SANTA CRUZ BIOTECHNOLOGY, INC.

ARF3 (h3): 293T Lysate: sc-176857

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The Power to Question

BACKGROUND

The ADP-ribosylation factor (ARF) protein family are structurally and functionally conserved members of the Ras superfamily of regulatory GTP-binding proteins. ARFs influence vesicle trafficking and signal transduction in eukaryotic cells. ARF-dependent regulatory mechanisms include the coordination of spectrin interactions with Golgi membranes and the association of Actin to the Golgi via Rho family-dependent G-protein localization and WASP/Arp2/3 complexes. Additionally, ARFs play a central role in the maintenance of organelle integrity, assembly of coat proteins and activation of phospholipase D (PC-PLD). ARF3 (ADP-ribosylation factor 3), is a 181 amino acid protein that localizes to Golgi apparatus and belongs to the small GTPase superfamily. ARF3 interacts with PICK1 and may modulate budding and uncoating of vesicles within the Golgi apparatus. Known to activate cholera toxin, ARF3 maps to human chromosome 12q13.12.

REFERENCES

1. Tsai, S.C., Haun, R.S., Tsuchiya, M., Moss, J. and Vaughan, M. 1991. Isolation and characterization of the human gene for ADP-ribosylation factor 3, a 20-kDa guanine nucleotide-binding protein activator of cholera toxin. J. Biol. Chem. 266: 23053-23059.
2. Hirai, M., Kusuda, J. and Hashimoto, K. 1996. Assignment of human ADP ribosylation factor (ARF) genes ARF1 and ARF3 to chromosomes 1q42 and 12q13, respectively. Genomics 34: 263-265.
3. Hosaka, M., Toda, K., Takatsu, H., Torii, S., Murakami, K. and Nakayama, K. 1996. Structure and intracellular localization of mouse ADP-ribosylation factors type 1 to type 6 (ARF1-ARF6). J. Biochem. 120: 813-819.
4. Boman, A.L., Zhang, C., Zhu, X. and Kahn, R.A. 2000. A family of ADP-ribosylation factor effectors that can alter membrane transport through the *trans*-Golgi. Mol. Biol. Cell 11: 1241-1255.
5. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 103190. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Li, F., Mandal, M., Mishra, S.K., Barnes, C.J. and Kumar, R. 2002. Heregulin promotes expression and subcellular redistribution of ADP-ribosylation factor 3. FEBS Lett. 524: 49-53.
7. Irobi, J., Nelis, E., Verhoeven, K., De Vriendt, E., Dierick, I., De Jonghe, P., Van Broeckhoven, C. and Timmerman, V. 2002. Mutation analysis of 12 candidate genes for distal hereditary motor neuropathy type II (distal HMN II) linked to 12q24.3. J. Peripher. Nerv. Syst. 7: 87-95.
8. Renault, L., Guibert, B. and Cherfils, J. 2003. Structural snapshots of the mechanism and inhibition of a guanine nucleotide exchange factor. Nature 426: 525-530.

CHROMOSOMAL LOCATION

Genetic locus: ARF3 (human) mapping to 12q13.12.

PRODUCT

ARF3 (h3): 293T Lysate represents a lysate of human ARF3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

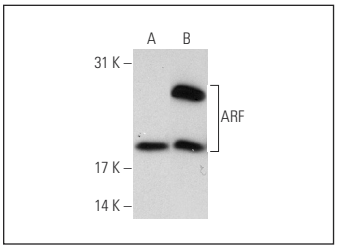
APPLICATIONS

ARF3 (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive ARF 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.

ARF3 (41): sc-135841 is recommended as a positive control antibody for Western Blot analysis of enhanced human ARF expression in ARF transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



ARF3 (41): sc-135841. Western blot analysis of ARF expression in non-transfected: sc-117752 (**A**) and human ARF transfected: sc-176857 (**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.