

Rab 24 (N-19): sc-68220

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins, which includes the R-Ras, Rap, Ral/Rec and Rho/Rab superfamilies exhibit 30-60% homology with Ras p21. Accumulating data suggests an important role for Rab proteins, either in endocytosis or in biosynthetic protein transport. The transport of newly synthesized proteins from the endoplasmic reticulum to various stacks of the Golgi complex and to secretory vesicles involves at each stage the movement of carrier vesicles, a process that appears to involve Rab protein function. The possibility that Rab proteins might also direct the exocytosis from secretory vesicles to the plasma membrane is supported by the observation that in yeast, the Sec4 protein, which is 40% homologous to Rab proteins, is associated with secretory vesicles. Rab 24 differs from other Rab family members because it has low intrinsic GTPase activity and is not efficiently prenylated. Rab 24 is thought to be involved in the autophagic pathway.

REFERENCES

- Zahraoui, A., et al. 1989. The human Rab genes encode a family of GTP-binding proteins related to yeast Ypt1 and Sec4 products involved in secretion. *J. Biol. Chem.* 264: 12394-12401.
- Chavrier, P., et al. 1992. The complexity of the Rab and Rho GTP-binding protein subfamilies revealed by a PCR cloning approach. *Gene* 112: 261-264.
- Novick, P., et al. 1993. Friends and family: the role of the Rab GTPases in vesicular traffic. *Cell* 75: 597-601.
- Erdman, R.A., et al. 2000. Rab 24 is an atypical member of the Rab GTPase family. Deficient GTPase activity, GDP dissociation inhibitor interaction, and prenylation of Rab 24 expressed in cultured cells. *J. Biol. Chem.* 275: 3848-3856.
- Maltese, W.A., et al. 2002. Mutant Rab 24 GTPase is targeted to nuclear inclusions. *BMC Cell Biol.* 3: 25.
- Munafó, D.B., et al. 2002. Induction of autophagy causes dramatic changes in the subcellular distribution of GFP-Rab 24. *Traffic* 3: 472-482.
- Ding, J., et al. 2003. Tyrosine phosphorylation of the Rab 24 GTPase in cultured mammalian cells. *Biochem. Biophys. Res. Commun.* 312: 670-675.
- Wu, M., et al. 2006. Human Rab 24, interestingly and predominantly distributed in the nuclei of COS-7 cells, is co-localized with cyclophilin A and GABARAP. *Int. J. Mol. Med.* 17: 749-754.
- Tambe, Y., et al. 2009. The drs tumor suppressor is involved in the maturation process of autophagy induced by low serum. *Cancer Lett.* 283: 74-83.

CHROMOSOMAL LOCATION

Genetic locus: RAB24 (human) mapping to 5q35.3; Rab24 (mouse) mapping to 13 B1.

SOURCE

Rab 24 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Rab 24 of human origin.

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-68220 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rab 24 (N-19) is recommended for detection of Rab 24 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Rab 24 (N-19) is also recommended for detection of Rab 24 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Rab 24 siRNA (h): sc-62918, Rab 24 siRNA (m): sc-62919, Rab 24 shRNA Plasmid (h): sc-62918-SH, Rab 24 shRNA Plasmid (m): sc-62919-SH, Rab 24 shRNA (h) Lentiviral Particles: sc-62918-V and Rab 24 shRNA (m) Lentiviral Particles: sc-62919-V.

Molecular Weight of Rab 24: 24 kDa.

Positive Controls: mouse brain extract: sc-2253.

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) 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.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **Rab 24 (43): sc-136049**, our highly recommended monoclonal alternative to Rab 24 (N-19).