

## Figure 1

**Supplemental Figure 1. Strategy to generate flag-tagged-PABP-orx transgenic mice.** (a) RP23-279L23 BAC clone containing the fully sequence of 1.5kb of mus musculus orx gene.(b) The construction, obtained after three successive cloning, begins in 5' by a 372 bp orx sequence, corresponding to the 5'UTR sequence flanking the start codon, followed by flag-tagged PABP, IRES-eGFP sequences, zeocine (ZEO) cassette flanked by FRT sites and end by a 60 bp orx 3'UTR sequence just next to the stop codon. (c) The PCR amplified construct was inserted into the BAC by homologous recombination in EL250 cells. (d, e) The ZEO resistance cassette was flipped out before microinjection of the recombined BAC in BXD-F2 pronucleus.



## Supplement 2

## Supplemental Figure 2. Efficiency of the mRNA tagging protocol.

Comparison by real-time RT-PCR of the relative orx/MCH expression obtained from RNA samples isolated by immunoprecipitation of flag-PABP-RNA complexes (left column, mean  $\pm$  SD: 4.57  $\pm$  0.69; n=9) compared to the orx/MCH value obtained from whole brain RNA (right column, mean  $\pm$  SD: 0.23  $\pm$  0.06, n=9) showing a 20-fold relative enrichment of orx mRNA after pull down.