

## **Supplementary movies:**

### **Movie 1:**

Time lapse imaging of live H2B-EGFP control and NCS treated oocytes. Same oocytes are on the Fig. 1C.

### **Movie 2:**

Time lapse imaging of live control or NCS treated oocytes expressing 2mEGFP-CENP-C (green) and H2B-mCherry (red). Same oocytes are on the Fig. 2A.

### **Movie 3:**

Time lapse imaging of live control and NCS treated oocytes expressing securin-EGFP (green) and H2B-mCHERRY (red). Same oocytes are on the Fig. S1A.

### **Movie 4:**

Time lapse imaging of live H2B-EGFP control and mirin treated oocytes. Same oocytes are on the Fig. 5A.

### **Movie 5:**

Time lapse imaging of live control and mirin treated oocytes expressing MAP-EGFP (green) and H2B-mCHERRY (red). Same oocytes are on the Fig. S4D.

### **Movie 6:**

Time lapse imaging of live control or mirin treated oocytes expressing EGFP-CENP-C (green) and H2B-mCherry (red). Same oocytes are on the Fig. 5B.