

# Rab GAP1 (N-19): sc-160696

## BACKGROUND

GTPase-activating proteins (GAPs) accelerate the intrinsic rate of GTP hydrolysis of Ras-related proteins, resulting in downregulation of their active form. Rab GAP1 (RAB GTPase activating protein 1), also known as GAPCENA (GAP and centrosome-associated) or TBC1D11, is a 1,069 amino acid cytoplasmic protein containing one PID domain and one Rab-GAP TBC domain. Rab GAP1 acts as a GTPase-activating protein of Rab 6A in the Rab 6A-mediated pathway, which is involved in the metaphase-anaphase transition. Expressed as four alternatively spliced variants, Rab GAP1 may also be involved in the microtubule nucleation by centrosome and in Golgi dynamics during the cell cycle. Rab GAP1 is encoded by a gene located on human chromosome 9, which consists of about 145 million bases, 4% of the human genome and encodes nearly 900 genes.

## REFERENCES

1. Cuif, M.H., et al. 1999. Characterization of GAPCenA, a GTPase activating protein for Rab6, part of which associates with the centrosome. *EMBO J.* 18: 1772-1782.
2. Echard, A., et al. 2000. Alternative splicing of the human Rab6A gene generates two close but functionally different isoforms. *Mol. Biol. Cell* 11: 3819-3833.
3. Miserey-Lenkei, S., et al. 2006. A role for the Rab6A' GTPase in the inactivation of the Mad2-spindle checkpoint. *EMBO J.* 25: 278-289.
4. Yoshimura, S., et al. 2007. Functional dissection of Rab GTPases involved in primary cilium formation. *J. Cell Biol.* 178: 363-369.
5. Caratù, G., et al. 2007. Identification of the ligands of protein interaction domains through a functional approach. *Mol. Cell. Proteomics* 6: 333-345.
6. Yoshimura, S., et al. 2008. Analysis of Rab GTPase and GTPase-activating protein function at primary cilia. *Methods Enzymol.* 439: 353-364.
7. Kanno, E., et al. 2010. Comprehensive screening for novel Rab-binding proteins by GST pull-down assay using 60 different mammalian Rabs. *Traffic* 11: 491-507.

## CHROMOSOMAL LOCATION

Genetic locus: RABGAP1 (human) mapping to 9q33.2; Rabgap1 (mouse) mapping to 2 B.

## SOURCE

Rab GAP1 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Rab GAP1 of human origin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160696 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Rab GAP1 (N-19) is recommended for detection of Rab GAP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with Rab GAP1L.

Rab GAP1 (N-19) is also recommended for detection of Rab GAP1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Rab GAP1 siRNA (h): sc-92500, Rab GAP1 siRNA (m): sc-152654, Rab GAP1 shRNA Plasmid (h): sc-92500-SH, Rab GAP1 shRNA Plasmid (m): sc-152654-SH, Rab GAP1 shRNA (h) Lentiviral Particles: sc-92500-V and Rab GAP1 shRNA (m) Lentiviral Particles: sc-152654-V.

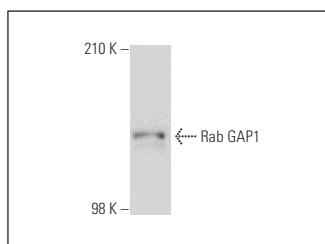
Molecular Weight of Rab GAP1: 122/67/53/29 kDa.

Positive Controls: Sol8 cell lysate: sc-2249.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Rab GAP1 (N-19): sc-160696. Western blot analysis of Rab GAP1 expression in Sol8 whole cell lysate.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.