SANTA CRUZ BIOTECHNOLOGY, INC.

arfaptin 1 (h): 293T Lysate: sc-111774

BACKGROUND

ADP-ribosylation factors, or ARFs, enhance the ADP ribosyltransferase activity of cholera toxin and are implicated in vesicle transport between endoplasmic reticulum and the Golgi complex. Arfaptin 1 is recruited from the cytosol to Golgi membranes by ARFs in a guanosine 5'-O-(3-thiotriphosphate)-dependent and brefeldin A-sensitive manner but is not a constituent of coatomer. Arfaptin 1 binds to nonmyristoylated GTP-bound ARF3, but not to GDP-bound ARF3, and also to ARF1, another class I ARF. It binds with lower affinity to ARF5, a class II ARF, and with very little affinity to ARF6, a class III ARF. POR1 (also designated arfaptin 2) was first isolated as a Rac 1 binding protein necessary for Rac-mediated Actin polymerization and the subsequent formation of membrane ruffles and lamellipodia. POR1 has also been shown to interact with the ADP ribosylation factor ARF6, a GTPase that associates with the plasma membrane and intracellular endosome vesicles in a GTP-dependent manner. The association of POR1 with ARF6 stimulates induction of Actin polymerization. POR1 appears to play a regulatory role through multiple signaling pathways in the reorganization of the cytoskeletal structure.

REFERENCES

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4. D'Souza-Schorey, C., Boshans, R.L., McDonough, M., Stahl, P.D. and Van Aelst, L.1997. A role for POR1, a Rac 1-interacting protein, in ARF6-mediated cytoskeletal rearrangements. EMBO J. 16: 5445-5454.
5. D'Souza-Schorey, C., van Donselaar, E., Hsu, V.W., Yang, C., Stahl, P.D. and Peters, P.J. 1998. ARF6 targets recycling vesicles to the plasma membrane: insights from an ultrastructural investigation. J. Cell Biol. 140: 603-616.
6. Gauthier-Rouviere, C., Vignal, E., Meriane, M., Roux, P., Montcourier, P. and Fort, P. 1998. RhoG GTPase controls a pathway that independently activates Rac 1 and Cdc42Hs. Mol. Biol. Cell 9: 1379-1394.
7. Radhakrishna, H., Al-Awar, O., Khachikian, Z. and Donaldson, J.G. 1999. ARF6 requirement for Rac ruffling suggests a role for membrane trafficking in cortical Actin rearrangements. J. Cell Sci. 112: 855-866.
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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.

CHROMOSOMAL LOCATION

Genetic locus: ARFIP1 (human) mapping to 4q31.3.

PRODUCT

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

APPLICATIONS

arfaptin 1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive arfaptin 1 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.

RESEARCH USE

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