Supplemental Table 1: Serum T4 Levels (ng/ml) with PTU Treatment

Genotype	Diet	4 Days	7 Days	14 Days
WT	**Normal**	**53.3 ± 2.5**	**57.5 ± 7.6**	**46.8 ± 3.5**
PAM+/-	**Normal**	**57.8 ± 0.9**	**63.7 ± 0.4**	**42.8 ± 0.9**
WT	**PTU**	**26.0 ± 2.2 *****	**4.8 ± 2.4 *****	**< 0.01 *****
PAM+/-	**PTU**	**25.8 ± 3.2 *****	**0.11 ± 0.1 *****	**< 0.01 *****

Serum T_4 was measured by radioimmunoassay in WT and $PAM^{+/-}$ mice kept on a normal diet or the low iodine/PTU diet for 4, 7 or 14 days.

Supplemental Table 2: Baseline TRH Data from RIAs

Region	Mouse	TRH-NH_2 ng/mg	TRH-Gly, ng/mg	Total TRH ng/mg	% Gly/Total TRH
PVN	**WT**	**2.4 ± 0.2 ****	**0.22 ± 0.03**	**2.7 ± 0.2 ***	**8.34 ± 0.92**
	PAM+/-	**1.4 ± 0.15 ****	**0.29 ± 0.07**	**1.7 ± 0.2 ***	**16.0 ± 2.45**
POA	**WT**	**2.5 ± 0.4**	**0.20 ± 0.02 ****	**2.7 ± 0.4**	**8.6 ± 1.3**
	PAM+/-	**2.7 ± 0.3**	**0.47 ± 0.08 ****	**3.2 ± 0.3**	**15.4 ± 2.6**

Levels of TRH-Gly and amidated TRH in POA and PVN extracts prepared from $PAM^{+/-}$ (N=7 or 8) and WT (N= 7 or 8) mice are reported. For the PVN, one-way ANOVAs revealed a significant reduction in TRH (p=0.003), a significant increase TRH-Gly (p=0.003) and a significant decrease in total TRH (p=0.01) in $PAM^{+/-}$ mice when compared to WT littermates. Peptide concentrations may vary more than the TRH-Gly percentage because of variability in the protein measurements and dissection of individual hypothalamic nuclei.