Connolly et al., http://www.jcb.org/cgi/content/full/jcb.201412010/DC1

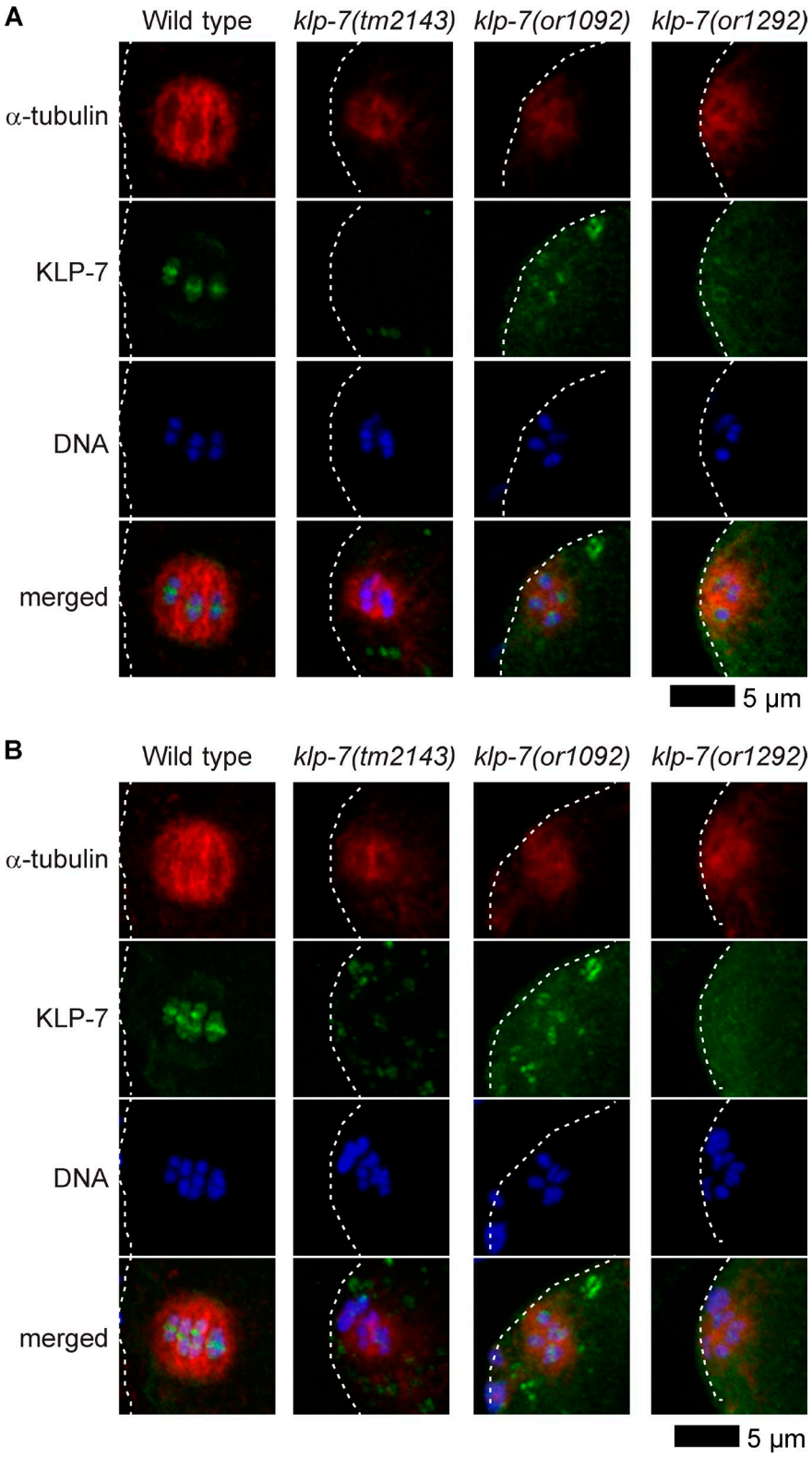

Figure S1. **KLP-7 immunolocalization in wild-type and *klp-7(–)* oocytes.** (A and B) Immunolocalization of KLP-7 and α-tubulin, and DAPI staining of chromosomes during meiosis I in fixed wild-type and *klp-7(–)* embryo showing a single focal plane (A) and z projections (B). White dashed lines indicate the oocyte plasma membrane.

