#### SUPPLEMENTARY MATERIAL

# Primers used for PCR Genotyping cat-2(1112): GGCAGAGTAGATTTCCAAAG ATCTGAGGAATCCTATCCGCTGTCAAAACCTTCTCCCCTT dop-4(ok1321): GGGCTCAGGATAGAGATTG TGGAGAATCAGCTCTATTGC Promoter amplification dop-4: ATTACAAAAGCCCAGCCAG TTTGATGTAGGCTAATTGCTG Rescue transgenes dop-4: AATGTTGGCTTACGGGTC CTATTCAATTGAAGTATTCGGCG RNAi constructs *dop-4* sense: GCTTTTTGGCCTGATGATGT

CTGGAAAATTTGGGGGATTT

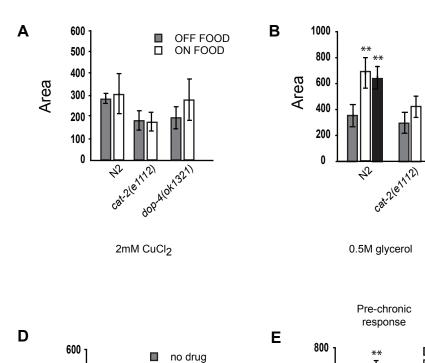
## dop-4 antisense

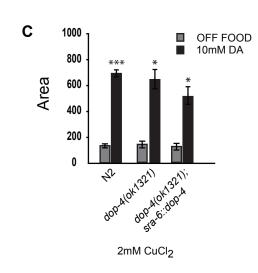
## GCTTTTTGGCCTGATGATGT

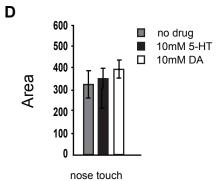
### ${\tt CTGGAAAATTTGGGGGATTT}$

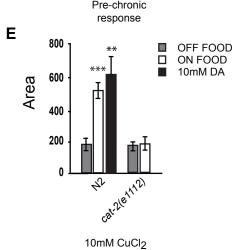
#### Supplementary Figure 1. Measurements of ASH calcium transient duration.

A-F) Average area under the curve for calcium imaging experiments. A) Area is not increased by food in responses to 2 mM CuCl<sub>2</sub>. B) In wild type, the area in responses to 0.5 M glycerol is increased by both food and dopamine (p < 0.0035, Mann-Whitney rank sum test; N $\geq$ 7). In *cat-2(e1112)* the area is unaffected by food. C) The area in response to 2 mM CuCl<sub>2</sub> is increased by exogenous dopamine in wild type and *dop-4(ok1321)* (p < 0.0035, Mann-Whitney rank sum test; N $\geq$ 8). D) Nose touch responses are unaffected by dopamine and serotonin. E) In wild type, the area in post-chronic responses to 10 mM CuCl<sub>2</sub> is increased by both food and dopamine (p < 0.01, Mann-Whitney rank sum test; N $\geq$ 11). In *cat-2(e1112)* the area is unaffected by food. F) In wild type, the area in post-chronic responses to 10 mM CuCl<sub>2</sub> is increased by both food and dopamine (p < 0.05, Mann-Whitney rank sum test; N $\geq$ 6). In *cat-2(e1112)* the area is unaffected by food.









OFF FOOD ON FOOD

10mM DA

