Supplemental material
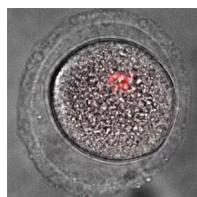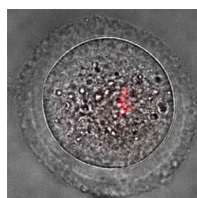
Video 1.   **Progression through meiosis I in control oocyte.** A *Ccnb3*^{+/−} oocyte incubated with SiR-DNA to visualize chromosomes. Acquisitions were started at GVBD + 6:30 (hours:minutes). 11 z-sections with 3-µm steps were taken to follow chromosome movements, and shown are overlays of the stack. Acquisitions of the far-red and DIC channel were done every 20 min; 21 time points are shown. Related to Fig. 2 A. This is a representative video from 42 oocytes from six independent experiments.

Video 2.   **Progression through meiosis I in *Ccnb3*^{−/−} oocyte.** A *Ccnb3*^{−/−} oocyte incubated with SiR-DNA to visualize chromosomes. Acquisitions were started at GVBD + 6:30 (hours:minutes). 11 z-sections with 3-µm steps were taken to follow chromosome movements, and shown are overlays of the stack. Acquisitions of the far-red and DIC channel were done every 20 min, 21 time points are shown. Related to Fig. 2 A. This is a representative video from 63 oocytes from six independent experiments.

Table S1.   **Primers used for cloning expression plasmids**

Primer ID	Primer (5′–3′)	Primers used to generate the plasmid indicated
p20	ATCTGAATTCGGATCCGCCACCATGCCACCACCACTACTACCC	pRN3-eRFP-cyclin B3
p21	AGGAGGTCATGGATCCGTGGAATAATGCACAATTCAAAAGATTCTC	
p30	CTTTACTGCGCCTTGAGTTGAAG	pRN3-eRFP-cyclin B3 Δdbox
p31	GCATCTCATAGTCAATGTGTCCAG	
p37	GAACTCACCAGTGATGCGGCAGCCATTGCTGTGGACTGGTTGGTG	pRN3-eRFP-cyclin B3 MRL
p38	CACCAACCAGTCCACAGCAATGGCTGCCGCATCACTGGTGAGTTC	
p92	CGCGGGCCCGGGATCCATGATGCCTTCTCTTCGTCCATCTC	pRN3-eGFP-*X.laevis* cyclin B3
p93	TAGATCCGGTGGATCCTTAGCTCTGAAGGGCCTCTGTAAG	
p100	CGCGGGCCCGGGATCCATGCCGTTTTCAAAAGGAAAAAAGCCC	pRN3-eGFP-*D.rerio* cyclin B3
p101	TAGATCCGGTGGATCCTCACTTCAAAAGCCCTTCAAGCTTCTC	
p104	CGCGGGCCCGGGATCCATGGCGCCCACAAAAGCAACAAC	pRN3-eGFP-*D.melanogaster* cyclin B3
p105	TAGATCCGGTGGATCCCTACGACAGATTGCTTTCGTTCAGGTC	
p47	TACTTCCAATCCAATATTATGCCACCACCACTACTACCC	pFastBacI-MBP6His-cyclin B3 or cyclin B3 MRL
p48	TTATCCACTTCCAATATTTCAGTGGAATAATGCACAATTCAAAAG	