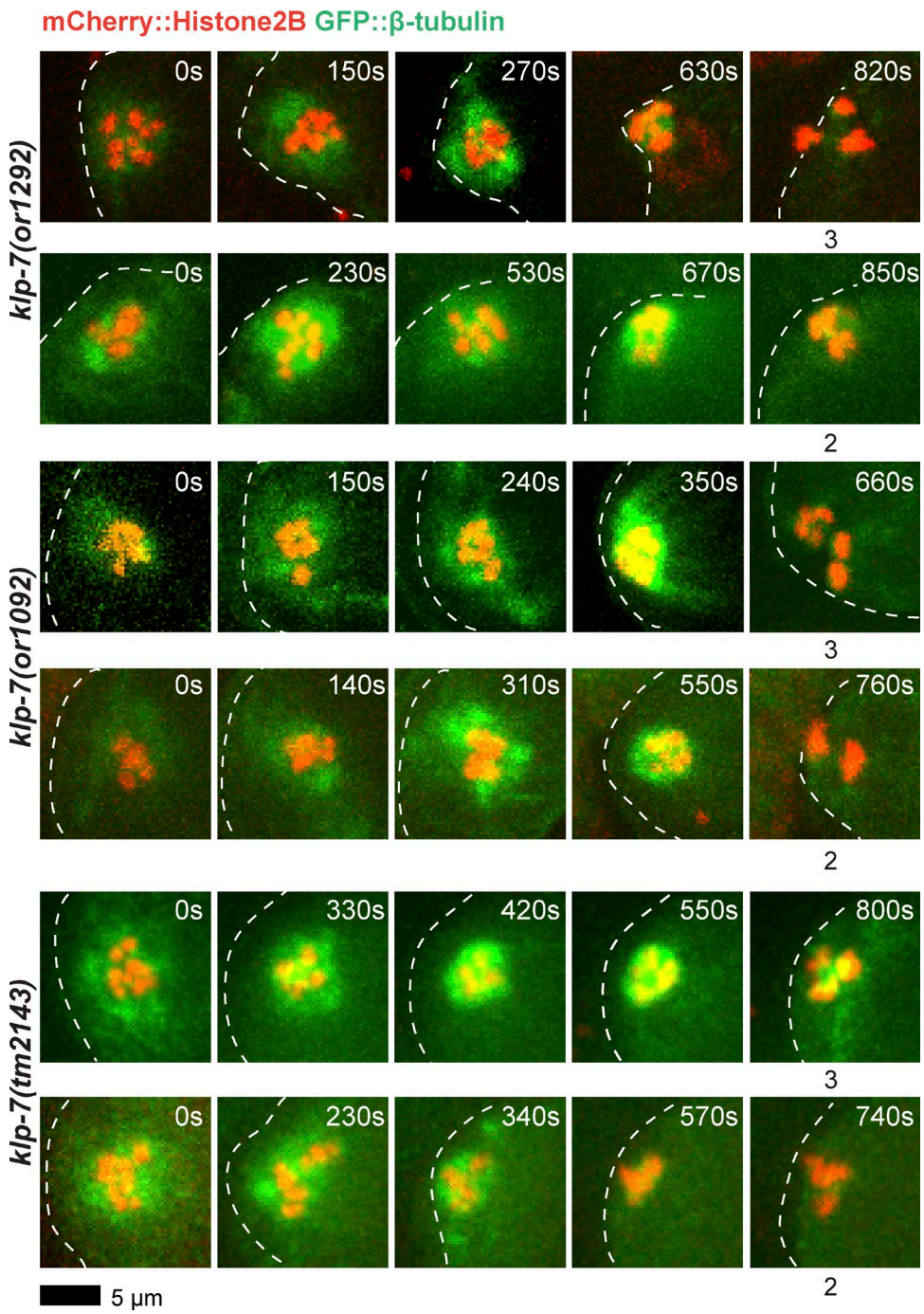

Figure S2. ***klp-7(–) oocytes assemble multipolar spindles with extra microtubules.*** Spinning disk confocal images were recorded over time during meiosis I in live mutant embryos expressing mCherry::Histone H2B and GFP::β-tubulin translational fusions to mark chromosomes and microtubules, respectively, in *klp-7(or1292)*, *klp-7(or1092)*, and *klp-7(tm2143)*. The number under the last image in each row indicates how many chromosome aggregates were scored for that oocyte. White dashed lines indicate the oocyte plasma membrane, and times after ovulation are indicated in time-lapse sequence frames.

