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Cell cycle ends with cytokinesis that is the physical separation of a cell into two daughter cells. For faithful cytokinesis, cells integrate multiple processes, such as actomyosin ring formation, contraction and plasma membrane closure, into coherent responses. Linear actin assembly by formins is essential for formation and maintenance of actomyosin ring. Budding yeast conceives only two formins, Bni1 and Bnr1. From G_1/S to metaphase, Bni1 localizes at the growth point in the daughter cell, whereas Bnr1 localizes at the pre-determined division site. However, the underlying mechanisms of the switching their subcellular localization were not completely understood.

Here, we provide evidence showing that Bnr1 is dephosphorylated concomitant with its release from the division site. Impaired PP1/Glc7 activity delayed Bnr1 release and dephosphorylation, Bni1 recruitment and actomyosin ring formation at the division site. These results suggest the involvement of Glc7 in this regulation. Further, we identified Ref2 as the PP1 regulatory subunit responsible for this regulation. Taken together, Glc7 and Ref2 may have a role in actomyosin ring formation by modulating the localization of formins during cytokinesis.