

Rab 2B (139.1): sc-81921

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins, which includes the R-Ras, Rap, Ral/Rec and Rho/Rab subfamilies 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. At least eight members of the Rab subfamily have been identified, each of which is found at a particular stage of a membrane transport pathway.

REFERENCES

- Zahraoui, A., Touchot, N., Chardin, P. and Tavitian, A. 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., Simons, K. and Zerial, M. 1992. The complexity of the Rab and Rho GTP-binding protein subfamilies revealed by a PCR cloning approach. *Gene* 112: 261-264.
- Pfeffer, S.R. 1992. GTP-binding proteins in intracellular transport. *Trends Cell Biol.* 2: 41-46.
- Baldini, G., Hohl, T., Lin, H.Y. and Lodish, H.F. 1992. Cloning of a Rab 3 isotype predominately expressed in adipocytes. *Proc. Natl. Acad. Sci. USA* 89: 5049-5052.
- Takizawa, P. and Malhotra, V. 1993. Coatomers and SNAREs in promoting membrane traffic. *Cell* 75: 593-596.
- Novick, P. and Brennwald, P. 1993. Friends and family: the role of the Rab GTPases in vesicular traffic. *Cell* 75: 597-601.
- Chen, Y., Holcomb, C. and Moore, H.P. 1993. Expression and localization of two low molecular weight GTP-binding proteins, Rab8 and Rab10, by epitope tag. *Proc. Natl. Acad. Sci. USA* 90: 6508-6512.
- Torti, M., Ramaschi, G., Sinigaglia, F., Lapetina, E.G. and Balduini, C. 1993. Association of the low molecular weight GTP-binding protein rap2B with the cytoskeleton during platelet aggregation. *Proc. Natl. Acad. Sci. USA* 90: 7553-7557.
- Karniguan, A., Zahroui, A. and Tavitian, A. 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: RAB2B (human) mapping to 14q11.2; Rab2b (mouse) mapping to 14 C2.

RESEARCH USE

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

SOURCE

Rab 2B (139.1) is a mouse monoclonal antibody raised against recombinant Rab 2B of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Rab 2B (139.1) is recommended for detection of Rab 2B 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 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 siRNA (m): sc-41813, Rab 2B shRNA Plasmid (h): sc-41812-SH, Rab 2B shRNA Plasmid (m): sc-41813-SH, Rab 2B shRNA (h) Lentiviral Particles: sc-41812-V and Rab 2B shRNA (m) Lentiviral Particles: sc-41813-V.

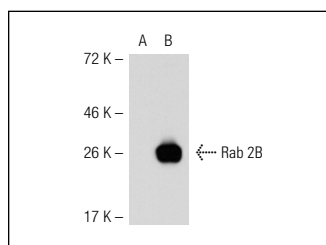
Molecular Weight of Rab 2B: 24 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211 or Rab 2B (m): 293T Lysate: sc-122896.

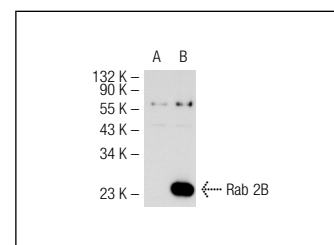
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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).

DATA



Rab 2B (139.1): sc-81921. Western blot analysis of Rab 2B expression in non-transfected: sc-117752 (A) and mouse Rab 2B transfected: sc-122896 (B) 293T whole cell lysates.



Rab 2B (139.1): sc-81921. Western blot analysis of Rab 2B expression in non-transfected: sc-117752 (A) and mouse Rab 2B transfected: sc-122897 (B) 293T whole cell lysates.

STORAGE

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