biosystems TaqMan® gene expression assays used for real-time PCR analysis.

<b>Gene</b>	<b>Applied Biosystems assay ID</b>
<i>Hmox-1</i>	Mm00516005_m1
<i>Nrf2</i>	Mm00477784_m1
<i>Nqo1</i>	Mm01253561_m1
<i>IL-6</i>	Mm00446190_m1
<i>Tnfa</i>	Mm00443260_g1
<i>IL-1b</i>	Mm00434228_m1
<i>Nos2</i>	Mm00440502_m1
<i>Txnrd1</i>	Mm00443675_m1
<i>Srxn1</i>	Mm00769566_m1
<i>Txn1</i>	Mm00726847_s1
<i>Gsta1</i>	Hs00275575_m1

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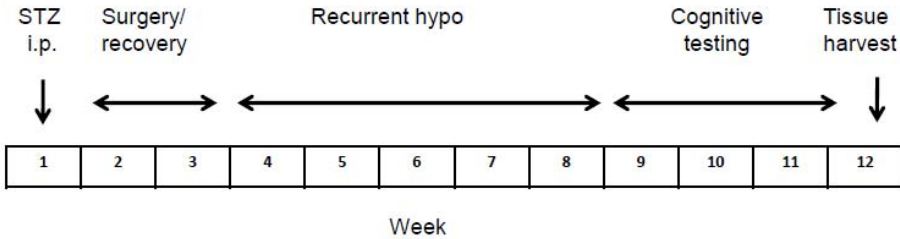
**Supplementary Table 2. Recurrent hypoglycemia and T1D enhance the expression of inflammatory genes within the hippocampus in WT and *Nrf2*<sup>-/-</sup> mice.** mRNA was extracted and processed for real-time PCR to evaluate changes in gene expression Interleukin 6 (*IL-6*), Tumor necrosis factor alpha (Tnf- $\alpha$ ), Interleukin -1beta (IL-1 $\beta$ ) and Inducible nitric oxide synthase (*Nos2*). Con, Con + Hypo, T1D and T1D + Hypo all n=8 per group. *Nrf2*<sup>-/-</sup>, *Nrf2*<sup>-/-</sup> + Hypo, T1D *Nrf2*<sup>-/-</sup> and T1D *Nrf2*<sup>-/-</sup> + Hypo all n=7-8 per group. Results represent mean values  $\pm$  SEM. Data were analyzed within genotype by 2-way ANOVA with T1D and Hypo as between subject factors followed by Tukey's post hoc test \* p<0.05, test \*p<0.05, \*\*p<0.01 Control or *Nrf2*<sup>-/-</sup> vs T1D or T1D *Nrf2*<sup>-/-</sup>, # p<0.05, # # p<0.01 Hypo vs. No Hypo.

Gene	Control	Control + Hypo	T1D	T1D + Hypo	<i>Nrf2</i> <sup>-/-</sup>	<i>Nrf2</i> <sup>-/-</sup> + Hypo	T1D <i>Nrf2</i> <sup>-/-</sup>	T1D <i>Nrf2</i> <sup>-/-</sup> + Hypo
<i>IL-6</i>	1.00 $\pm$ 0.20	1.13 $\pm$ 0.20	1.98 $\pm$ 0.37	2.94 $\pm$ 0.43	0.88 $\pm$ 0.09	0.51 $\pm$ 0.03	1.27 $\pm$ 0.17**	1.66 $\pm$ 0.03**
<i>Tnfa</i>	1.00 $\pm$ 0.18	1.23 $\pm$ 0.32	1.87 $\pm$ 0.24	3.02 $\pm$ 0.48	0.79 $\pm$ 0.04	0.87 $\pm$ 0.07	1.45 $\pm$ 0.15**	1.50 $\pm$ 0.20**
<i>IL-1b</i>	1.00 $\pm$ 0.31	0.70 $\pm$ 0.08	0.95 $\pm$ 0.13	0.98 $\pm$ 0.14	0.17 $\pm$ 0.02	0.15 $\pm$ 0.02	0.24 $\pm$ 0.02**	0.30 $\pm$ 0.06**
<i>Nos2</i>	1.00 $\pm$ 0.28	1.57 $\pm$ 0.33	1.47 $\pm$ 0.24	2.79 $\pm$ 0.46	0.17 $\pm$ 0.02	0.15 $\pm$ 0.02	0.245 $\pm$ 0.02**	0.30 $\pm$ 0.06**

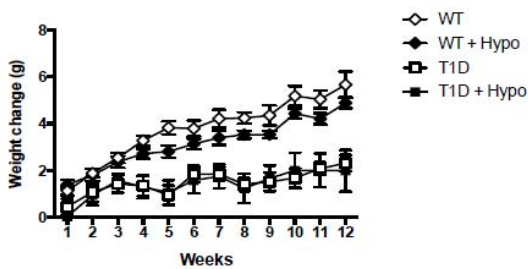
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**Supplementary Figure 1. Time line and weight profile of control and T1D WT and Nrf2<sup>-/-</sup> mice exposed to recurrent hypoglycemia.** A. Timeline for induction of diabetes, surgery, recurrent hypoglycemia, behavioral testing and biochemical analysis. B. Body weight was comparable between groups and unaltered by either genotype or RH. Results represent mean values ± SEM.

S1 A



S1 B



S1 C

