

RABAPTIN-5 (20): sc-136051

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. 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. 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 Rab 5-dependent early endosome fusion and may be required for membrane docking and fusion.

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.
- Takizawa, P., et al. 1993. Coatomers and SNAREs in promoting membrane traffic. *Cell* 75: 593-596.
- Novick, P., et al. 1993. Friends and family: the role of the Rab GTPases in vesicular traffic. *Cell* 75: 597-601.
- Torti, M., et al. 1993. Association of the low molecular weight GTP-binding protein Rab 2B with the cytoskeleton during platelet aggregation. *Proc. Natl. Acad. Sci. USA* 90: 7553-7557.
- Karniguan, 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 (20) is a mouse monoclonal antibody raised against amino acids 247-417 of RABAPTIN-5 of human origin.

PRODUCT

Each vial contains 50 µg IgG₁ in 500 µl of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

STORAGE

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

APPLICATIONS

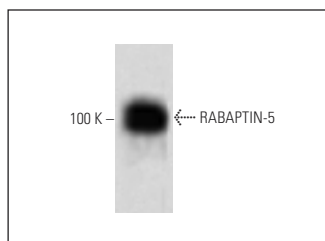
RABAPTIN-5 (20) is recommended for detection of RABAPTIN-5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

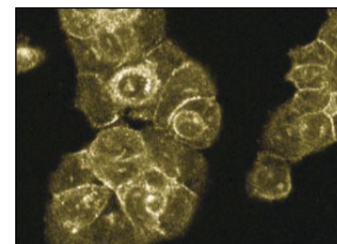
Molecular Weight of RABAPTIN-5: 100 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, mouse brain extract: sc-2253 or A-431 whole cell lysate: sc-2201.

DATA



RABAPTIN-5 (20): sc-136051. Western blot analysis of RABAPTIN-5 expression in MCF7 whole cell lysate.



RABAPTIN-5 (20): sc-136051. Immunofluorescence staining of A-431 cells showing cytoplasmic and membrane localization.

RESEARCH USE

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

PROTOCOLS

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