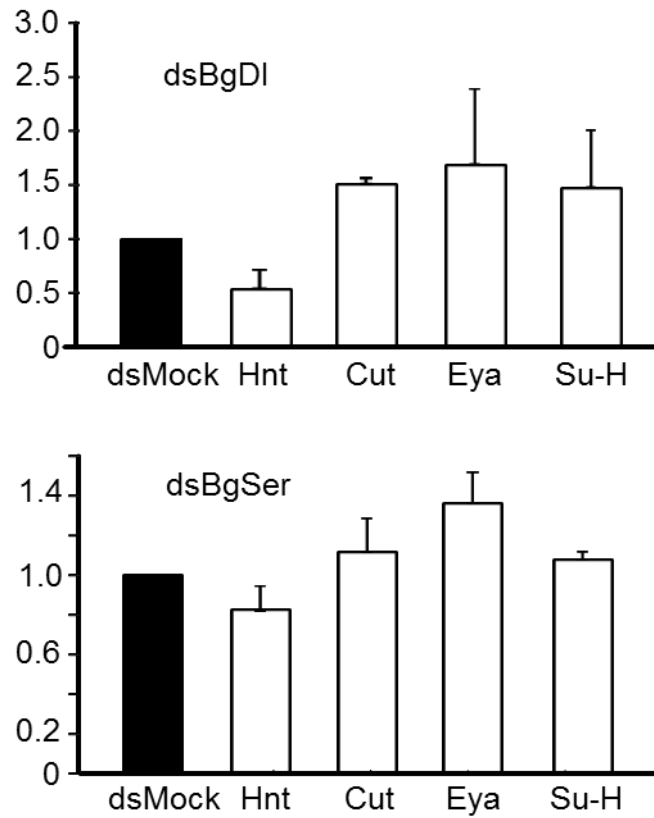


**Figure S1.** Mild phenotype in 0-day-old dsBgn-treated females.

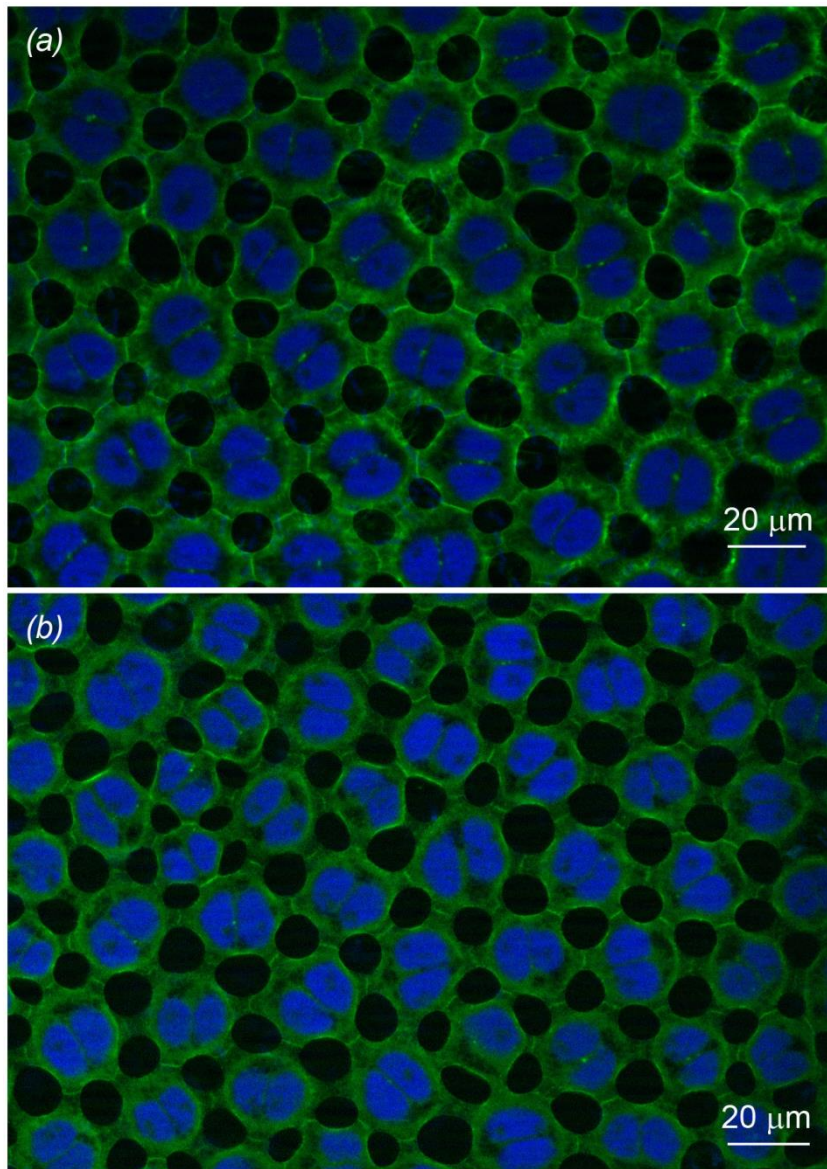
(a) Ovariole from a dsMock-treated female showing high labelling for NICD in the basal ovarian follicle.

