

Goat Anti-RACGAP1 / MgcRacGAP Antibody
Peptide-affinity purified goat antibody
Catalog # AF1900a**Specification**

Goat Anti-RACGAP1 / MgcRacGAP Antibody - Product Information

Application	WB, IHC, E
Primary Accession	O9H0H5
Other Accession	NP_001119575 , 29127
Reactivity	Human
Predicted	Dog
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	71027

Goat Anti-RACGAP1 / MgcRacGAP Antibody - Additional Information**Gene ID** 29127**Other Names**

Rac GTPase-activating protein 1, Male germ cell RacGap, MgcRacGAP, Protein CYK4 homolog, CYK4, HsCYK-4, RACGAP1 (HGNC:9804)

Dilution

WB~~1:1000
IHC~~1:100~500
E~~N/A

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

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

Goat Anti-RACGAP1 / MgcRacGAP Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-RACGAP1 / MgcRacGAP Antibody - 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.

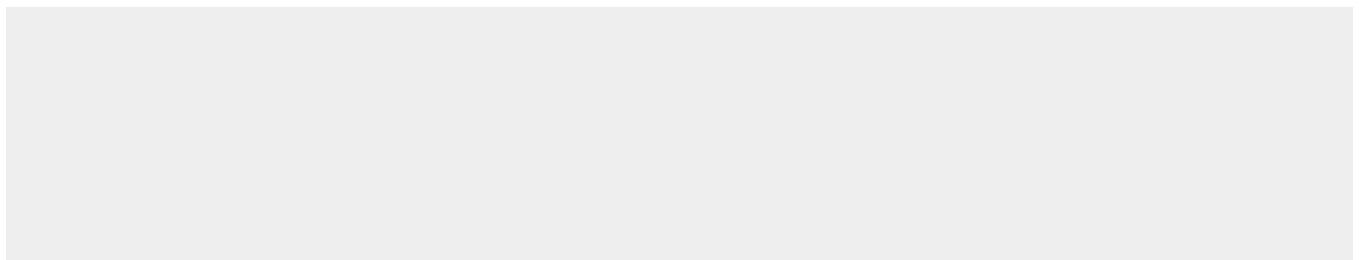
Tissue Location

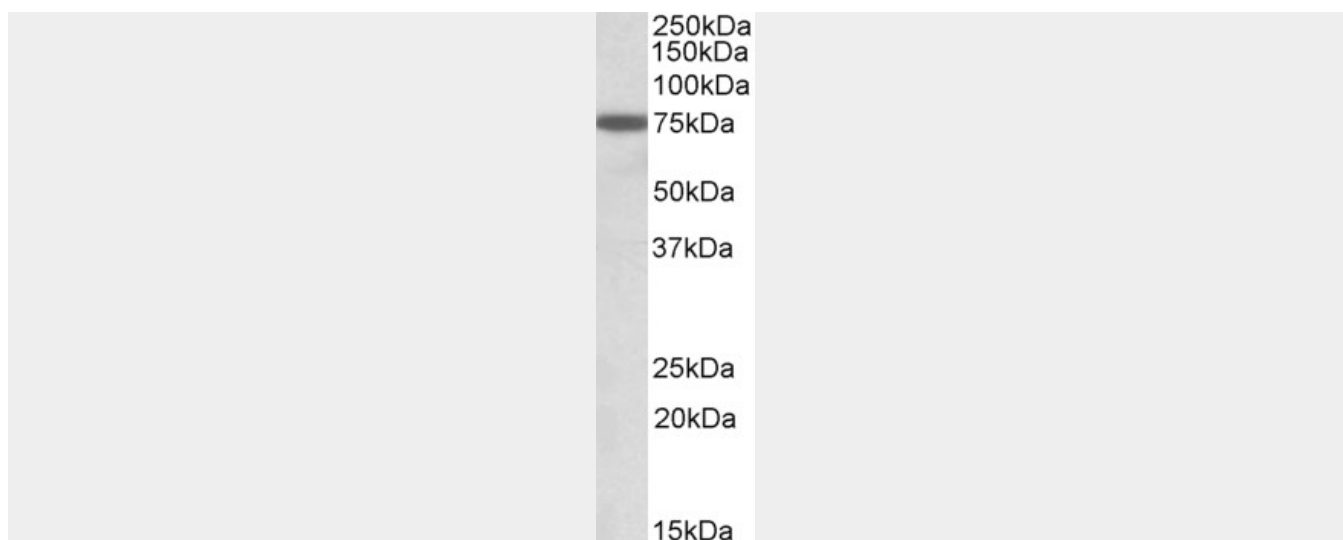
Highly expressed in testis, thymus and placenta. Expressed at lower levels in spleen and peripheral blood lymphocytes In testis, expression is restricted to germ cells with the highest levels of expression found in spermatocytes. Expression is regulated in a cell cycle-dependent manner and peaks during G2/M phase

