ABSTRACT

The role of dynamin and Rho1 during cytokinesis in C. elegans

Cytokinesis is the final phase of cell division in which a single cell is physically separated into two daughter cells. This is accomplished by constricting the acto-myosin contractile ring and inserting new membrane along the furrow. The large GTPase dynamin is essential for cytokinesis. Dynamin is required for endocytosis and also regulates the dynamics of the actin cytoskeleton. We hypothesize that dynamin may regulate the acto-myosin contractile ring. In order to test this hypothesis, we use in vivo microscopy to shed light on the role of DYN-1 in regulating actin dynamics by using GFP::RHO-1 as a marker. These experiments yield insight into the establishment and regulation of the contractile ring during cytokinesis.

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