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Anti- RACGAP1 / MgcRacGAP Antibody (C-term), Biotinylated

Catalog # AF4273a

Product Information

Application	WB, IHC, E
Primary Accession	Q9H0H5
Other Accession	29127, NP_037409.2, NP_001306934.1, NP_001306935.1, NP_001306936.1
Reactivity	Human
Predicted	Human, Dog
Calculated MW	71027

Additional Information

Gene ID	29127
Other Names	GAP; Rho signaling; spermatogenesis; mitosis; phosphoprotein; acetylprotein; spindlebody
Target/Specificity	This antibody is expected to recognize all reported isoforms (NP_037409.2; NP_001306934.1; NP_001306935.1; NP_001306936.1). Reported variants represent identical protein: NP_001306928.1, NP_001119576.1, NP_037409.2, NP_001306931.1, NP_001306929.1, NP_0011
Dilution	WB~~1:1000 IHC~~1:100~500 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Anti- RACGAP1 / MgcRacGAP Antibody (C-term), Biotinylated is for research use only and not for use in diagnostic or therapeutic procedures.

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. 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.
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

Images

Biotinylated Antibody (1 µg/ml) staining of Jurkat lysate (35 µg protein in RIPA buffer), exactly mirroring its parental non-biotinylated product. Primary incubation was 1 hour. Detected by chemiluminescence, using streptavidin-HRP and using NAP blocker as a substitute for skimmed milk.