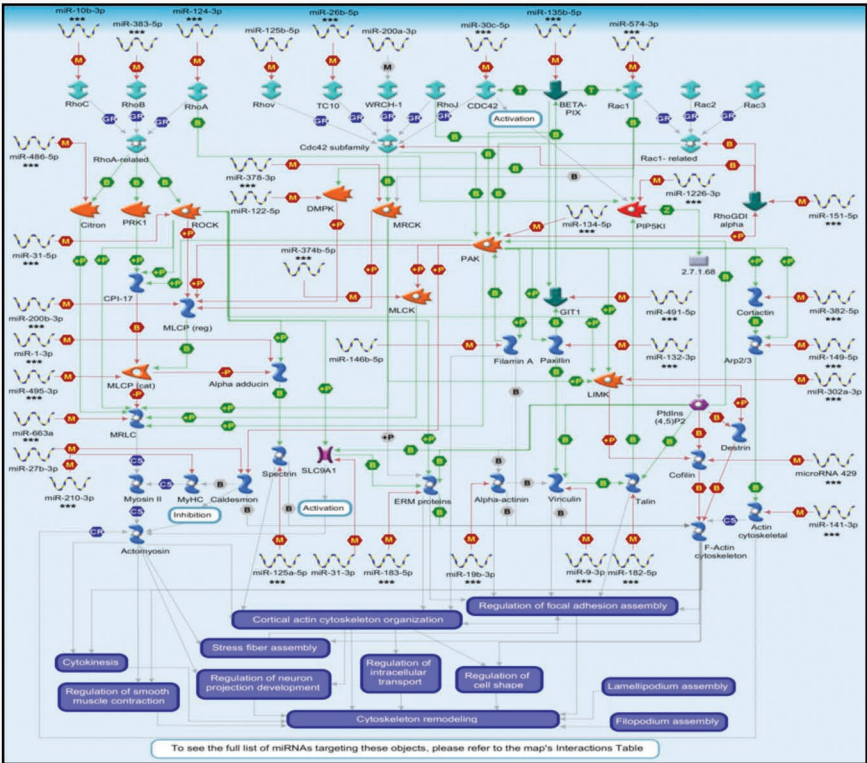


# Regulation of actin cytoskeleton organization by the kinase effectors of Rho GTPases



Ras-homologous (Rho) GTPases are well-known regulators of the actin cytoskeleton, which is involved in many important processes, such as cell migration, cell adhesion, regulation of cell shape and intracellular transport. Among Rho GTPases, members of the RhoA, Rac1 and CDC42 subfamilies have been most extensively studied. Activated Rho GTPases recruit a series of kinase effectors (e.g. ROCK, PAK and MRCK) that regulate the organization and dynamics of diverse F-actin cytoskeleton structures.

Ras-homologous (Rho) GTPases are well-known regulators of the actin cytoskeleton, which serves as a scaffold for the spatial distribution of a large set of cellular components. Activated Rho GTPases recruit a series of kinases that regulate assembly and organization of diverse F-Actin cytoskeleton structures needed for many important processes [1], such as cell migration [2], [3], [4] cell adhesion [2], cytokinesis [5], regulation of cell shape [6] and intracellular transport, [7], [8], [9]. Among Rho GTPases, members of the RhoA, Rac1 and CDC42 subfamilies have been widely studied for their effects on actin organization, being classically associated with stress fibre assembly, filopodium assembly and lamellipodium assembly

MIRXES has 163 miRNAs targeting 74 proteins on this signalling cascade, indicating that most proteins involved in the Rho pathway are miRNA targets and may therefore be affected by miRNA action.

Hi-resolution  
Pathway Map



Full pathway  
summary & Citations



Relevant microRNA  
and gene transcripts



Interactions Table

