SANTA CRUZ BIOTECHNOLOGY, INC.

ARFGAP1 (h): 293 Lysate: sc-114757

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ARFGAP1 (ADP-ribosylation factor GTPase activating protein 1), also known as ARF1 GAP, is a 406 amino acid protein that contains one ARF-GAP domain and localizes to the cytoplasm and the Golgi apparatus. Functioning as a GTPase-activating protein (GAP), ARFGAP1 interacts with ARF1 and promotes hydrolysis of ARF1-bound GTP, an event that is required for both the dissociation of coat proteins from Golgi structures and for the subsequent fusion of Golgi vesicles with target compartments. When overexpressed, ARFGAP1, whose activity is inhibited by phosphatidylcholine and stimulated by phosphoinosides, can induce the redistribution of the entire Golgi apparatus to the endoplasmic reticulum. Multiple isoforms of ARFGAP1 exist due to alternative splicing events.

REFERENCES

1. Cukierman, E., Huber, I., Rotman, M. and Cassel, D. 1995. The ARF1 GTPase-activating protein: zinc finger motif and Golgi complex localization. Science 270: 1999-2002.
2. Zhang, C., Yu, Y., Zhang, S., Liu, M., Xing, G., Wei, H., Bi, J., Liu, X., Zhou, G., Dong, C., Hu, Z., Zhang, Y., Luo, L., Wu, C., Zhao, S. and He, F. 2000. Characterization, chromosomal assignment, and tissue expression of a novel human gene belonging to the ARF GAP family. Genomics 63: 400-408.
3. Majoul, I., Straub, M., Hell, S.W., Duden, R. and Söling, H.D. 2001. KDEL-cargo regulates interactions between proteins involved in COPI vesicle traffic: measurements in living cells using FRET. Dev. Cell 1: 139-153.
4. Yang, J.S., Lee, S.Y., Gao, M., Bourgoin, S., Randazzo, P.A., Premont, R.T. and Hsu, V.W. 2002. ARFGAP1 promotes the formation of COPI vesicles, suggesting function as a component of the coat. J. Cell Biol. 159: 69-78.
5. Bernards, A. and Settleman, J. 2004. GAP control: regulating the regulators of small GTPases. Trends Cell Biol. 14: 377-385.
6. Parnis, A., Rawet, M., Regev, L., Barkan, B., Rotman, M., Gaitner, M. and Cassel, D. 2006. Golgi localization determinants in ARFGAP1 and in new tissue-specific ARFGAP1 isoforms. J. Biol. Chem. 281: 3785-3792.
7. Natsume, W., Tanabe, K., Kon, S., Yoshida, N., Watanabe, T., Torii, T. and Satake, M. 2006. SMAP2, a novel ARF GTPase-activating protein, interacts with clathrin and clathrin assembly protein and functions on the AP-1-positive early endosome/*trans*-Golgi network. Mol. Biol. Cell 17: 2592-2603.
8. Lippincott-Schwartz, J. and Liu, W. 2006. Insights into COPI coat assembly and function in living cells. Trends Cell Biol. 16: e1-e4.
9. Luo, R. and Randazzo, P.A. 2008. Kinetic analysis of ARFGAP1 indicates a regulatory role for coatomer. J. Biol. Chem. 283: 21965-21977.

CHROMOSOMAL LOCATION

Genetic locus: ARFGAP1 (human) mapping to 20q13.33.

PRODUCT

ARFGAP1 (h): 293 Lysate represents a lysate of human ARFGAP1 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

ARFGAP1 (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive ARFGAP1 antibodies. Recommended use: 10-20 µl per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

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.