

Rab 4A (h3): 293T Lysate: sc-173396

BACKGROUND

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

REFERENCES

1. 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.
2. 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.
3. 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.
4. Novick, P. and Brennwald, P. 1993. Friends and family: the role of the Rab GTPases in vesicular traffic. *Cell* 75: 597-601.
5. 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.
6. Takizawa, P. and Malhotra, V. 1993. Coatomers and SNAREs in promoting membrane traffic. *Cell* 75: 593-596.
7. Chen, Y., Holcomb, C. and Moore, H.P. 1993. Expression and localization of two low molecular weight GTP-binding proteins, Rab 8 and Rab 10, by epitope tag. *Proc. Natl. Acad. Sci. USA* 90: 6508-6512.
8. Torti, M., Ramaschi, G., Sinigaglia, F., Lapetina, E.G. and Balduini, C. 1993. Association of the low molecular weight GTP-binding protein Rap 2B with the cytoskeleton during platelet aggregation. *Proc. Natl. Acad. Sci. USA* 90: 7553-7557.
9. Karniguian, 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: RAB4A (human) mapping to 1q42.13.

RESEARCH USE

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

PRODUCT

Rab 4A (h3): 293T Lysate represents a lysate of human Rab 4A transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Rab 4A (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive Rab 4A 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.

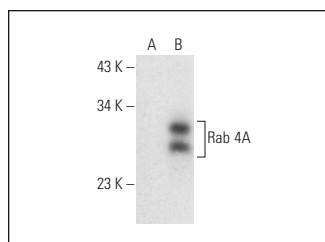
Rab 4A (E-10): sc-515773 is recommended as a positive control antibody for Western Blot analysis of enhanced human Rab 4A expression in Rab 4A transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

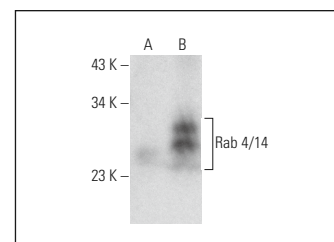
To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-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, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Rab 4A (E-10): sc-515773. Western blot analysis of Rab 4A expression in non-transfected: sc-117752 (A) and human Rab 4A transfected: sc-173396 (B) 293T whole cell lysates.



Rab 4/14 (F-10): sc-376243. Western blot analysis of Rab 4/14 expression in non-transfected: sc-117752 (A) and human Rab 4A transfected: sc-173396 (B) 293T whole cell lysates.

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.