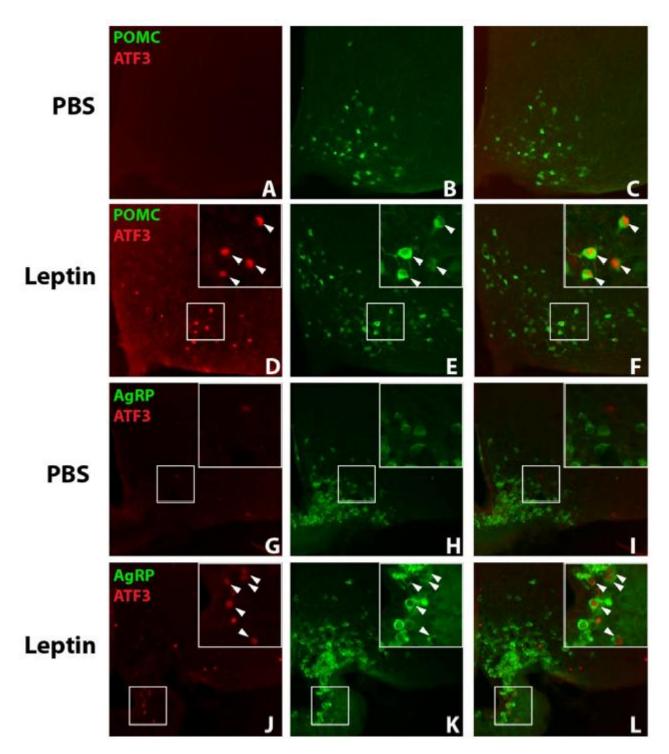
## SUPPLEMENTARY DATA

## Supplementary Figure 1. Leptin stimulates ATF3-IR in POMC and AgRP neurons.

Representative images from POMC-dsRed (A-F) and  $AgRP^{eGFP-L10a}$  (G-L) mice were treated with leptin (5mg/kg i.p.) or vehicle (PBS) 6 hours prior to perfusion. Brains were harvested, sectioned, and stained for ATF3 (red) and dsRed ((A-F), pseudocolored green, indicates POMC neurons) or GFP ((G-L), green indicates AgRP neurons). Images are representative of 3-4 mice per treatment group. White arrows indicate colocalized neurons.



## Supplementary Figure 2. Normal glucose and insulin tolerance in male Atf3<sup>LepRb</sup>KO

**mice**. Atf3<sup>LepRb</sup>KO (KO) and control (WT) mice were subjected to glucose tolerance test (2g/kg body weight, IP) (Top panel) and insulin tolerance test (1 unit/kg body weight, Humulin (Eli Lilly), IP) (Bottom panel) with the analysis of blood glucose at the indicated times. Data are plotted as mean +/-standard deviation. All comparisons, p=ns.