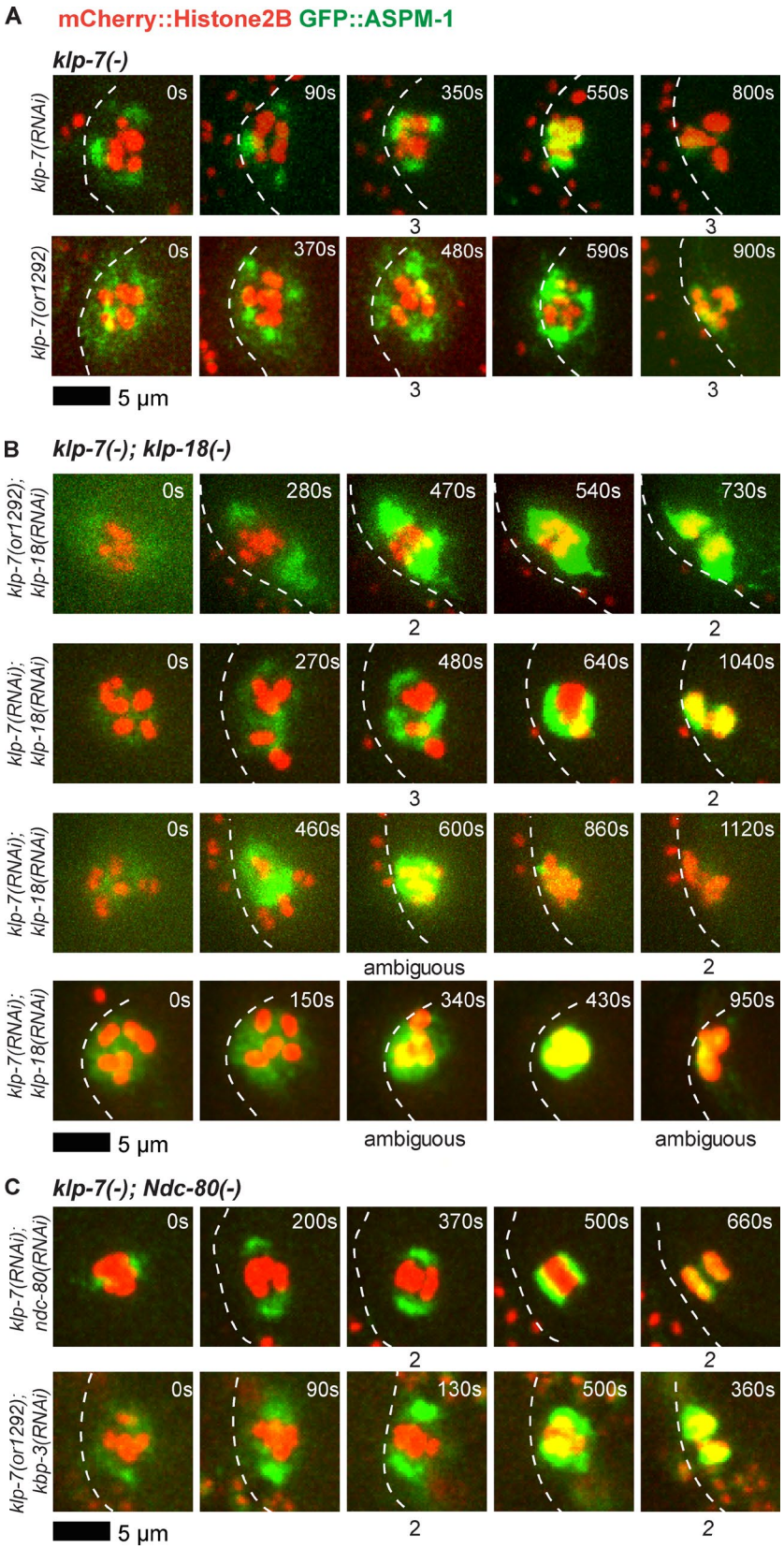

Figure S3. **Additional examples of spindle pole assembly in single and double mutant *klp-7(–)* oocytes.** Spinning disk confocal images were recorded over time during meiosis I in live mutant embryos expressing mCherry::Histone H2B and GFP::ASPM-1 translational fusions to mark chromosomes and spindle poles, respectively, in *klp-7(–)* (A), *klp-7(–);klp-18(–)* (B), and *klp-7(–); Ndc-80(–)* (C). The number under the third image indicates how many poles were scored for that oocyte, and the number under the last image in each row indicates how many chromosome aggregates were scored for that oocyte. The third row in C is an example of an ambiguous pole number that appeared large and possibly monopolar, but two chromosomal aggregates were observed at the last time point. White dashed lines indicate the oocyte plasma membrane, and times after ovulation are indicated in time-lapse sequence frames.

