Davis-Roca et al., https://doi.org/10.1083/jcb.201608042

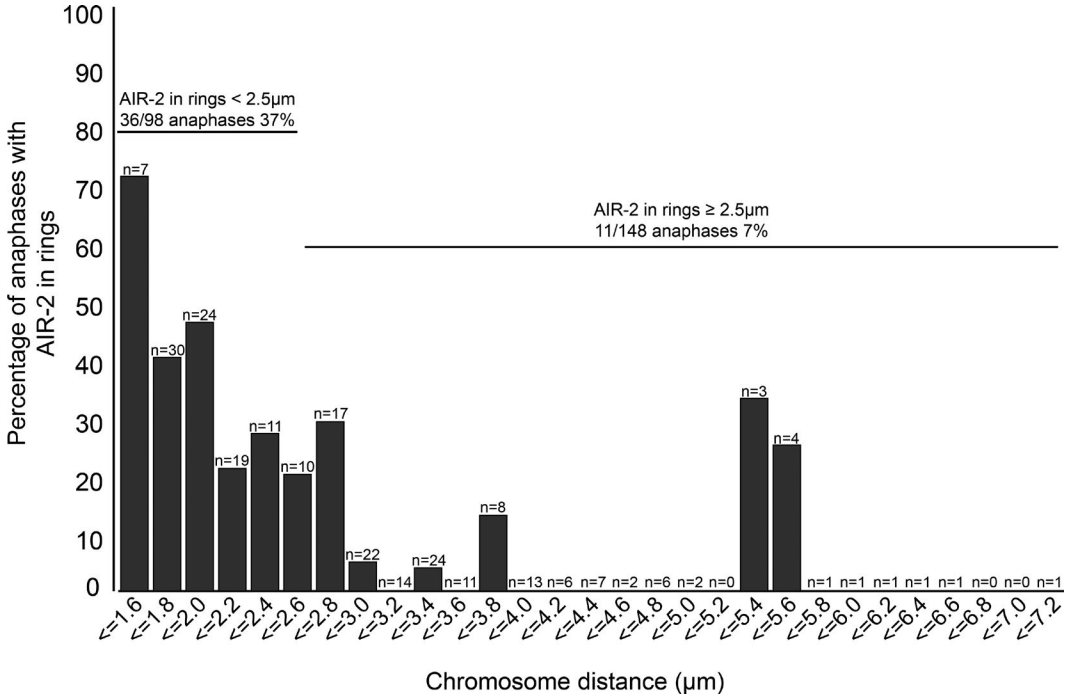
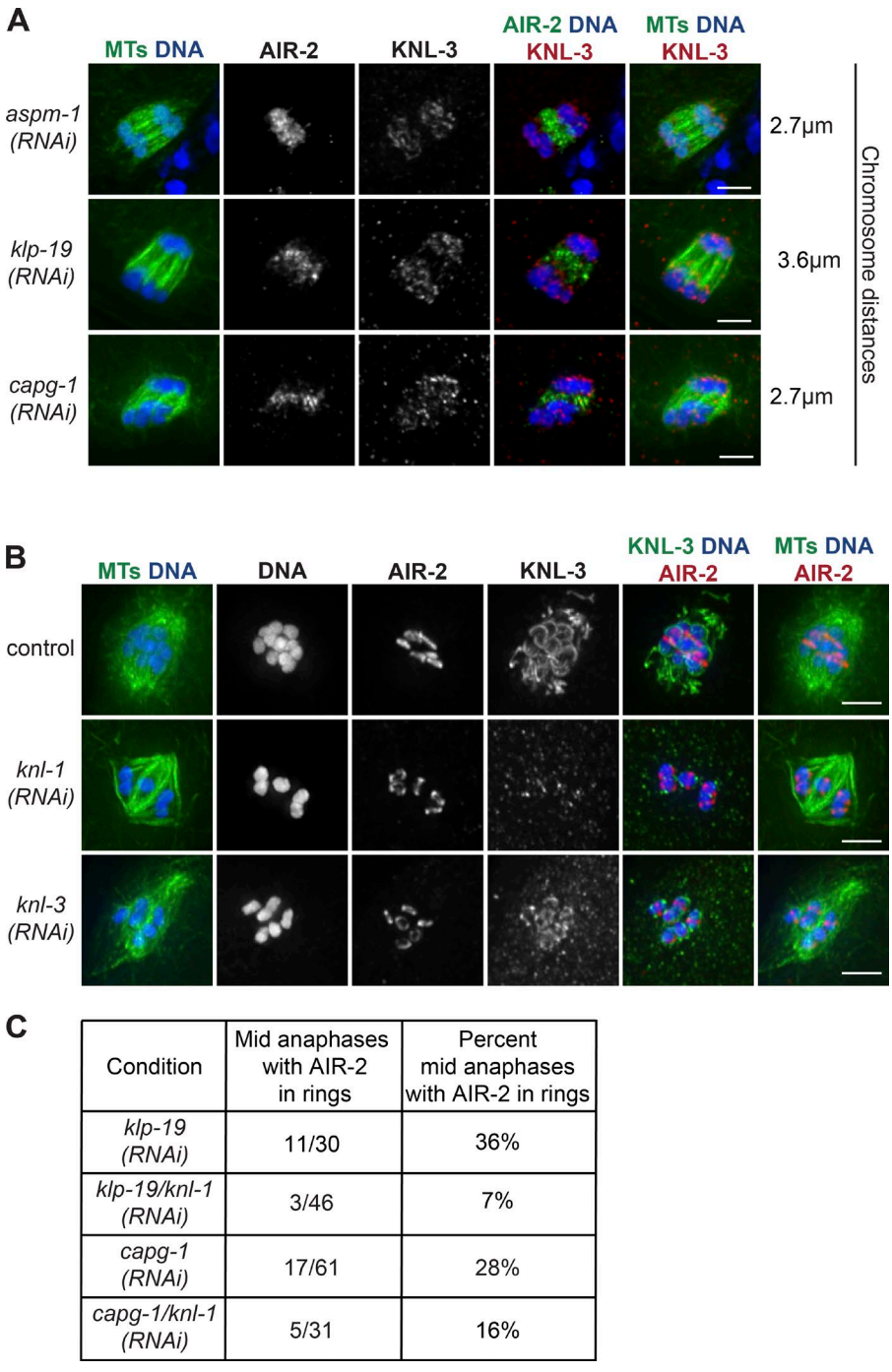


