Rho GTP 酶激活蛋白 GAP 抗体

产品货号： mlR7766

英文名称： RACGAP1

中文名称： Rho GTP 酶激活蛋白 GAP 抗体

别　　名： GAP; Gap1; GTPase activating protein; HsCYK 4; HsCYK4; ID GAP; KIAA1478; MgcRacGAP; Rac GTPase activating protein 1; RACGAP 1; RGAP1_HUMAN.

研究领域： 细胞生物　信号转导　转录调节因子　细胞分化　G 蛋白信号

抗体来源： Rabbit

克隆类型： Polyclonal

交叉反应： Human, Mouse, Rat, Dog, Cow,

产品应用： WB=1:500-2000 ELISA=1:500-1000 IHC-P=1:400-800 IHC-F=1:400-800 IF=1:100-500 （石蜡切片需做抗原修复）

not yet tested in other applications.

optimal dilutions/concentrations should be determined by the end user.

分 子 量： 71kDa

细胞定位： 细胞核 细胞浆 细胞膜

性　　状： Lyophilized or Liquid

浓　　度： 1mg/ml

免 疫 原： KLH conjugated synthetic peptide derived from human RACGAP1:301-400/632

亚　　型： IgG

纯化方法： affinity purified by Protein A

储 存 液： 0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.

保存条件： Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

PubMed： PubMed

产品介绍： Rho GTPases control a variety of cellular processes. There are 3 subtypes of Rho GTPases in the Ras superfamily of small G proteins: RHO, RAC and CDC42. GTPase-activating proteins (GAPs) bind activated

forms of Rho GTPases and stimulate GTP hydrolysis. Through this catalytic function, Rho GAPs negatively regulate Rho-mediated signals. GAPs may also serve as effector molecules and play a role in signaling downstream of Rho and other Ras-like GTPases.

Function:

Component of the centralspindlin complex that serves asa microtubule-dependent and Rho-mediated signaling required for themyosin contractile ring formation during the cell cyclecytokinesis. Plays key roles in controlling cell growth anddifferentiation of hematopoietic cells through mechanisms otherthan regulating Rac GTPase activity. Also involved in theregulation of growth-related processes in adipocytes and myoblasts.May be involved in regulating spermatogenesis and in the RACGAP1pathway in neuronal proliferation. Shows strong GAP (GTPaseactivation) activity towards CDC42 and RAC1 and less towards RHOA.Essential for the early stages of embryogenesis. May play a role inregulating cortical activity through RHOA during cytokinesis. Mayparticipate in the regulation of sulfate transport in male germcells.

Subunit:

Heterotetramer of two molecules each of RACGAP1 andKIF23. Found in the centralspindlin complex composed of RACGAP1 andKIF23. Associates with alpha-, beta- and gamma-tubulin andmicrotubules. Interacts via its Rho-GAP domain with RND2.Associates with AURKB during M phase. Interacts via its Rho-GAPdomain and basic region with PRC1. The interaction with PRC1inhibits its GAP activity towards CDC42 in vitro, which may berequired for maintaining normal spindle morphology. Interacts withSLC26A8 via its N-terminus. Interacts with RAB11FIP3. Interactswith ECT2; the interaction is direct, occurs at anaphase and duringcytokinesis in a microtubule-dependent manner and is enhanced byphosphorylation by PLK1. Interacts with KIF23; the interaction isdirect.

Subcellular Location:

ucleus. Cytoplasm. Cytoplasm, cytoskeleton,spindle. Cytoplasmic vesicle, secretory vesicle, acrosome. Cleavagefurrow. Midbody. Note=Colocalizes with RND2 in Golgi-derivedproacrosomal vesicles and the acrosome (By similarity). Duringinterphase, localized to the nucleus and cytoplasm along withmicrotubules, in anaphase, is redistributed to the central spindleand, in telophase and cytokinesis, to the midbody. Colocalizes withRHOA at the myosin contractile ring during cytokinesis. Colocalizeswith ECT2 to the mitotic spindles during anaphase/metaphase, thecleavage furrow during telophase and at the midbody at the end ofcytokinesis. Colocalizes wit Cdc42 to spindle microtubules fromprometaphase to telophase.

Tissue Specificity:

Highly expressed in testis, thymus andplacenta. Expressed at lower levels in spleen and peripheral bloodlymphocytes. In testis, expression is restricted to germ cells withthe highest levels of expression found in spermatocytes. Expressionis regulated in a cell cycle-dependent manner and peaks during G2/Mphase.

Post-translational modifications:

Phosphorylated at multiple sites in the midbody duringcytokinesis. Phosphorylation by AURKB on Ser-387 at the midbody is,at least in part, responsible for exerting its latent GAP activitytowards RhoA. Phosphorylation on multiple serine residues by PLK1enhances its association with ECT2 and is critical for cleavagefurrow formation.

Similarity:

Contains 1 phorbol-ester/DAG-type zinc finger.

Contains 1 Rho-GAP domain.

SWISS:

Q9H0H5

Gene ID:

29127

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.