

# Rab 2B (A-14): sc-26549

## BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins includes the R-Ras, Rap, Ral/Rec and Rho/Rab subfamilies all of which are thought to play an important role in either endocytosis or in biosynthetic protein transport. The process of transporting newly synthesized proteins from the endoplasmic reticulum (ER) to various stacks of the Golgi complex and to secretory vesicles involves the movement of carrier vesicles and requires Rab protein function. Rab proteins are also an integral part of endocytic pathways. Rab 2A (Ras-related protein Rab-2A) and Rab 2B (Ras-related protein Rab-2B) are 212 and 216 amino acid proteins, respectively, that belong to the Ras-related GTPase superfamily. While both Rab 2A and Rab 2B are required for protein transport from the ER to the Golgi, Rab 2A is lipid-anchored to the ER-Golgi intermediate compartment membrane while Rab 2B is lipid anchored to the cytoplasmic side of the cell membrane.

## REFERENCES

- Opdam, F.J., et al. 2000. Expression of Rab small GTPases in epithelial Caco-2 cells: Rab21 is an apically located GTP-binding protein in polarised intestinal epithelial cells. *Eur. J. Cell Biol.* 79: 308-316.
- Ni, X., et al. 2002. Molecular cloning and characterization of a novel human Rab ( Rab2B) gene. *J. Hum. Genet.* 47: 548-551.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 179509. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Ali, B.R., et al. 2004. Multiple regions contribute to membrane targeting of Rab GTPases. *J. Cell Sci.* 117: 6401-6412.
- Itoh, T., et al. 2006. Screening for target Rabs of TBC (Tre-2/Bub2/Cdc16) domain-containing proteins based on their Rab-binding activity. *Genes Cells* 11: 1023-1037.
- Mountjoy, J.R., et al. 2008. RAB2A: a major subacrosomal protein of bovine spermatozoa implicated in acrosomal biogenesis. *Biol. Reprod.* 79: 223-232.
- Chun, D.K., et al. 2008. UNC-108/Rab2 regulates postendocytic trafficking in *Caenorhabditis elegans*. *Mol. Biol. Cell* 19: 2682-2695.
- Fukuda, M., et al. 2008. Large scale screening for novel rab effectors reveals unexpected broad Rab binding specificity. *Mol. Cell. Proteomics* 7: 1031-1042.

## CHROMOSOMAL LOCATION

Genetic locus: RAB2B (human) mapping to 14q11.2.

## SOURCE

Rab 2B (A-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Rab 2B 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.

## 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-26549 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Rab 2B (A-14) is recommended for detection of Rab 2B of 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).

Suitable for use as control antibody for Rab 2B siRNA (h): sc-41812, Rab 2B shRNA Plasmid (h): sc-41812-SH and Rab 2B shRNA (h) Lentiviral Particles: sc-41812-V.

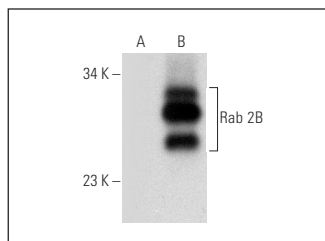
Molecular Weight of Rab 2B: 24 kDa.

Positive Controls: Rab 2B (h): 293T Lysate: sc-172439.

## 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 2B (A-14): sc-26549. Western blot analysis of Rab 2B expression in non-transfected: sc-117752 (A) and human Rab 2B transfected: sc-172439 (B) 293T whole cell lysates.

## RESEARCH USE

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