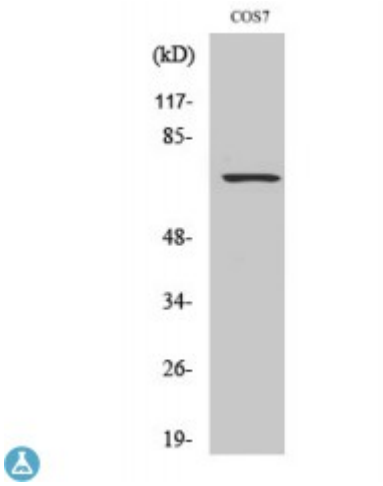
Anti-Rac GAP1 antibody



Description	Rabbit polyclonal to Rac GAP1.

Model	STJ95318
Host	Rabbit
Reactivity	Human, Mouse, Rat, Simian
Applications	ELISA, IF, IHC, WB
Immunogen	Synthesized peptide derived from human Rac GAP1 around the non-phosphorylation site of S387.
Immunogen Region	330-410 aa
Gene ID	29127
Gene Symbol	RACGAP1
Dilution range	WB 1:500-1:2000IHC 1:100-1:300IF 1:200-1:1000ELISA 1:40000
Specificity	Rac GAP1 Polyclonal Antibody detects endogenous levels of Rac GAP1 protein.
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.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).

Protein Name	Rac GTPase-activating protein 1 Male germ cell RacGap MgcRacGAP Protein CYK4 homolog CYK4 HsCYK-4
Molecular Weight	72 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:9804OMIM:604980
Alternative Names	Rac GTPase-activating protein 1 Male germ cell RacGap MgcRacGAP Protein CYK4 homolog CYK4 HsCYK-4
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. 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.
Sequence and Domain Family	The coiled coil region is indispensible for localization to the midbody during cytokinesis. The phorbol-ester/DAG-type zinc finger domain mediates interaction with membranes enriched in phosphatidylinositol 3,4,5-trisphosphate and is required during mitotic cytokinesis for normal attachment of the midbody to the cell membrane.
Cellular Localization	Nucleus. Cytoplasm. Cytoplasm, cytoskeleton, spindle. Cytoplasmic vesicle, secretory vesicle, acrosome. Cleavage furrow. Midbody, Midbody ring Cell membrane. Peripheral membrane protein. Cytoplasmic side. Colocalizes with RND2 in Golgi-derived proacrosomal vesicles and the acrosome . 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.
Post-translational Modifications	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. Phosphorylation on multiple serine residues by PLK1 enhances its association with ECT2 and is critical for cleavage furrow formation.

St John's Laboratory Ltd

F +44 (0)207 681 2580
T +44 (0)208 223 3081

W http://www.stjohnslabs.com/
E info@stjohnslabs.com