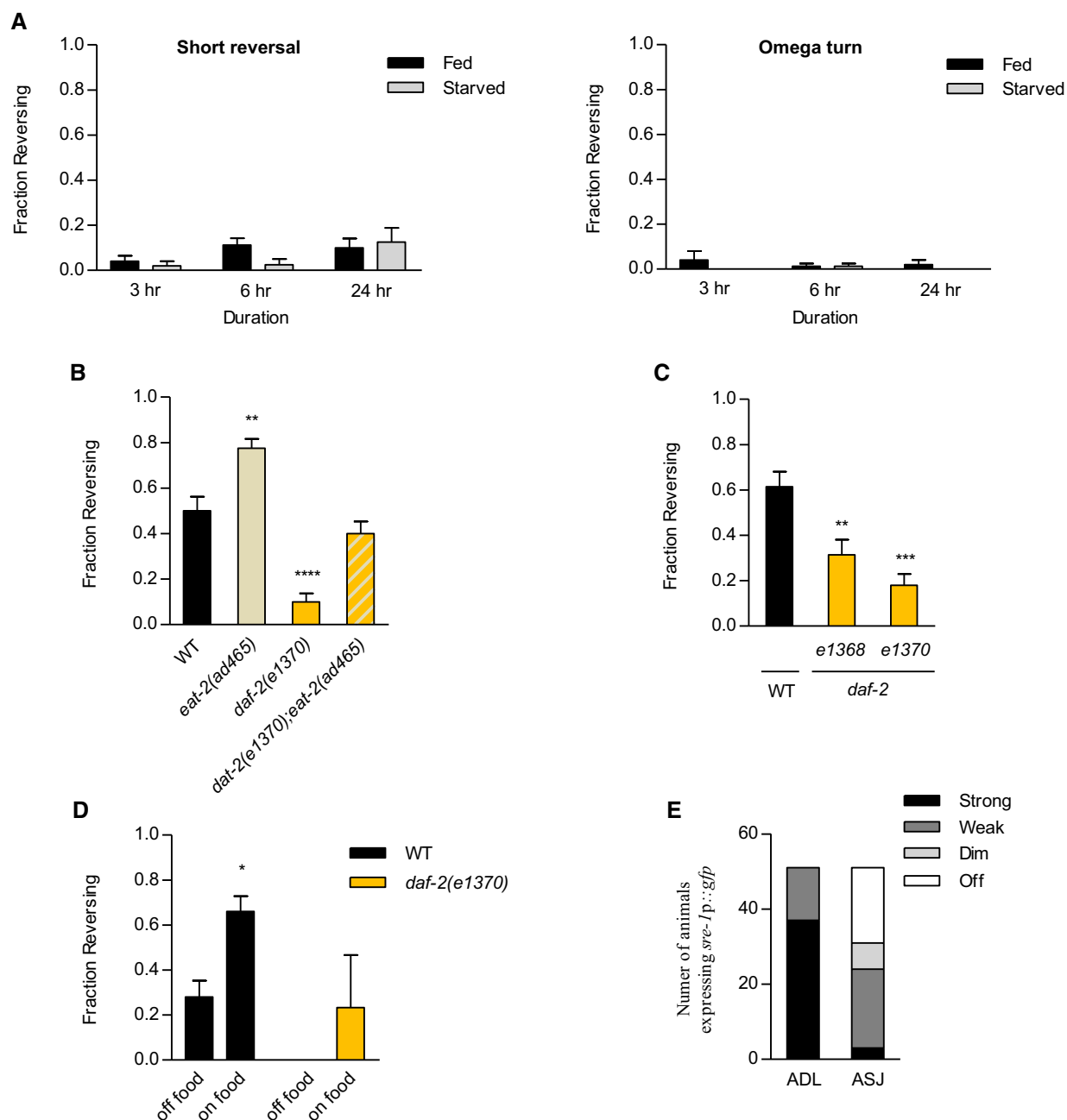# Expanded View Figures

Figure EV1. Effect of DAF-2/insulin-like receptor and feeding status on ascr#3 avoidance.