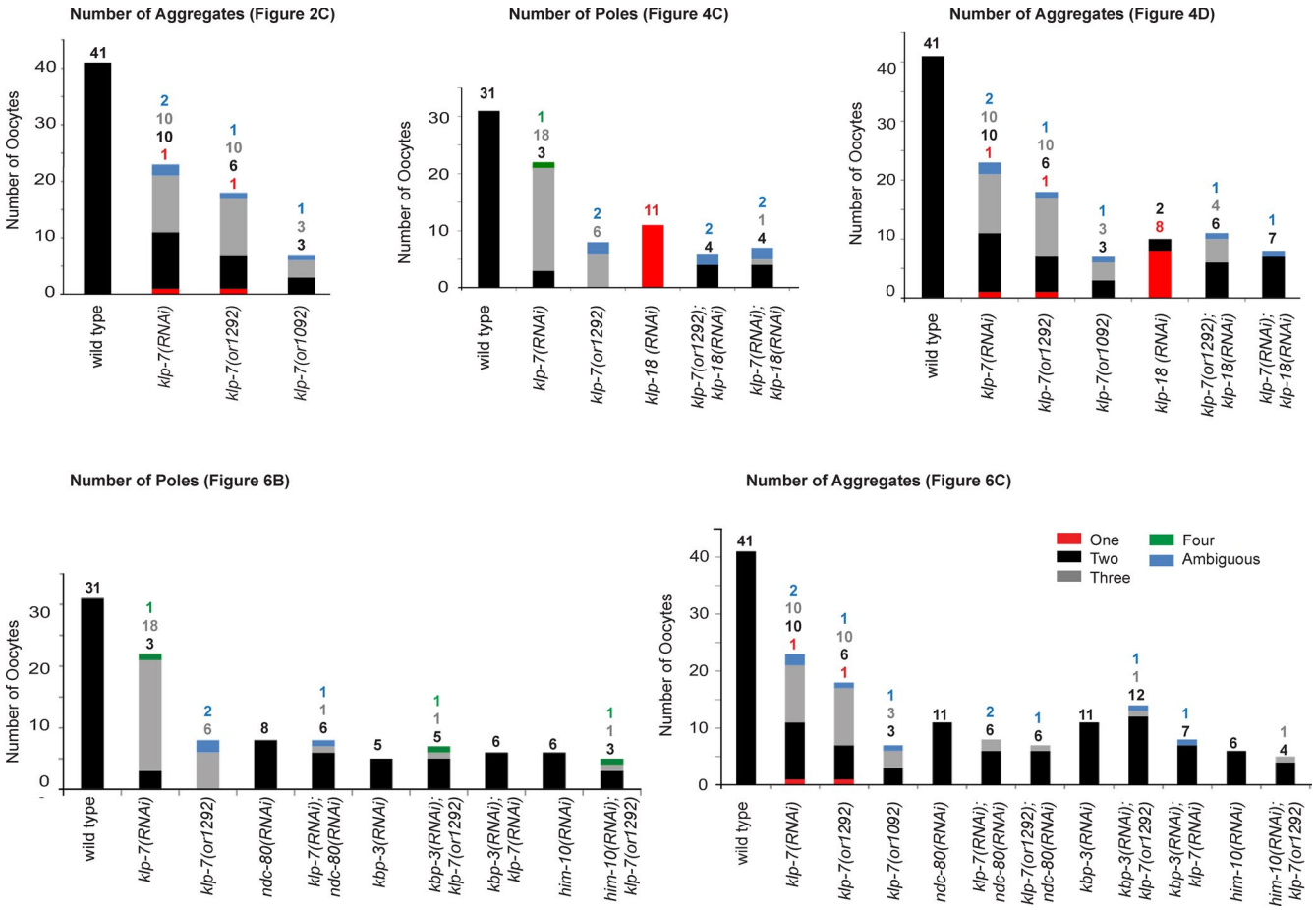

Figure S4. **Expanded results for Fig. 2 C, Fig. 4 (C and D), and Fig. 6, (B, and C).** Bar graphs show either the number of segregating chromosome masses detected during anaphase or the number of poles detected based on GFP::ASPM-1 distribution, as described in Fig. 3, for the indicated genotypes. All data are from video micrographs of individual oocytes, each isolated from different worms in multiple experiments.

