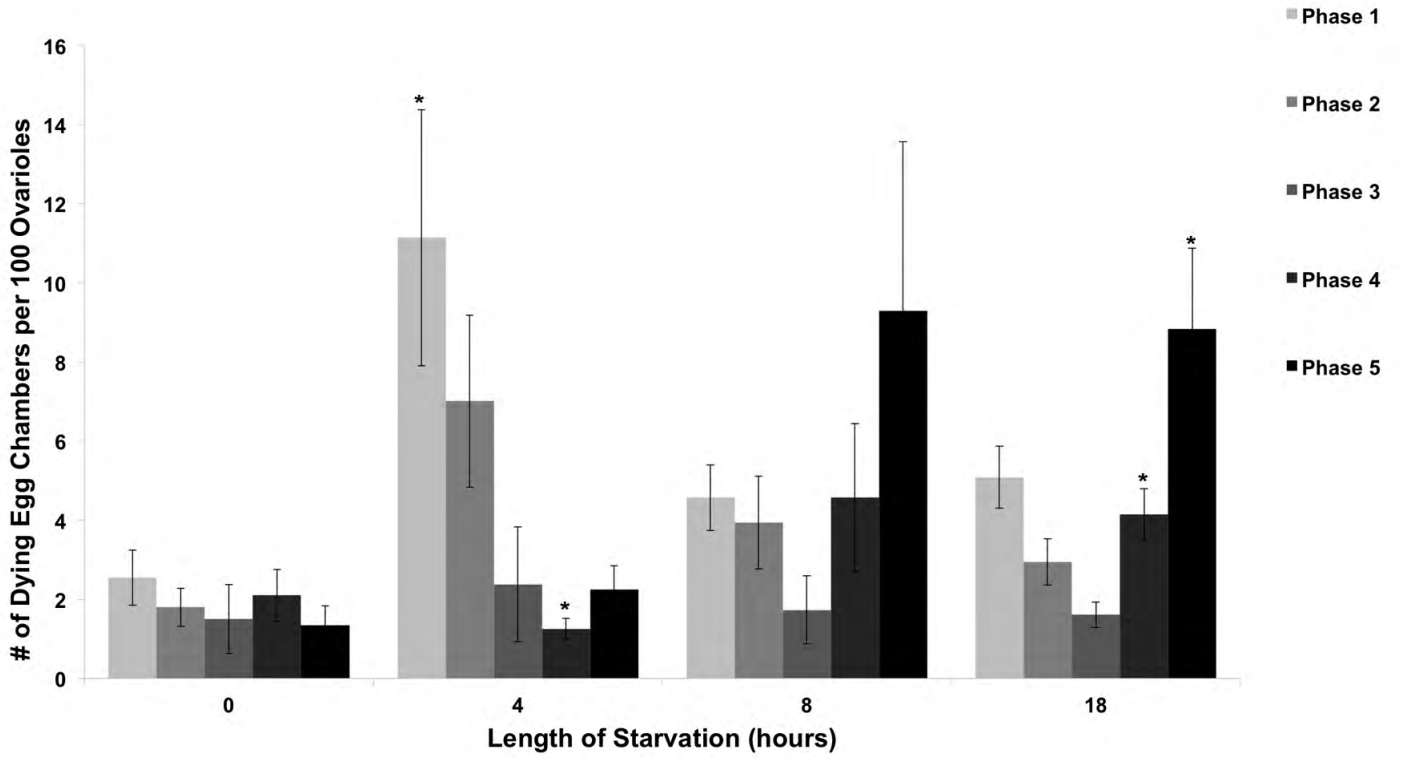

Fig. S1. *Drosophila* egg chambers respond rapidly to starvation and all phases are present at all times of starvation. The mean number of degenerating egg chambers at each phase (±s.e.m.) per 100 ovarioles is shown. Three different control genotypes were combined and averaged: w^{1118}, *UAS-GFPmCD8/GR1-GAL4* and $drpr^{\Delta 5}$/+. At least five replicates with a minimum of 44 total flies for each time point were analyzed. All flies were 3-6 days old after 2 days of conditioning and were starved on apple juice agar plates as described in Materials and methods. A two-tailed *t*-test was performed comparing the number of egg chambers in each phase at 4, 8 and 18 hours with the number observed in the absence of starvation (0 hours). **P*<0.05.

