

Product Name: Rac GAP1 (phospho Ser387) Rabbit Polyclonal Antibody**Catalog #: APRab05324**

For research use only.

Summary

Description	Rabbit polyclonal Antibody
Host	Rabbit
Application	WB,IHC,ICC/IF,ELISA
Reactivity	Human,Mouse,Rat,Monkey
Conjugation	Unconjugated
Modification	Phosphorylated
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:200-1:1000,ELISA 1:10000-1:20000
Molecular Weight	72kDa

Antigen Information

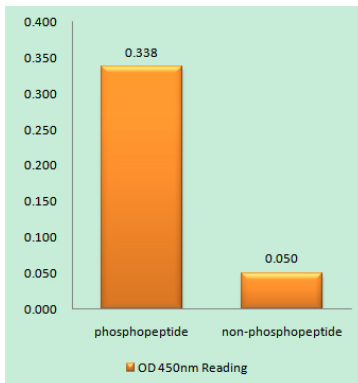
Gene Name	RACGAP1
Alternative Names	RACGAP1; KIAA1478; MGCRCAGAP; Rac GTPase-activating protein 1; Male germ cell RacGap; MgcRacGAP; Protein CYK4 homolg; CYK4; HsCYK-4
Gene ID	29127.0
SwissProt ID	Q9H0H5
Immunogen	The antiserum was produced against synthesized peptide derived from human GTPase Activating Protein around the phosphorylation site of Ser387. AA range:353-402

Background

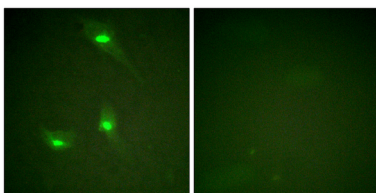
This gene encodes a GTPase-activating protein (GAP) that is a component of the centralspindlin complex. This protein binds activated forms of Rho GTPases and stimulates GTP hydrolysis, which results in negative regulation of Rho-mediated signals. This protein plays a regulatory role in cytokinesis, cell growth, and differentiation. Alternatively spliced transcript variants have been found for this gene. There is a pseudogene for this gene on chromosome 12. [provided by RefSeq, Feb 2016],domain:The coiled coil region is indispensable for localization to the midbody during cytokinesis.,function:Essential for the early stages of embryogenesis and may play a role in the microtubule-dependent steps in 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. Required for initiation of cleavage furrow ingression by regulating ECT2 and for assembly of the contractile ring. May play a role in regulating cortical activity through RHOA during cytokinesis. May participate in the regulation of sulfate transport in male germ cells.,induction:Expression is down-regulated during macrophage differentiation of HL-60 cells.,PTM:Phosphorylated at multiple sites in the midbody during cytokinesis. Phosphorylation by AURKB on SER-387 at the midbody is, at least in part, responsible for exerting its latent GAP activity towards RhoA.,similarity:Contains 1 phorbol-ester/DAG-type zinc finger.,similarity:Contains 1 Rho-GAP domain.,subcellular location: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. Colocalizes with RHOA at the contractile ring during cytokinesis. Colocalizes with RND2 in Golgi-derived proacrosomal vesicles and the acrosome.,subunit:Associates with alpha-, beta- and gamma-tubulin and microtubules. Interacts via its Rho-GAP domain with RND2. Associates with AURKB during M phase. Interacts via its Rho-GAP domain and basic region with PRC1. The interaction with PRC1 inhibits its GAP activity towards CDC42 in vitro, which may be required for maintaining normal spindle morphology. Associates with ECT2 at anaphase and during cytokinesis. Interacts with SLC26A8 via its N-terminus.,tissue specificity: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.,

Research Area

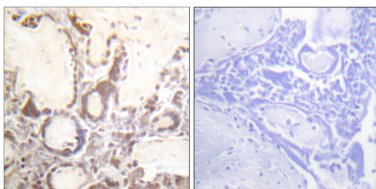
Image Data



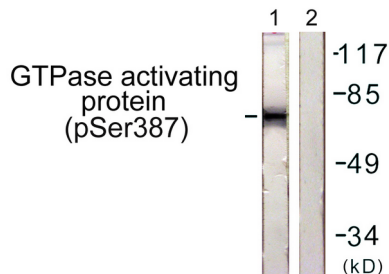
Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right) , using GTPase Activating Protein (Phospho-Ser387) Antibody



Immunofluorescence analysis of HeLa cells, using GTPase Activating Protein (Phospho-Ser387) Antibody. The picture on the right is blocked with the phosphopeptide.



Immunohistochemistry analysis of paraffin-embedded human placenta, using GTPase Activating Protein (Phospho-Ser387) Antibody. The picture on the right is blocked with the phosphopeptide.



Western blot analysis of lysates from COS7 cells, using GTPase Activating Protein (Phospho-Ser387) Antibody. The lane on the right is blocked with the phosphopeptide.