

# RABAPTIN-5 (B-8): sc-271069

## 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 Rab5-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.
- Pfeffer, S.R. 1992. GTP-binding proteins in intracellular transport. *Trends Cell Biol.* 2: 41-46.
- Baldini, G., et al. 1992. Cloning of a Rab3 isotype predominately expressed in adipocytes. *Proc. Natl. Acad. Sci. USA* 89: 5049-5052.

## CHROMOSOMAL LOCATION

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

## SOURCE

RABAPTIN-5 (B-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 829-862 at the C-terminus of RABAPTIN-5 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RABAPTIN-5 (B-8) is available conjugated to agarose (sc-271069 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271069 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271069 PE), fluorescein (sc-271069 FITC), Alexa Fluor® 488 (sc-271069 AF488), Alexa Fluor® 546 (sc-271069 AF546), Alexa Fluor® 594 (sc-271069 AF594) or Alexa Fluor® 647 (sc-271069 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271069 AF680) or Alexa Fluor® 790 (sc-271069 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271069 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

RABAPTIN-5 (B-8) is recommended for detection of RABAPTIN-5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

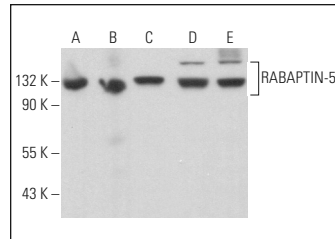
RABAPTIN-5 (B-8) is also recommended for detection of RABAPTIN-5 in additional species, including equine, bovine and avian.

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.

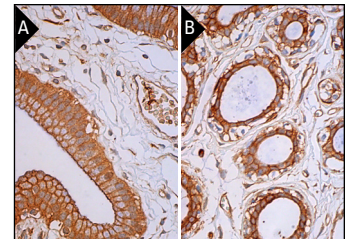
Molecular Weight of RABAPTIN-5: 100 kDa.

Positive Controls: F9 cell lysate: sc-2245, Raji whole cell lysate: sc-364236 or PC-12 cell lysate: sc-2250.

## DATA



RABAPTIN-5 (B-8): sc-271069. Western blot analysis of RABAPTIN-5 expression in Raji (A), T-47D (B), EOC 20 (C), F9 (D) and PC-12 (E) whole cell lysates.



RABAPTIN-5 (B-8): sc-271069. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic and membrane staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic and membrane staining of glandular cells and myoepithelial cells (B).

## SELECT PRODUCT CITATIONS

- Paatero, I., et al. 2014. Hypoxia-inducible factor-1  $\alpha$  induces ErbB4 signaling in the differentiating mammary gland. *J. Biol. Chem.* 289: 22459-22469.
- Reyes, M., et al. 2020. Nuclear accumulation of  $\beta$ -catenin is associated with endosomal sequestration of the destruction complex and increased activation of Rab5 in oral dysplasia. *FASEB J.* 34: 4009-4025.

## 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.