A   Fraction reversing of wild-type animals exhibiting short reversal (left) and omega turn under different feeding conditions (right). n = 40–80.

B   Fraction reversing of wild-type animals and *eat-2* mutants, *daf-2* mutants, and *eat-2;daf-2* double mutants under fed conditions. n = 80–110. **P < 0.01 and ****P < 0.0001 (Dunnett's Test).

C   Fraction reversing of *daf-2* alleles, *e1368,* and *e1370* in response to 500 nM ascr#3 in fed conditions. n = 50–70. **P < 0.01 and ***P < 0.001 (Dunnett's test).

D   Fraction reversing of wild-type and *daf-2* mutant animals on on-food or off-food conditions. n = 30–50. *P < 0.05 (Bonferroni's test).

E   The number of transgenic animals expressing *sre-1*p::*gfp* in ADL and ASJ. n = 31.
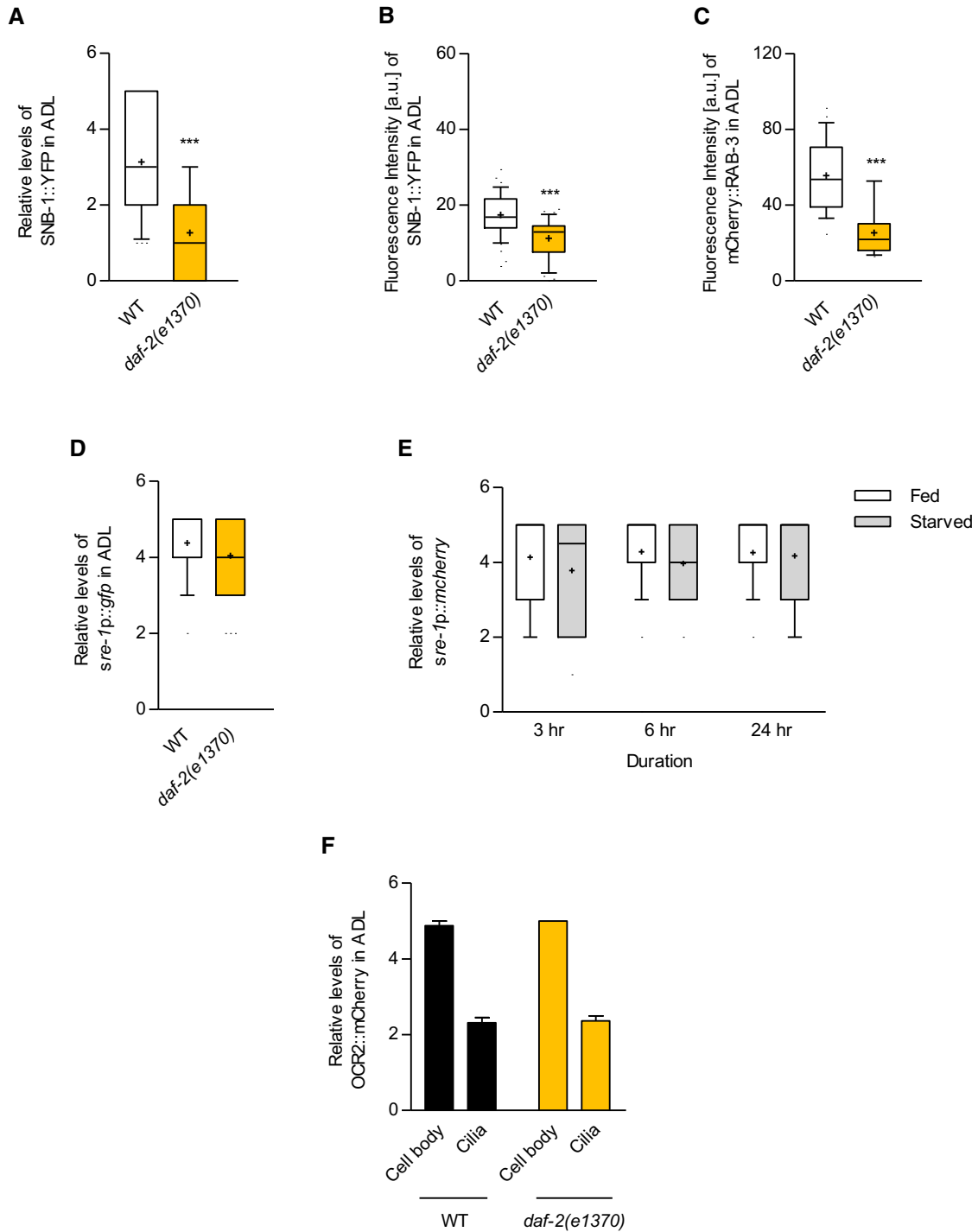
Data information: All error bars represent ± SEM.