Figure S1. **Quantification of AIR-2 localization in wild-type anaphase.** Percentage of anaphase spindles with AIR-2 in rings at each given chromosome segregation distance.



C

Condition	Mid anaphases with AIR-2 in rings	Percent mid anaphases with AIR-2 in rings
klp-19 (RNAi)	11/30	36%
klp-19/knl-1 (RNAi)	3/46	7%
capg-1 (RNAi)	17/61	28%
capg-1/knl-1 (RNAi)	5/31	16%

Figure S2. **Kinetochore analysis under additional error conditions.** (A) Spindles stained for DNA (blue), tubulin (green, columns 1 and 5), AIR-2 (green, column 4), and outer kinetochore component KNL-3 (red). KNL-3 is usually removed from chromosomes in anaphase but remains chromosome associated when AIR-2 remains in rings; *aspm-1*, *capg-1*, and *klp-19 RNAi* treatment shown. (B) Metaphase spindles stained for DNA (blue), tubulin (green, columns 1 and 6), KNL-3 (green, column 5), and AIR-2 (red) after partial *knl-1 (RNAi)* or *knl-3 (RNAi)*. (C) Quantification of mid anaphase spindles with AIR-2 in rings (chromosome distances ≥2.5 µm) for *klp-19(RNAi)*, *capg-1(RNAi)*, *klp-19/knl-1(RNAi)*, and *capg-1/knl-1(RNAi)*. Data include both MI and MII spindles. Kinetochore depletion by *knl-1(RNAi)* reduces the percentage of AIR-2 in rings in *klp-19(RNAi)* and *capg-1(RNAi)* spindles. *aspm-1/knl-1(RNAi)* could not be quantified because of disorganization of the spindle but showed a similar trend. Bars, 2.5 µm.