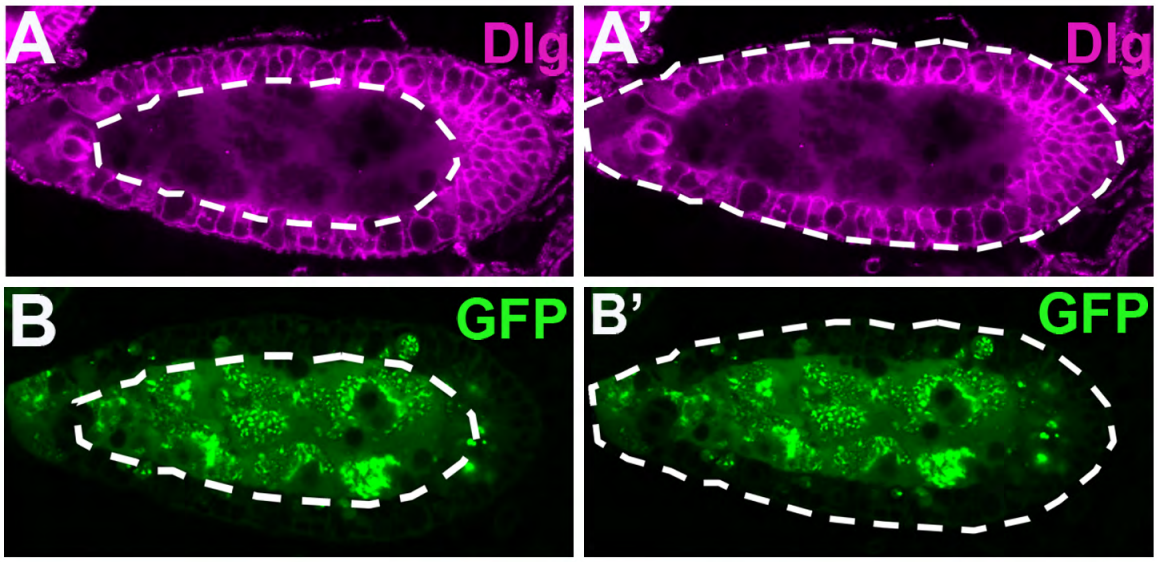

Fig. S2. Methods of quantification of engulfment. (**A**,**A′**) Using ImageJ, the area of the engulfed germline (A) and the area of the total egg chamber (A′) were measured based on the outline of the FC membranes as shown for a phase 2 egg chamber (from Fig. 1C). The ratio of the area of the unengulfed germline compared with the area of the entire egg chamber was calculated, and referred to as the percentage unengulfed germline. (**B**,**B′**) Using the same outline as in A,A′ based on FC membranes, the intensity of the GFP in the unengulfed germline (B) and the intensity of the GFP in the entire egg chamber (B′) were measured by ImageJ. Again, a ratio was taken and referred to as percentage unengulfed germline (for Fig. 1 only).