Figure EV2. Quantification of SNB-1::YFP and mCherry::RAB-3 and gene expression of *sre-1* promoter upon *daf-2* mutation or starvation.

A   Relative fluorescence intensity of integrated animals expressing *sre-1p::snb-1* cDNA::*yfp*. *n* = 30. ***P < 0.0001 (unpaired Student's *t*-test).

B, C Quantification of fluorescence intensity of wild-type and *daf-2* mutant animals expressing *sre-1p::snb-1* cDNA::*yfp* (B) and *sre-1p::mCherry::rab-3* cDNA (C) analyzed using ImageJ software. *n* = 13–41. ***P < 0.001 (unpaired Student's *t*-test).

D   Relative fluorescence intensity of *daf-2* mutants expressing *sre-1p::gfp*. *n* = 50.

E   Relative fluorescence intensity of transgenic animals expressing *sre-1p::mCherry* in fed and starved conditions. *n* = 29–35.

F   Relative fluorescence intensity of wild-type and *daf-2* mutant animals expressing *sre-1p::ocr-2* genome::*mcherry*. *n* = 41.

Data information: All error bars represent ± SEM. Tops and bottoms of boxes indicate the 25th and 75th percentiles, respectively; whiskers represent 10th–90th percentile. Median is indicated by a horizontal line, and the average is marked by "+" in the box.

A

B

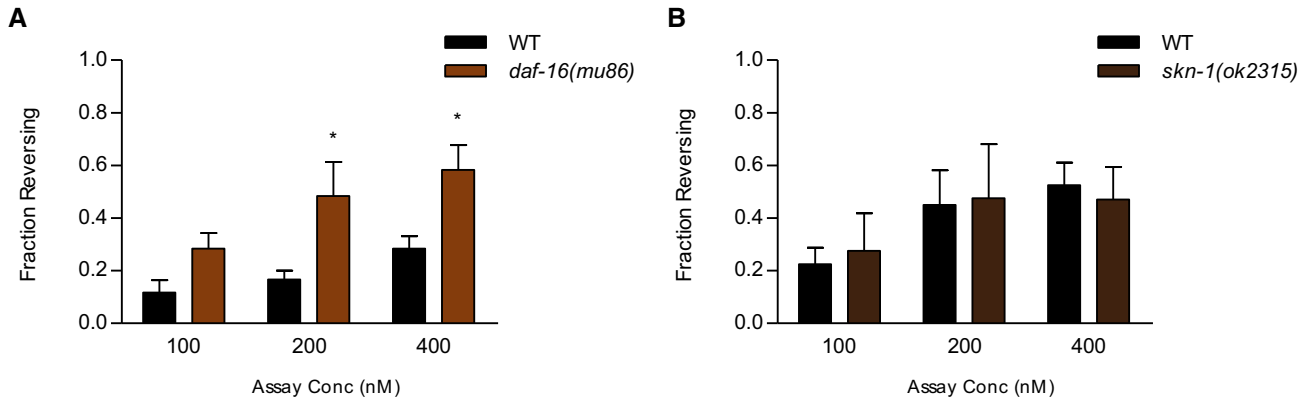
Figure EV3.   ascr#3 avoidance behaviors of *daf-16* mutants and of *skn-1* mutants.

