

Rab 2B (m): 293T Lysate: sc-122896

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins includes the R-Ras, Rap, Ral/Rec and Rho/Rab subfamilies all of which are thought to play an important role in either endocytosis or in biosynthetic protein transport. The process of transporting newly synthesized proteins from the endoplasmic reticulum (ER) to various stacks of the Golgi complex and to secretory vesicles involves the movement of carrier vesicles and requires Rab protein function. Rab proteins are also an integral part of endocytic pathways. Rab 2A (Ras-related protein Rab-2A) and Rab 2B (Ras-related protein Rab-2B) are 212 and 216 amino acid proteins, respectively, that belong to the Ras-related GTPase superfamily. While both Rab 2A and Rab 2B are required for protein transport from the ER to the Golgi, Rab 2A is lipid-anchored to the ER-Golgi intermediate compartment membrane while Rab 2B is lipid anchored to the cytoplasmic side of the cell membrane.

REFERENCES

- Opdam, F.J., Kamps, G., Croes, H., van Bokhoven, H., Ginsel, L.A. and Franssen, J.A. 2000. Expression of Rab small GTPases in epithelial Caco-2 cells: Rab 21 is an apically located GTP-binding protein in polarised intestinal epithelial cells. *Eur. J. Cell Biol.* 79: 308-316.
- Ni, X., Ma, Y., Cheng, H., Jiang, M., Guo, L., Ji, C., Gu, S., Cao, Y., Xie, Y. and Mao, Y. 2002. Molecular cloning and characterization of a novel human Rab (Rab 2B) gene. *J. Hum. Genet.* 47: 548-551.
- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 179509. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Ali, B.R., Wasmeier, C., Lamoreux, L., Strom, M. and Seabra, M.C. 2004. Multiple regions contribute to membrane targeting of Rab GTPases. *J. Cell Sci.* 117: 6401-6412.
- Itoh, T., Satoh, M., Kanno, E. and Fukuda, M. 2006. Screening for target Rabs of TBC (Tre-2/Bub2/Cdc16) domain-containing proteins based on their Rab-binding activity. *Genes Cells* 11: 1023-1037.
- Mountjoy, J.R., Xu, W., McLeod, D., Hyndman, D. and Oko, R. 2008. Rab 2A: a major subacrosomal protein of bovine spermatozoa implicated in acrosomal biogenesis. *Biol. Reprod.* 79: 223-232.
- Chun, D.K., McEwen, J.M., Burbea, M. and Kaplan, J.M. 2008. UNC-108/Rab 2 regulates postendocytic trafficking in *Caenorhabditis elegans*. *Mol. Biol. Cell* 19: 2682-2695.
- Fukuda, M., Kanno, E., Ishibashi, K. and Itoh, T. 2008. Large scale screening for novel Rab effectors reveals unexpected broad Rab binding specificity. *Mol. Cell. Proteomics* 7: 1031-1042.

CHROMOSOMAL LOCATION

Genetic locus: Rab2b (mouse) mapping to 14 C2.

PRODUCT

Rab 2B (m): 293T Lysate represents a lysate of mouse Rab 2B transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Rab 2B (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Rab 2B antibodies. Recommended use: 10-20 µl per lane.

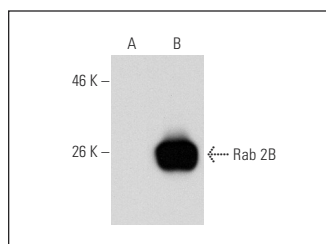
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Rab 2B (139.1): sc-81921 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Rab 2B expression in Rab 2B 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 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.

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.

RESEARCH USE

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

PROTOCOLS

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