(b) Ovariole from dsBgn-treated females showing a slightly phenotype after the depletion of Bgn. The shape of the basal ovarian follicles remains similar to that of dsMock-treated females, but the NICD labelling was highly depleted.

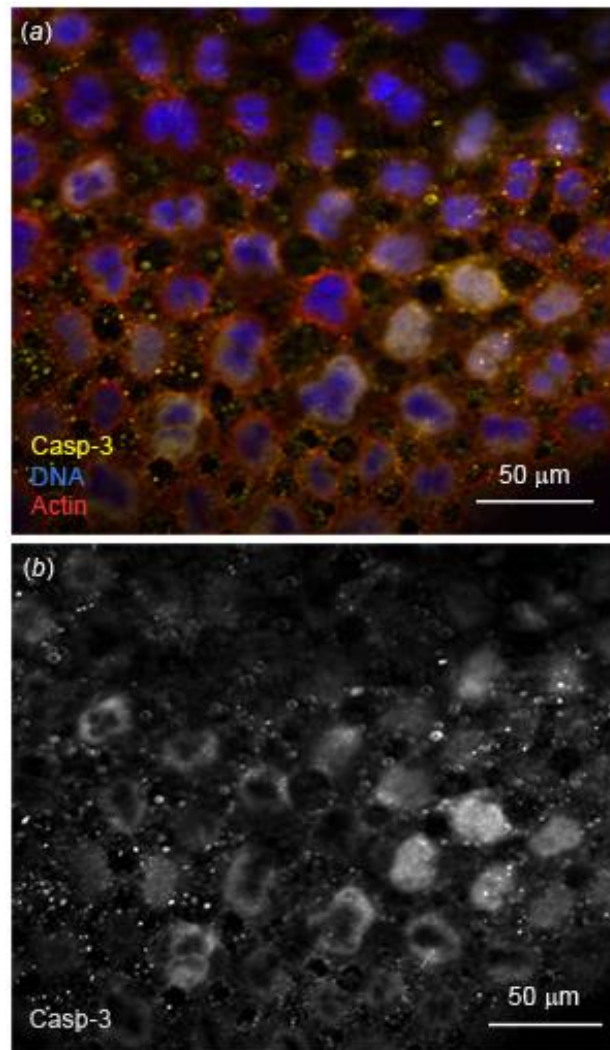
(c) Detail of the follicular epithelium in dsBgn-treated females showing the cytoskeleton arrangement in the follicular cells, the absence of mitosis and no labelling for NICD. DAPI (Blue) was used to DNA staining and TRITC-phalloidin (green) was used to stain F-actin microfilaments. In (a) and (b) the posterior pole of the basal follicle is towards to bottom.



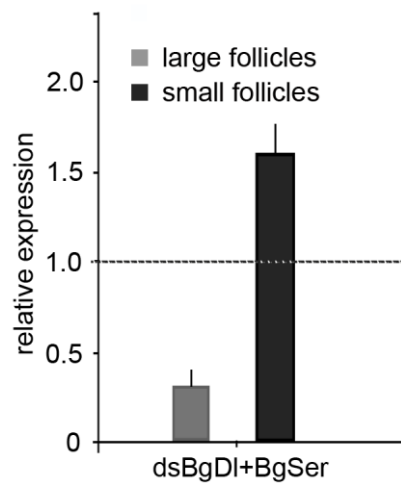
**Figure S2.** Relative expression of BgN, BgSu-H, BgDI and BgSer mRNAs in ovaries from dsMock, dsBgDI and dsBgSer-treated females. Females were treated in the last nymphal instar (6-day-old) and ovaries dissected in adult stage (5-day-old). Data represent normalized values against the control (reference value = 1) (n = 3).