A, B   Fraction reversing of *daf-16* mutants (A) and *skn-1* mutants (B) in response to 100, 200, and 400 nM ascr#3 under fed conditions. (A) *n* = 60, *P < 0.05 (Bonferroni's test). (B) *n* = 40–50.

Data information: All error bars represent ± SEM.
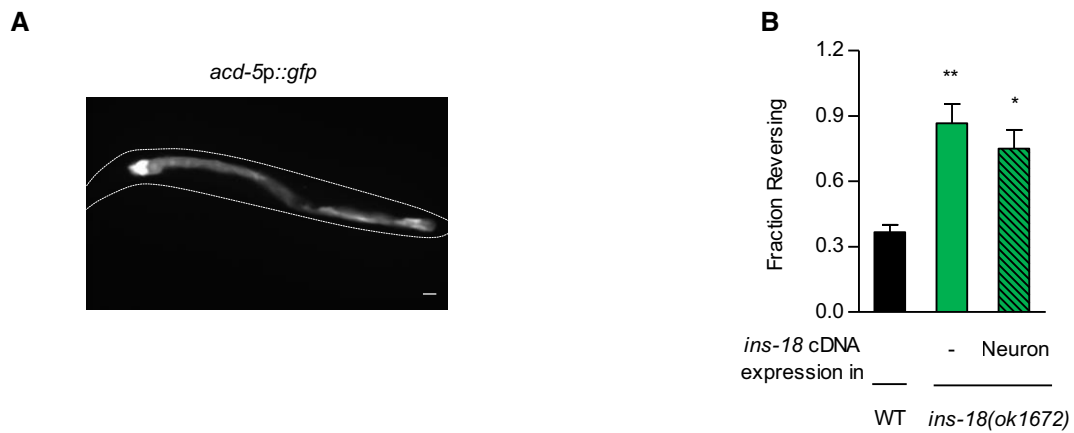
A

*acd-5*p::*gfp*

B

Figure EV4.   Expression pattern of *acd-5* promoter in the intestine and neuronal rescue of *ins-18* phenotype.

A   A representative image of a transgenic animal expressing *acd-5*p::*gfp*. Scale bar is 10 μm.
B   Fraction reversing of wild-type animals, *ins-18* mutants, and *ins-18* mutants expressing *su006(rgef-1)*p::*ins-18* cDNA::*gfp* (neuron). *n* = 30–40. *P < 0.05 and **P < 0.01 (Dunnett's test).
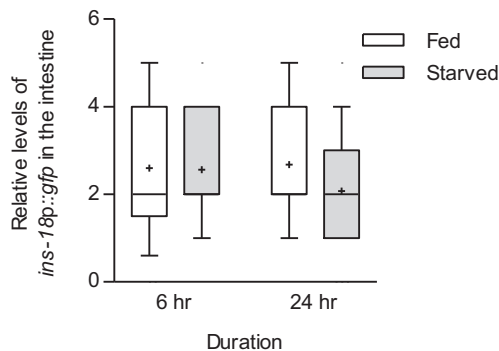
Data information: Error bars represent ± SEM.

Figure EV5.   Expression of *ins-18* promoter upon starvation.

Relative fluorescence intensity of expressing *ins-18*p::*gfp* in the intestine in 6-h and 24-h fed and starved conditions. *n* = 25–40. Tops and bottoms of boxes indicate the 25th and 75th percentiles, respectively; whiskers represent 10th–90th percentile. Median is indicated by a horizontal line, and the average is marked by "+" in the box.