abcepta

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Anti-MGCRACGAP Antibody

Rabbit polyclonal antibody to MGCRACGAP
Catalog # AP59834

Product Information

Application	WB, IF/IC, IHC
Primary Accession	Q9H0H5
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	71027

Additional Information

Gene ID	29127
Other Names	KIAA1478; MGCRACGAP; Rac GTPase-activating protein 1; Male germ cell RacGap; MgcRacGAP; Protein CYK4 homolog; CYK4; HsCYK-4
Target/Specificity	Recognizes endogenous levels of MGCRACGAP protein.
Dilution	WB~~WB (1/500 - 1/1000), IHC (1/100 - 1/200), IF/IC (1/100 - 1/500) IF/IC~~N/A IHC~~WB (1/500 - 1/1000), IHC (1/100 - 1/200), IF/IC (1/100 - 1/500)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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.

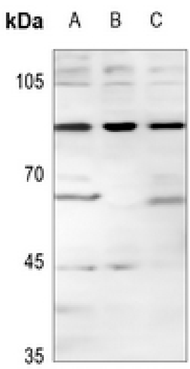
Tissue Location

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

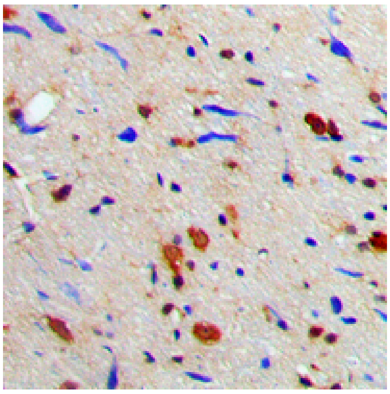
Background

KLH-conjugated synthetic peptide encompassing a sequence within the N-term region of human MGCRACGAP. The exact sequence is proprietary.

Images

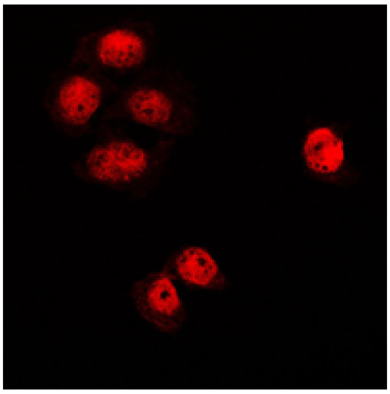


Western blot analysis of MGCRACGAP expression in HEK239T (A), A549 (B), H1792 (C) whole cell lysates.



Immunohistochemical analysis of MGCRACGAP staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Immunofluorescent analysis of MGCRACGAP staining in K562 cells. Formalin-fixed cells were permeabilized with



0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.