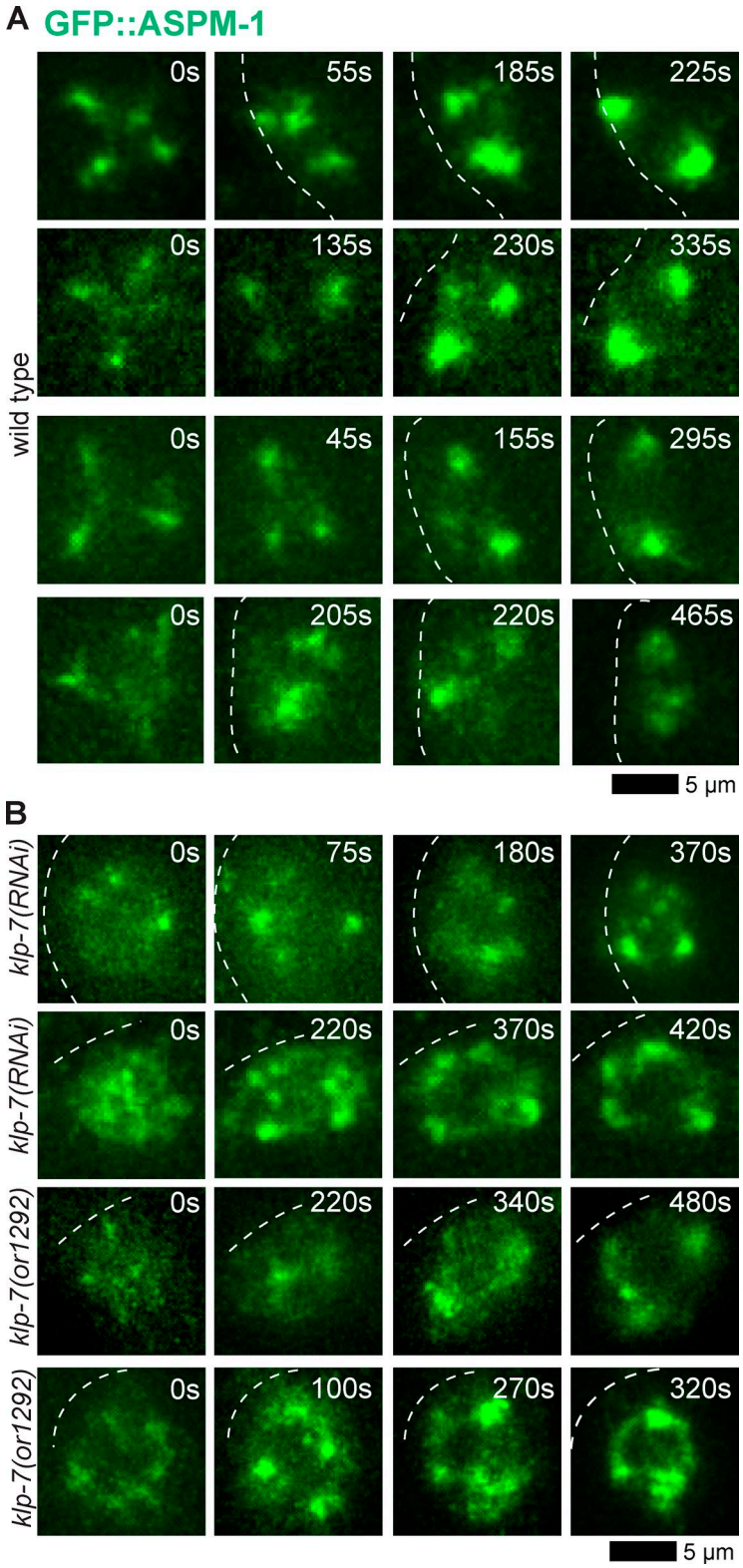

Figure S5. **GFP::ASPM-1 and oocyte meiotic spindle pole coalescence in wild-type oocytes and *klp-7(–)* oocytes.** Time-lapse spinning disk microscopy of wild-type oocytes using a homozygous viable CRISPR/Cas9 GFP::ASPM-1 endogenous fusion. White dashed lines indicate the oocyte plasma membrane, and times after ovulation are indicated in time-lapse sequence frames.

Table S1. ***C. elegans* strains used in this study**

Strain	Genotype
EU2695	*klp-7(or1292*ts*)*, III; *ojIs1*[*pie-1*p::GFP::*tbb-2* + *unc-119(+)*]; *itIs37*[*pie-1*p::mCherry::H2B::*pie-1* 3′UTR + *unc-119(+)*] IV
EU2697	*mei-1(or1178*ts*)*, I; *ojIs1*[*pie-1*p::GFP::*tbb-2* + *unc-119(+)*]; *itIs37*[*pie-1*p::mCherry::H2B::*pie-1* 3′UTR + *unc-119(+)*] IV
EU2810	*orEx25* [*unc-119(+); pie-1* promoter::GFP::*aspm-1*]; *itIs37[pie-1*p::mCherry::H2B::*pie-1* 3′UTR + *unc-119(+)*] IV
EU2861	*or1935*[GFP::*aspm-1*] I
EU2866	*orIs1 [unc-119(+); pie-1*p::GFP::*mei-1*]; *itIs37 [unc-19(+) pie-1*::mCherry::H2B]
EU2876	*or1935*[GFP::*aspm-1*] I; *itIs37[pie-1*p::mCherry::H2B::*pie-1* 3′UTR + *unc-119(+)*] IV