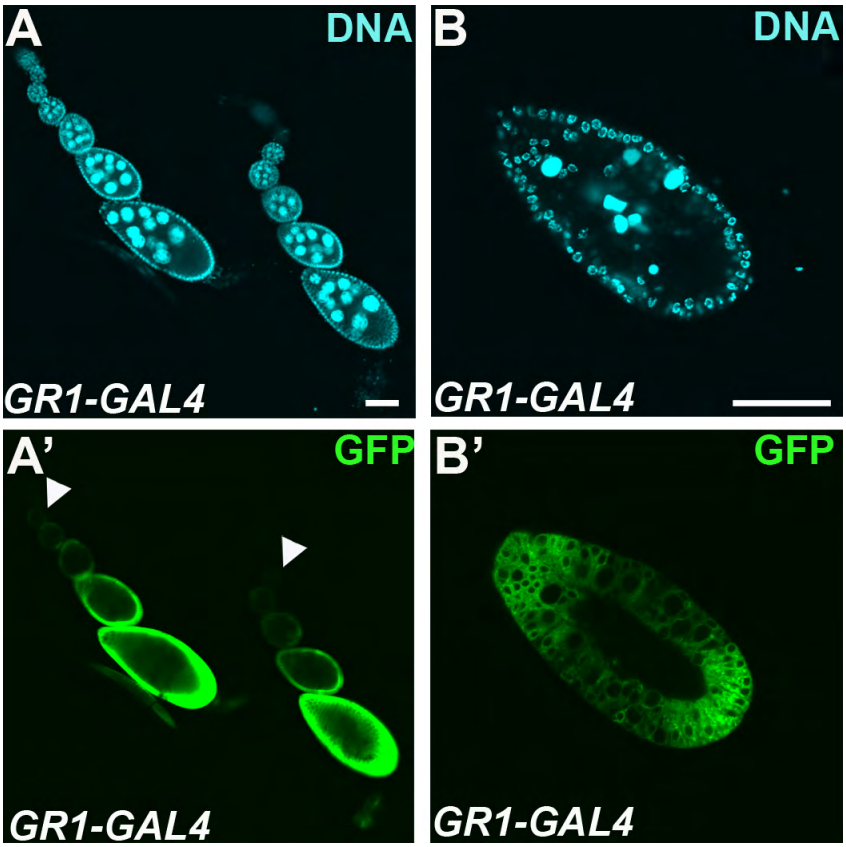

Fig. S3. *GR1-GAL4* is expressed in the follicle cells during mid-oogenesis. (**A**,**A′**) *GR1-GAL4* becomes expressed in the FCs beginning in stage 3 of oogenesis, as indicated by the presence of GFP (arrowheads). Expression is robust in the FCs of mid-stage healthy egg chambers. (**B**,**B′**) *GR1-GAL4* is expressed in the FCs of dying mid-stage egg chambers.

