

RABAPTIN-5 (H-300): sc-15351

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins, which includes the R-Ras, Rap, Ral/Rec and Rho/Rab subfamilies, exhibits 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 (4-8). Rab proteins are also an integral part of endocytic pathways. For example, Rab 5 is a potent regulator of endocytic transport that is localized to the plasma membrane, clathrin coated pits and early endosomes (9,10). A possible downstream effector of Rab 5, designated RABAPTIN-5, is a coiled-coil protein that physically associates with Rab 5. Immunodepletion of RABAPTIN-5 strongly inhibits Rab5-dependent early endosome fusion and may be required for membrane docking and fusion (9,10).

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.
- Baldini, G., et al. 1992. Cloning of a Rab 3 isotype predominately expressed in adipocytes. *Proc. Natl. Acad. Sci. USA* 89: 5049-5052.
- Novick, P., et al. 1993. Friends and family: the role of the Rab GTPases in vesicular traffic. *Cell* 75: 597-601.
- Takizawa, P., et al. 1993. Coatomers and SNAREs in promoting membrane traffic. *Cell* 75: 593-596.
- Karniguian, A., et al. 1993. Identification of small GTP-binding Rab proteins in human platelets: Thrombin-induced phosphorylation of Rab 3B, Rab 6 and Rab 8 proteins. *Proc. Natl. Acad. Sci. USA* 90: 7647-7651.

CHROMOSOMAL LOCATION

Genetic locus: RABEP1 (human) mapping to 17p13.2; Rabep1 (mouse) mapping to 11 B3.

SOURCE

RABAPTIN-5 (H-300) is a rabbit polyclonal antibody raised against amino acids 511-810 mapping near the C-terminus of RABAPTIN-5 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.

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 or our catalog for detailed protocols and support products.

APPLICATIONS

RABAPTIN-5 (H-300) is recommended for detection of RABAPTIN-5 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).

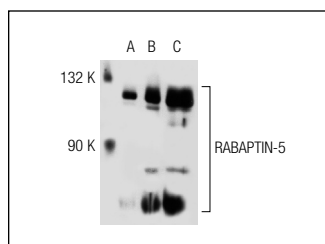
RABAPTIN-5 (H-300) is also recommended for detection of RABAPTIN-5 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for RABAPTIN-5 siRNA (h): sc-36349, RABAPTIN-5 siRNA (m): sc-36350, RABAPTIN-5 shRNA Plasmid (h): sc-36349-SH, RABAPTIN-5 shRNA Plasmid (m): sc-36350-SH, RABAPTIN-5 shRNA (h) Lentiviral Particles: sc-36349-V and RABAPTIN-5 shRNA (m) Lentiviral Particles: sc-36350-V.

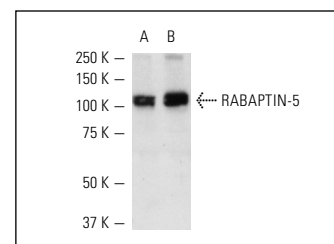
Molecular Weight of RABAPTIN-5: 100 kDa.

Positive Controls: RABAPTIN-5 (h): 293T Lysate: sc-115800, rat brain extract: sc-2392 or HeLa whole cell lysate: sc-2200.

DATA



RABAPTIN-5 (H-300): sc-15351. Western blot analysis of RABAPTIN-5 expression in non-transfected 293T: sc-117752 (A), human RABAPTIN-5 transfected 293T: sc-115800 (B) and Raji (C) whole cell lysates.



RABAPTIN-5 (H-300): sc-15351. Western blot analysis of RABAPTIN-5 expression in HeLa (A) and A-431 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Isobe, I., et al. 2001. 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) causes Akt phosphorylation and morphological changes in intracellular organelles in cultured rat astrocytes. *J. Neurochem.* 77: 274-280.
- Wei, J., et al. 2010. Regulation of AMPA receptor trafficking and function by glycogen synthase kinase 3. *J. Biol. Chem.* 285: 26369-26376.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **RABAPTIN-5 (B-8): sc-271069** or **RABAPTIN-5 (G-9): sc-25275**, our highly recommended monoclonal alternatives to RABAPTIN-5 (H-300).