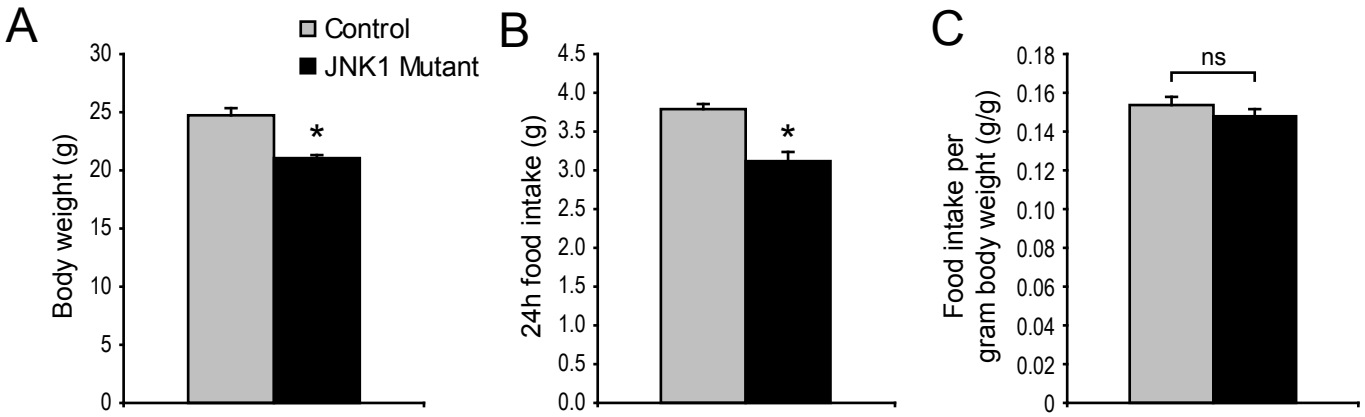
Supplementary Figure Legends

Supplementary Figure 1. Body weight and food intake of JNK1 mutant mice. (**A**) Average body weight, (**B**) daily food intake and (**C**) food intake normalized to body weight of male control and JNK1 mutant mice at 10 weeks of age. n = 9 per group. *, $P < 0.05$ between controls and mutants as determined by Student's *t* test.

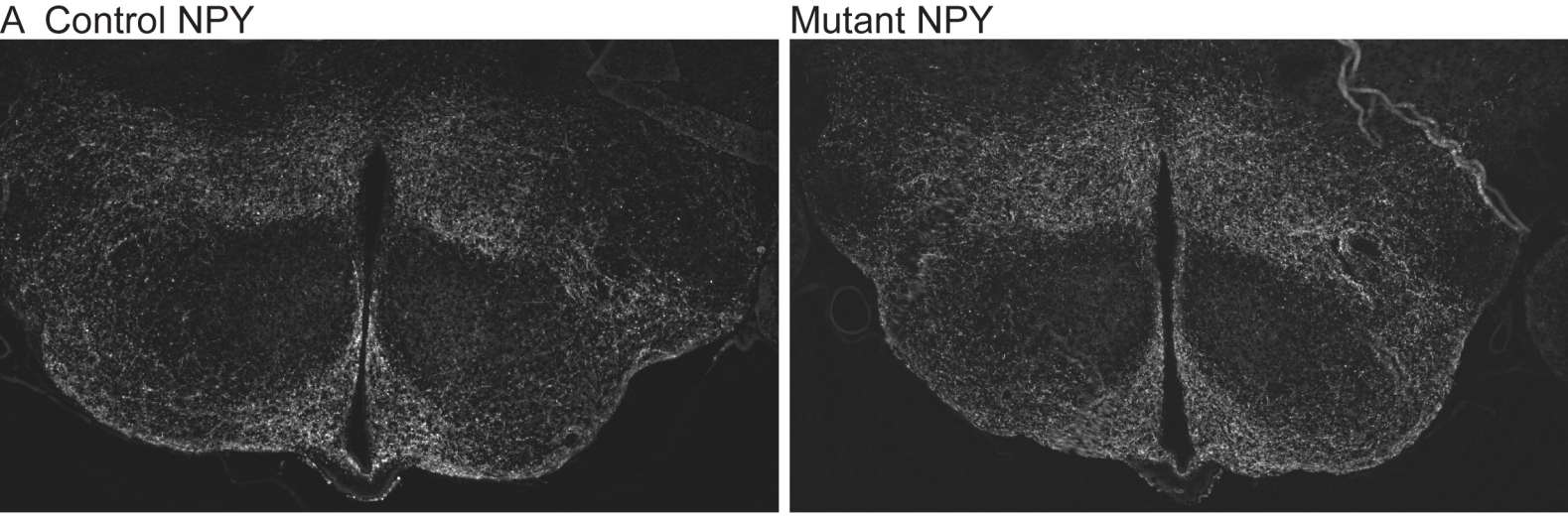
Supplementary Figure 2. NPY neuronal projection patterns are comparable between controls and JNK1-deficient mice. NPY neuronal projections in the hypothalamus was revealed by immunofluorescence analysis using an NPY antibody (**A**). The intensity of NPY projections in the controls and mutants was quantified using NIH Image J software (**B**). Hypothalamic sections were selected from Bregma -1.94 to -2.30. n = 7 sections from 6 control mice and 8 sections from 3 mutant mice.

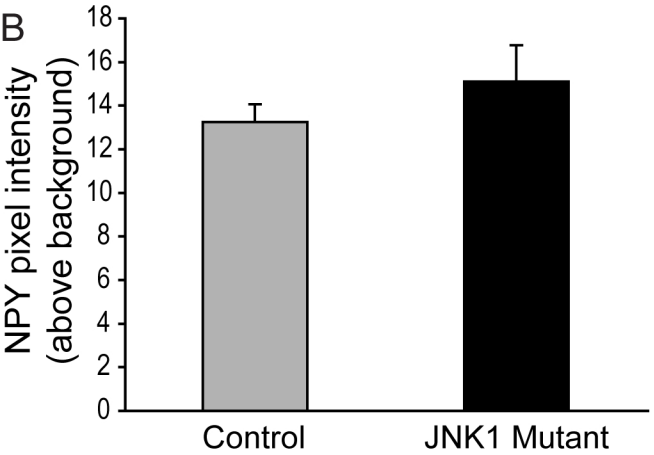
Supplementary Figure 3. Control and JNK1-deficient mice show comparable neuronal and glial cell numbers within the hypothalamus. Hypothalamic sections from fed controls and JNK1 mutants were processed for Nissl staining and Glial Fibrillary Acidic Protein (GFAP) immunofluorescence to reveal neuronal and astrocyte populations, respectively. Control and JNK1 mutant mice had similar number of Nissl positive cells (382±14 per section in controls versus 375±10 in mutants) and GFAP positive cells (97±14 per section in controls, 106±8 in mutants) within the arcuate nucleus. Sections were selected from Bregma -1.94 to -2.06. n = 3 mice for each.

Supplementary Figure 1



Supplementary Figure 2





Supplementary Figure 3