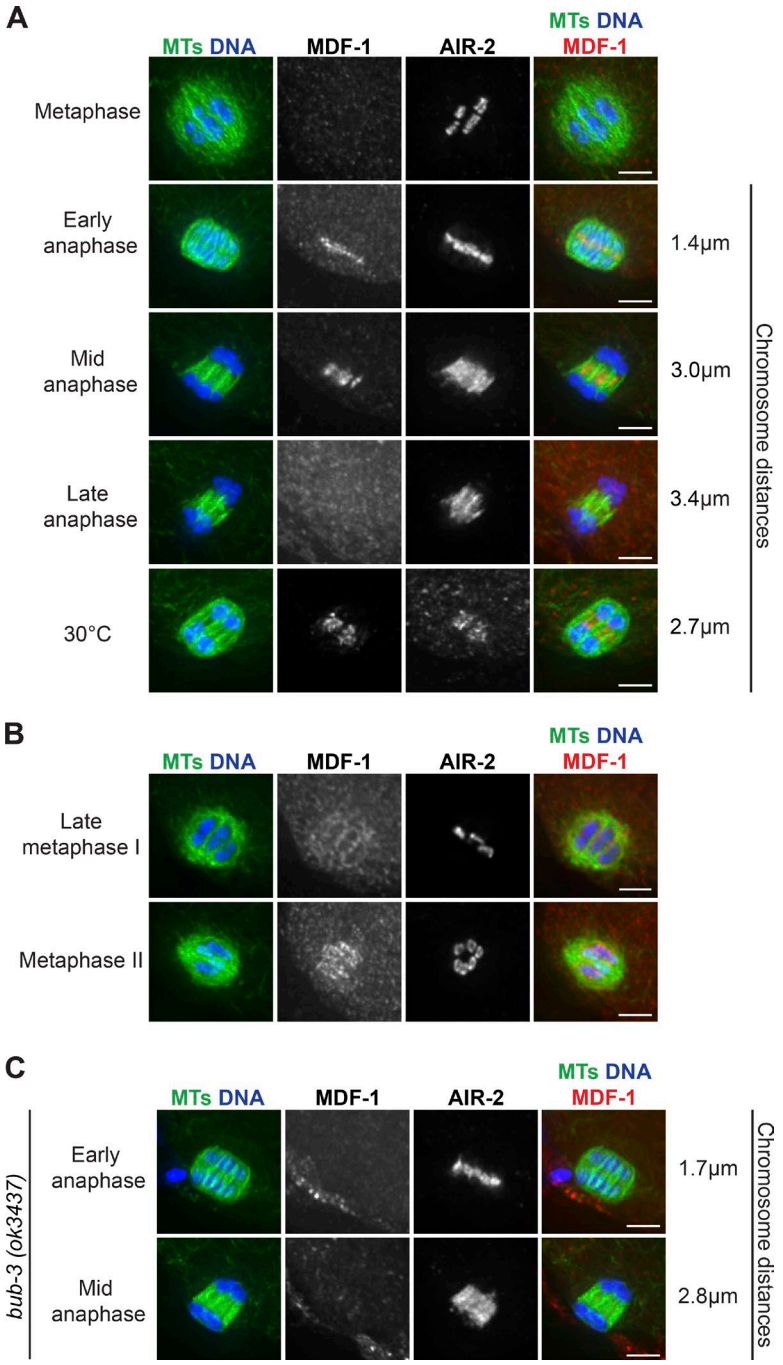
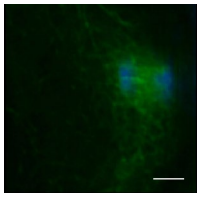
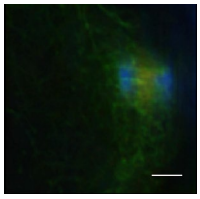


Figure S3. **MDF-1 (Mad1) localization and targeting in oocyte meiosis.** Spindles stained for DNA (blue), tubulin (green), MDF-1 (red), and AIR-2. (A) MDF-1 is diffuse until early anaphase when it localizes to the rings and persists there as the rings disassemble. Similar to other ring proteins we have assayed, MDF-1 remains on rings longer under error conditions, suggesting that the entire ring complex is stabilized under these conditions. (B) Although MDF-1 is usually diffuse in metaphase, occasionally we observed kinetochore or ring localization at that stage. Two examples are shown: MI (row 1) and MII (row 2). The top panel shows a single z slice. This localization did not appear to be increased under error conditions and may represent transient targeting. (C) MDF-1 is delocalized from the ring complexes in anaphase in the *bub-3(ok3437)* mutant strain. Bars, 2.5 µm.



Video 1. **Movie steps through individual z-slices, highlighting open channels in the central region of a *capg-1(RNAi)* mid anaphase spindle.** Chromosome segregation distance is 3.4 µm. DNA (blue), tubulin (green). Bar, 2.5 µm.



Video 2. **Movie steps through individual z-slices, highlighting open channels in the central region of a *capg-1(RNAi)* mid anaphase spindle where the rings are located.** Chromosome segregation distance is 3.4 µm. DNA (blue), tubulin (green), AIR-2 (red). Bar, 2.5 µm.