



Supplementary Fig. 4. Life extension correlated with NF1 expression level. **a.** NF1 expression is increased in *hsNF1/+;K33* flies at 25°C. Western blots were used to detect the 280kD NF1 protein. The NF1 level of *hsNF1/+;K33* was greater than in *K33*, while NF1 level of *K33* was greater than the null mutant *NF1^{P1}*. **b.** Similar increases in NF1 protein levels were generated by both the heat shock and *GAL4-UAS* systems, detected by western blot measured using Image J densitometry analysis, mean \pm SD of 3 experiments (*: $P < 0.05$, t - test). **c.** Survivalship of *hsNF1/+;K33* and control *K33* flies at 18°C. Each data point is the mean \pm SD of 13 experiments with 40 flies per experiment, 520 flies total per category. Both genotypes were maintained at 25°C throughout embryogenesis and 4 days into adulthood before transfer to 18°C. Flies were briefly exposed to room temperature (24°C to 25°C) for 15 minutes during food replacements every 4 days. No difference was observed in maximal life spans ($P = 0.783$, t-test), though minimal differences were seen in mean life spans ($P = 0.024$, Logrank test). NF1 levels in these flies were shown.