**Figure S3.** FCs from a basal ovarian follicle in 5-day-old adult females. (a) FCs in dsMock-treated females. (b) Smaller FCs in dsBgsSer-treated females. DAPI (Blue) was used for DNA staining and TRITC-phalloidin (green) was used to stain F-actin microfilaments



**Figure S4.** Follicular cell death in basal ovarian follicles from a 5-day-old adult female treated with dsBgSer. (a) DAPI (Blue) was used for DNA staining and TRITC-phalloidin (red) was used to stain F-actin microfilaments. An antibody anti-cleaved caspase-3 (casp-3, yellow) was used to label apoptotic FCs. (b) Channel for anti-cleaved caspase-3 alone. FCs from dsMock-treated females were showed in figure 6a and a”.



**Figure S5.** Expression of BgSer in ovaries from 5-day-old adult, double-ligand knockdown treated females. The mRNA expression for BgSer presented in figure 6a, here is split in accordance to the size of the ovarian follicles.

**Table S1:** Accession Number of Studied Sequences and Primer Sequence Used for qRT-PCR and RNAi experiments

|    | Accession number | Primer name |        | Primer sequence  | Amplicon Length (bp) |
|----|------------------|-------------|--------|--|----------------------|
| 1  | HF969251         | BgHpo-RT    | F<br>R | 5'-GACATTTGGAGCCTTGCCAT-3'<br>5'-AGGTTTCCCTTCAGCCATTC-3'       | 51                   |
| 2  | HF969255         | BgN-RT      | F<br>R | 5'-GCTAAGAGGCTGTTGGATGC-3'<br>5'-TGCCAGTGTGTCCTGAGAG-3'        | 55                   |
| 3  | HF969255         | BgN-RNAi    | F<br>R | 5'-CTCAGGACAACACTGGCAGA-3'<br>5'-AGGCTTCGTAACCTGCCTCA-3'       | 363                  |
| 4  | HF969256         | BgDI-RT     | F<br>R | 5'-CCACTACAAGTGTTCGCCAA-3'<br>5'-TACCTCTCGCATTGTCACA-3'        | 180                  |
| 5  | HF969256         | BgDI-RNAi   | F<br>R | 5'-CAACGACTATGGCAAGGACA-3'<br>5'-ATCAGCGTCTCTCCTCTGA-3'        | 339                  |
| 6  | HG515375.1       | BgSer-RT    | F<br>R | 5'-TCCTTTGGCAGTGCATTG-3'<br>5'-CTTGATCACAGAGGATGCCG-3'         | 55                   |
| 7  | HG515376.1       | BgSer-RNAi  | F<br>R | 5'-CCATGGGGTGAATGTCGTGA-3'<br>5'-CCTTGCTCAGGTCACAGAG-3'        | 260                  |
| 8  | HF969267.1       | BgCyc-E-RT  | F<br>R | 5'-TACCTGGGCAAATCCAAGAG-3'<br>5'-TTCATCTCGCTCATGACTGG-3'       | 76                   |
| 9  | LN812812         | BgCasp1-RT  | F<br>R | 5'-AAGCGGAAGGATTCATACCA-3'<br>5'-GATGACTGCCTTGCCCTTC-3'        | 80                   |
| 10 | HF969265         | BgCut-RT    | F<br>R | 5'-AAATATGTGCTCGGCCTGTC-3'<br>5'-TGCATCTTGCGGTAAGTGC-3'        | 107                  |
| 11 | HF969258         | BgHnt-RT    | F<br>R | 5'-CTACGACATCGCAAGAAGCA-3'<br>5'-AAAGGGCAGTGGAGTTGTTG-3'       | 40                   |
| 12 | HF969257         | BgEya-RT    | F<br>R | 5'-GGCTTTAGGCACAAAACGA-3'<br>5'-GCAAGGGCTGGAACAACTG-3'         | 166                  |
| 13 | LN812813         | BgSu-H-RT   | F<br>R | 5'-TGCCACACCAGTTTGGTTTA-3'<br>5'-TGGCCTGTACAACATTGAGC-3'       | 101                  |
| 14 | AJ862721         | BgActin-5c  | F<br>R | 5'-AGCTTCCTGATGGTCAGGTGA-3'<br>5'-ACCATGTACCCTGGAATTGCCGACA-3' | 213                  |
| 15 | HF969254         | BgEIF4a     | F<br>R | 5'-ATGGTGACATGCCACAAAAA-3'<br>5'-GCAACACCTTCTCCAAA-3'          | 208                  |

F: Primer forward - R: Primer reverse

In red is showed the housekeeping genes: BgActin-5c used for pattern expression studies and EIF4-a used for mRNA expression in RNAi studies.