Goat Anti-RACGAP1 / MgcRacGAP Antibody - Protocols

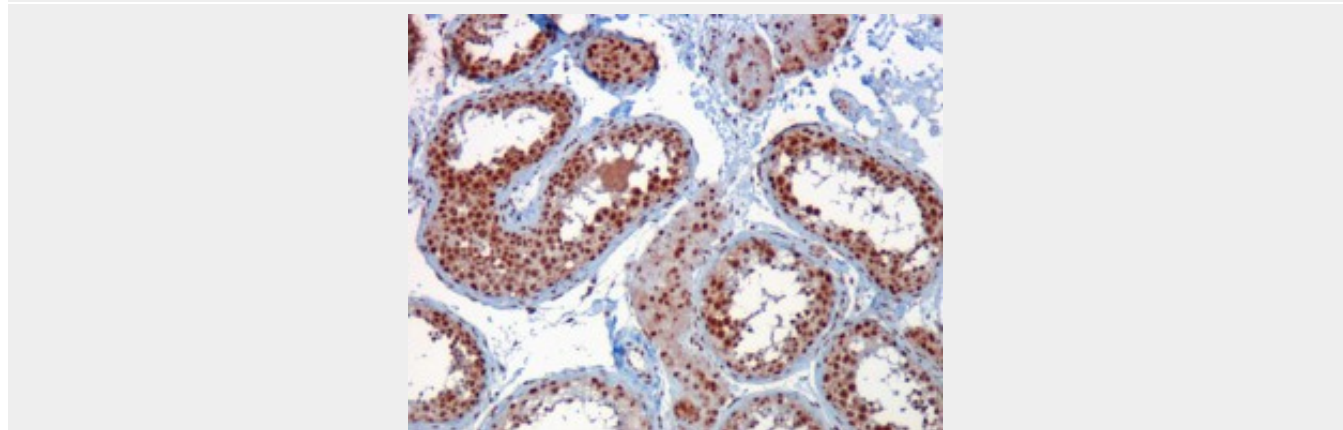
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Goat Anti-RACGAP1 / MgcRacGAP Antibody - Images



AF1900a (1 µg/ml) staining of lysate of cell line K562 (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



AF1900a (1 µg/ml) staining of paraffin embedded Human Testis. Microwaved antigen retrieval with Tris/EDTA buffer pH9, HRP-staining. Data obtained with a previous batch.

Goat Anti-RACGAP1 / MgcRacGAP Antibody - Background

Rho GTPases control a variety of cellular processes. There are 3 subtypes of Rho GTPases in the Ras superfamily of small G proteins: RHO (see MIM 165370), RAC (see RAC1; MIM 602048), and CDC42 (MIM 116952). 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.

Goat Anti-RACGAP1 / MgcRacGAP Antibody - References

Variation at the NFATC2 Locus Increases the Risk of Thiazolinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.
Gene-centric association signals for lipids and apolipoproteins identified via the HumanCVD BeadChip. Talmud PJ, et al. Am J Hum Genet, 2009 Nov. PMID 19913121.
CUX1 and E2F1 regulate coordinated expression of the mitotic complex genes Ect2, MgcRacGAP, and MKLP1 in S phase. Seguin L, et al. Mol Cell Biol, 2009 Jan. PMID 19015243.
Sequential Cyk-4 binding to ECT2 and FIP3 regulates cleavage furrow ingression and abscission during cytokinesis. Simon GC, et al. EMBO J, 2008 Jul 9. PMID 18511905.

Phosphoregulation of MgcRacGAP in mitosis involves Aurora B and Cdk1 protein kinases and the PP2A phosphatase. Tournebise A, et al. FEBS Lett, 2008 Apr 9. PMID 18201571.