

# The role of small GTPases in neuronal morphogenesis and polarity

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The highly dynamic remodeling and cross talk of the microtubule and actin cytoskeleton support neuronal morphogenesis. Small RhoGTPases family members have emerged as crucial regulators of cytoskeletal dynamics. In this review we will comprehensively analyze findings that support the participation of RhoA, Rac, Cdc42, and TC10 in different neuronal morphogenetic events ranging from migration to synaptic plasticity. We will specifically address the contribution of these GTPases to support neuronal polarity and axonal elongation. © 2012 Wiley Periodicals, Inc.