Rab 1A (m): 293T Lysate: sc-125876



The Power to Question

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

- 1. 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.
- 3. Baldini, G., et al. 1992. Cloning of a Rab3 isotype predominately expressed in adipocytes. Proc. Natl. Acad. Sci. USA 89: 5049-5052.
- 4. Karniguian, A., et al. 1993. Identification of small GTP-binding Rab proteins in human platelets: Thrombin-induced phosphorylation of Rab3B, Rab6, and Rab8 proteins. Proc. Natl. Acad. Sci. USA 90: 7647-7651.
- Chen, Y., et al. 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., et al. 1993. Association of the low molecular weight GTPbinding protein Rap2B with the cytoskeleton during platelet aggregation. Proc. Natl. Acad. Sci. USA 90: 7553-7557.
- 7. Novick, P. and Brennwald, P. 1993. Friends and family: the role of the Rab GTPases in vesicular traffic. Cell 75: 597-601.
- 8. Ferro-Novick, S. and Novick. P. 1993. The role of GTP-binding proteins in transport along the exocytic pathway. Annu. Rev. Cell Biol. 9: 575-599.
- Takizawa, P. and Malhotra, V. 1993. Coatomers and SNAREs in promoting membrane traffic. Cell 75: 593-596.

CHROMOSOMAL LOCATION

Genetic locus: Rab1 (mouse) mapping to 11 A3.1.

PRODUCT

Rab 1A (m): 293T Lysate represents a lysate of mouse Rab 1A transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

Rab 1A (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Rab 1A antibodies. Recommended use: 10-20 µl per lane.

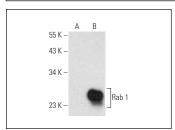
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Rab 1 (E-8): sc-515308 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Rab 1A expression in Rab 1A transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG κ BP-HRP: sc-516102 or m-lgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Rab 1 (E-8): sc-515308. Western blot analysis of Rab 1 expression in non-transfected: sc-117752 (**A**) and mouse Rab 1A transfected: sc-125876 (**B**) 293T

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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