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Rac GAP1 Polyclonal Antibody

Catalog # AP72136

Product Information

Application	WB, IHC-P, IF, ICC, E
Primary Accession	Q9H0H5
Reactivity	Human, Mouse, Rat, Monkey
Host	Rabbit
Clonality	Polyclonal
Calculated MW	71027

Additional Information

Gene ID	29127
Other Names	RACGAP1; KIAA1478; MGCRACGAP; Rac GTPase-activating protein 1; Male germ cell RacGap; MgcRacGAP; Protein CYK4 homolg; CYK4; HsCYK-4
Dilution	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/40000. Not yet tested in other applications. IHC-P~~N/A IF~~1:50~200 ICC~~N/A E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

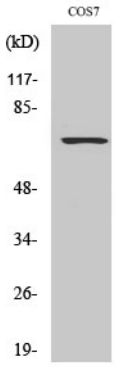
Name	RACGAP1 (HGNC:9804)
Function	Component of the centralspindlin complex that serves as a microtubule-dependent and Rho-mediated signaling required for the myosin contractile ring formation during the cell cycle cytokinesis. Required for proper attachment of the midbody to the cell membrane during cytokinesis. Sequentially binds to ECT2 and RAB11FIP3 which regulates cleavage furrow ingression and abscission during cytokinesis (PubMed:18511905). Plays key roles in controlling cell growth and differentiation of hematopoietic cells through mechanisms other than regulating Rac GTPase activity (PubMed:10979956). Has a critical role in erythropoiesis (PubMed:34818416). Also involved in the regulation of growth-related processes in adipocytes and myoblasts. May be involved in regulating spermatogenesis and in the RACGAP1 pathway in neuronal proliferation. Shows strong GAP (GTPase activation) activity towards CDC42 and RAC1 and less towards RHOA. Essential for the early stages of embryogenesis. May play a role in regulating cortical activity through RHOA during cytokinesis. May participate in the regulation of sulfate transport in male germ cells.

Cellular Location	Nucleus. Cytoplasm. Cytoplasm, cytoskeleton, spindle Cytoplasmic vesicle, secretory vesicle, acrosome. Cleavage furrow Midbody, Midbody ring. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Midbody Note=Colocalizes with RND2 in Golgi-derived proacrosomal vesicles and the acrosome (By similarity). During interphase, localized to the nucleus and cytoplasm along with microtubules, in anaphase, is redistributed to the central spindle and, in telophase and cytokinesis, to the midbody ring, also called Flemming body. Colocalizes with RHOA at the myosin contractile ring during cytokinesis. Colocalizes with ECT2 to the mitotic spindles during anaphase/metaphase, the cleavage furrow during telophase and at the midbody at the end of cytokinesis Colocalizes with Cdc42 to spindle microtubules from prometaphase to telophase. Localizes to the midbody in a KIF23 and PRC1-dependent manner. {ECO:0000250|UniProtKB:Q9WVM1, ECO:0000269|PubMed:36825683}
Tissue Location	Highly expressed in testis, thymus and placenta. Expressed at lower levels in spleen and peripheral blood lymphocytes In testis, expression is restricted to germ cells with the highest levels of expression found in spermatocytes. Expression is regulated in a cell cycle-dependent manner and peaks during G2/M phase

Background

Component of the centralspindlin complex that serves as a microtubule-dependent and Rho-mediated signaling required for the myosin contractile ring formation during the cell cycle cytokinesis. Required for proper attachment of the midbody to the cell membrane during cytokinesis. Plays key roles in controlling cell growth and differentiation of hematopoietic cells through mechanisms other than regulating Rac GTPase activity. Also involved in the regulation of growth-related processes in adipocytes and myoblasts. May be involved in regulating spermatogenesis and in the RACGAP1 pathway in neuronal proliferation. Shows strong GAP (GTPase activation) activity towards CDC42 and RAC1 and less towards RHOA. Essential for the early stages of embryogenesis. May play a role in regulating cortical activity through RHOA during cytokinesis. May participate in the regulation of sulfate transport in male germ cells.

Images



Western Blot analysis of various cells using Rac GAP1 Polyclonal Antibody

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.