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Inhibitors, Screening Libraries, Proteins

ROCK

Rho-associated protein kinase; Rho-associated kinase; Rho-kinase; ROK

ROCK (Rho-associated protein kinase) is a kinase belonging to the AGC (PKA/ PKG/PKC) family of serine-threonine kinases. ROCKs (ROCK1 and ROCK2) occur in mammals, zebrafish, *Xenopus*, invertebrates and chicken. Human ROCK1 has a molecular mass of 158 kDa and is a major downstream effector of the small GTPase RhoA. Mammalian ROCK consists of a kinase domain, a coiled-coil region and a Pleckstrin homology (PH) domain, which reduces the kinase activity of ROCKs by an autoinhibitory intramolecular fold if RhoA-GTP is not present. ROCK plays a role in a wide range of different cellular phenomena, as ROCK is a downstream effector protein of the small GTPase Rho, which is one of the major regulators of the cytoskeleton.