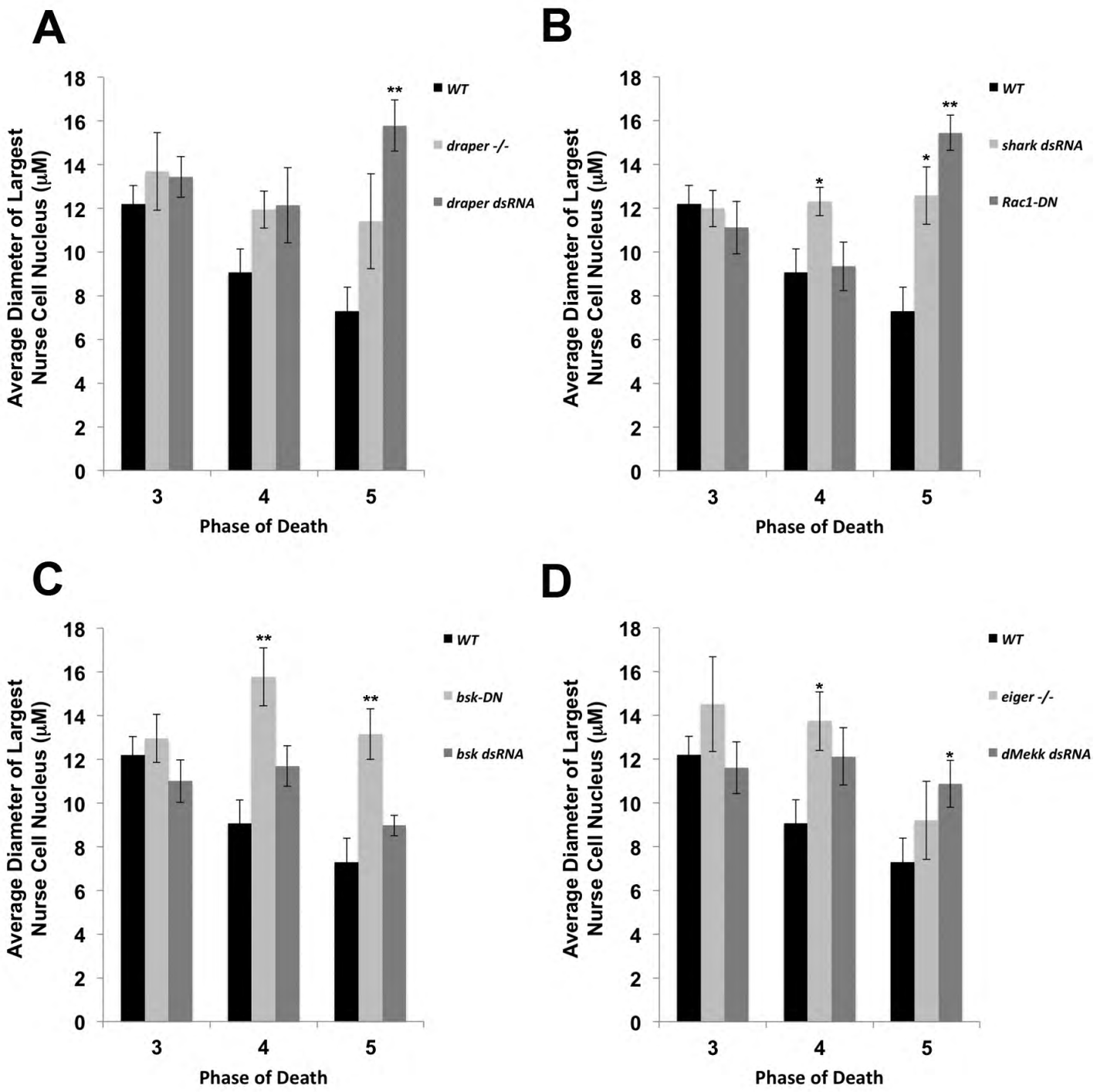

Fig. S4. Engulfment mutants have defects in the breakdown of NC nuclei in late phases of death. (**A-D**) Using ImageJ, the diameter of the largest remaining NC nucleus was measured in phase 3-5 dying egg chambers from a central confocal slice. $n>3$ for each phase of death in every genotype. Control egg chambers display a gradual decrease from phase 3 to phase 5 in the average diameter of the largest remaining NC nuclei. All of the engulfment-defective mutants show a larger NC diameter size than controls, and all except $drpr^{\Delta 5}$ and *bsk* dsRNA show statistically significant differences. *$P<0.05$, **$P<0.005$.

Table S1. Percentage of pyknotic follicle cells in egg chambers from starved flies*

Phase	Wild type‡	*draper*‡	*draper dsRNA*¶	*shark dsRNA*¶	*Rac1-DN*¶	*bsk-DN*¶	*bsk dsRNA*¶	*eiger*‡	*Mekk1 dsRNA*¶
0	0	0	0	0.67	0	0.19	0	0	0
1	0.42	1.17	0	0	0	0	17.14	10.61	10.72
2	1.52	0.67	0	1.01	1.01	1.4	1.68	10.57	5.72
3	0.94	2.86	0	2.93	2.57	43.86	2.87	19.16	4.64
4	3.67	33.61	11.29	25.54	15.18	45.27	48.34	32.86	18.94
5	13.77	68.36	64.41	57.60	52.69	65.97	17.66	62.97	47.69

*Pyknotic follicle cells were counted and compared with the total number of follicle cells in a central confocal slice. *n*=3 egg chambers were analyzed for each phase and genotype, except *Mekk1* phase 2 (*n*=2).

‡Data for wild type were combined from *G71/+* and *GR1-GAL4-G89/TM6B* control lines.

§Homozygous mutants.

¶Driven by the follicle cell-specific *GR1-GAL4* line.