EU2934	*klp-7(or1292)*, III; *or1935[*GFP::*aspm-1*] I; *itIs37[pie-1*p::mCherry::H2B::*pie-1* 3′UTR + *unc-119(+)*] IV
EU2863	*klp-7(or1092)*, III
EU2936	*klp-7(or1092)*, III *unc-68(e587)*, III
EU2715	*klp-7(or1092)*, III*; ojIs1[pie-1*p::GFP::*tbb-2* + *unc-119(+)*]; *itIs37[pie-1p*::mCherry::H2B::*pie-1* 3′UTR + *unc-119(+)*] IV
EU2938	*klp-7(or1292)*,III; *itIs37*[*pie-1*p::mCherry::H2B::*pie-1* 3′UTR + *unc-119(+)*] IV; *him-5(e1490)* V
EU2940	*klp-7(tm2143), III; ruIs57[pie-1*p::GFP::tubulin + *unc-119(+)*]; *itIs37[pie-1*p::mCherry::H2B::*pie-1* 3′UTR + *unc-119(+)*] IV
EU2941	*klp-7(tm2143)/qC1[qIs26*] III
EU2942	*ruIs57[pie-1*p::GFP::tubulin + *unc-119(+)*]; *itIs37[pie-1*p::mCherry::H2B::*pie-1* 3′UTR + *unc-119(+)*] IV

Table S2. **Oligos for the double-stranded RNA used in this study**

Gene	Left primer	Right primer
him-8	left: 5′-CAAAAATTGCATATGGGCCT-3′	right: 5′-TCCAATTGCTCCTCCATTTC-3′
kbp-3	left: 5′-AGGTGAATCCAAATGGAGAATTT-3′	right: 5′-TCATTGAATTTTTGCAGGTTTTT-3′
klp-7	left: 5′-GCTCCTGCACCGAAGTCTAC-3′	right: 5′-TGTCACGATCGCATTCTCTC-3′
klp-18	left: 5′-TCCAACTTTCAAATGCCACA-3′	right: 5′-TTCGATATGGAAGAAAGCGG-3′
ndc-80	left: 5′-CGAAAAGCAGCAGAAAATCC-3′	right: 5′-AACGGCGCTTAATTCGAGTA-3′