

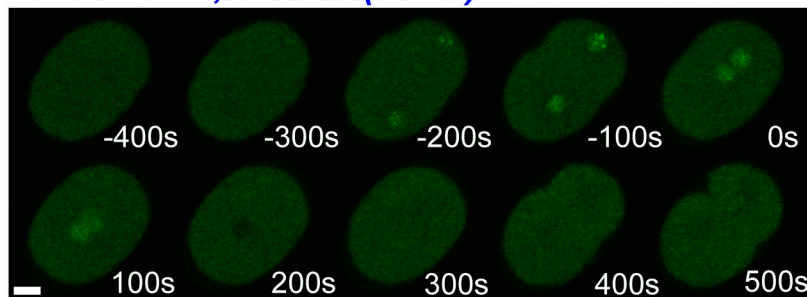
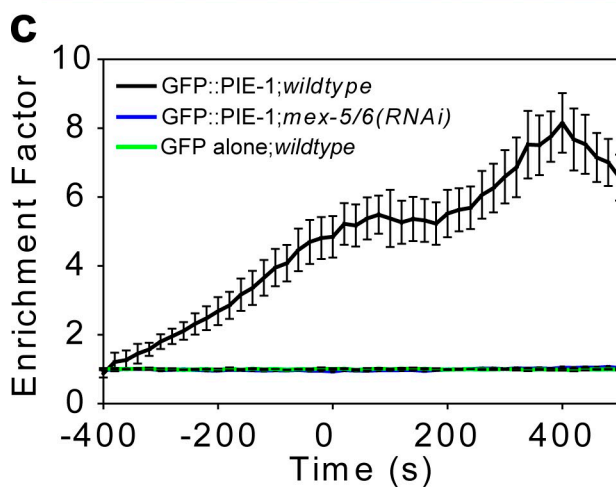
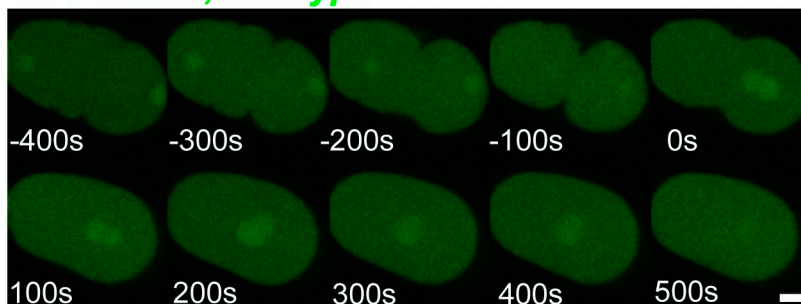
a GFP::PIE-1;*mex-5/6(RNAi)***b** GFP alone; *wildtype*

Figure S1. **Loss of *mex-5/6* function in *mex-5/6(RNAi)* embryos.** (A) GFP::PIE-1 remains uniformly distributed in *mex-5/6(RNAi)* embryos, which is consistent with observation of *mex-5/6* knockouts. (B) GFP molecules remain uniformly distributed in wild-type embryos, suggesting the absence of nonspecific polarized degradation in the zygote. (C) Posterior enrichment of fluorescence does not take place in GFP::PIE-1 (*mex-5/6 RNAi*) or GFP alone wild-type embryos. Error bars represent SEM. Bars, 10 μ m.

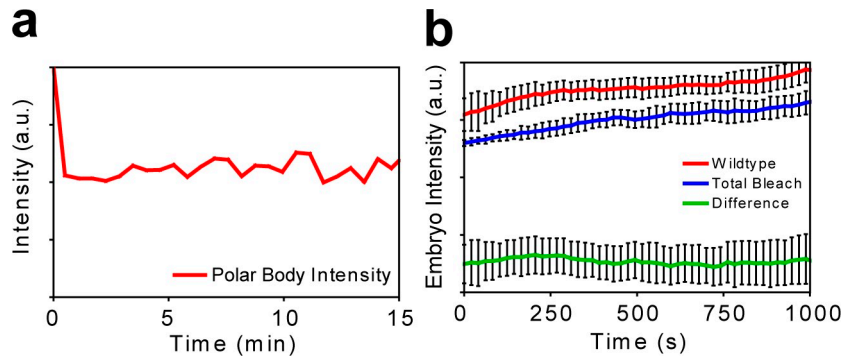


Figure S2. **GFP::PIE-1 photobleaches irreversibly within time scales relevant to FRAP and FLIP, indicating that fluorescence recovery in FRAP and FLIP is caused by diffusion.** (A) JH1545 embryos occasionally extrude fluorescent polar bodies. Photobleached polar bodies did not undergo significant recovery, indicating that photobleaching can be considered irreversible over time scales relevant to all experiments in this study. (B) Whole cell FRAP recovery curves match the rate of recovery as expected from basal GFP::PIE-1 expression predicted from simple intensity measurements (see Fig. 1). The difference between the intensity of each curve remains relatively constant throughout the first cell cycle, as expected for irreversible photobleaching. Error bars represent SEM.

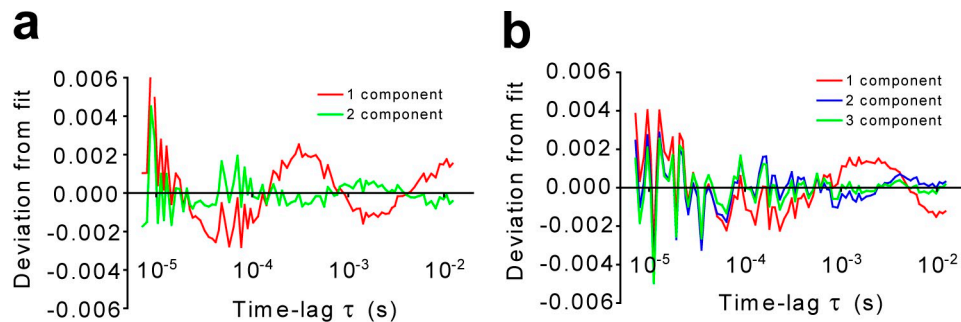


Figure S3. **There are multiple freely diffuse species of GFP::PIE-1 in both the anterior and posterior cytoplasm.** Fluorescence correlation spectroscopy autocorrelation curves exhibited oscillatory deviations from fit for a one-component fit in both the anterior (A) and posterior (B) cytoplasm, indicating a poor fit. Multicomponent fits alleviated this problem in both regions.