



#### Supplemental Figure 4

*In situ* hybridization on wildtype adult brains in arcuate nucleus (ARC) of the hypothalamus. *A*) Probes for Mks5 (green) and Mks6 (red) revealed no overt differences in gene expression pattern in wildtype *ad libitum* fed animals. *B*) Positive control (+ Control) probes for housekeeping genes RNA Pol II subunit A (POLR2A, green) and peptidylprolyl isomerase B (PPIB, red) show staining throughout the sample. Negative control (- Control) probes for the non-mammalian gene Dihydrodipicolinate reductase (dapB, red and green) show no staining. Scale bars 10µm and DAPI stained nuclei are blue.