

Abstract

Cytokinesis is the last step of cell cycle when two individual daughter cells separate in process called abscission. This process involves various cellular membrane structures such as endoplasmic reticulum or *trans*-Golgi network. Moreover, recent investigation has also highlighted an important role of recycling endosomes. The membrane dynamics appear to be important during cell division especially for the formation of new plasma membrane between two daughter cells. Numerous studies suggest that cytokinesis is tightly linked with highly sophisticated transmembrane shuttle that is controlled by Ras-superfamily members such as Rab and Ral proteins. Moreover, during last years has also been revealed the involvement of tethering factors which mediate the fusion of intracellular vesicles with the target plasma membrane. The best known tethering factor is the evolutionary conserved exocyst complex found in all eukaryotic cells. This protein complex is composed of eight subunits (Sec3, Sec5, Sec6, Sec8, Sec10, Sec15, Exo70 and Exo84) and was found to interact with members of Ras-superfamily suggesting its involvement in the regulation of cytokinesis. Although the exact mechanism remains shrouded in fog this work suppose the possible interactions among Ras-like proteins and exocyst members which may regulate the vesicle transport from recycling endosomes to the plasma membrane and thus mediate the last steps of cell division.