SANTA CRUZ BIOTECHNOLOGY, INC.

ARFGAP1/2/3 (H-84): sc-292277

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ARFGAP1 (ADP-ribosylation factor GTPase-activating protein 1), ARFGAP2 (ADP-ribosylation factor GTPase-activating protein 2) and ARFGAP3 (ADP-ribosylation factor GTPase-activating protein 3) are GTPase-activating proteins (GAP) that are associated with the Golgi apparatus and interact with ADP-ribosylation factor 1 (ARF). These proteins promote hydrolysis of ARF-bound GTP and are required for the dissociation of coat proteins from Golgi-derived membranes and vesicles. Dissociation of the coat proteins is required for the fusion of these vesicles with target compartments. The activity of ARFGAP1, ARFGAP2 and ARFGAP3 is stimulated by phosphoinosides and inhibited by phosphatidylcholine. The genes encoding ARFGAP1, ARFGAP2 and ARFGAP3 map to human chromosomes 20q13.33, 11p11.2 and 22q13.2, respectively.

REFERENCES

1. Zhang, C., et al. 2000. Characterization, chromosomal assignment, and tissue expression of a novel human gene belonging to the ARF GAP family. Genomics 63: 400-408.
2. Liu, X., et al. 2001. Functional characterization of novel human ARFGAP3. FEBS Lett. 490: 79-83.
3. Yang, J.S., et al. 2002. ARFGAP1 promotes the formation of COPI vesicles, suggesting function as a component of the coat. J. Cell Biol. 159: 69-78.
4. Parnis, A., et al. 2006. Golgi localization determinants in ArfGAP1 and in new tissue-specific ArfGAP1 isoforms. J. Biol. Chem. 281: 3785-3792.
5. Frigerio, G., et al. 2007. Two human ARFGAPs associated with COP-I-coated vesicles. Traffic 8: 1644-1655.
6. Weimer, C., et al. 2008. Differential roles of ArfGAP1, ArfGAP2, and ArfGAP3 in COPI trafficking. J. Cell Biol. 183: 725-735.
7. Saitoh, A., et al. 2009. Three homologous ArfGAPs participate in coat protein I-mediated transport. J. Biol. Chem. 284: 13948-13957.
8. Beck, R., et al. 2009. ArfGAP1 activity and COPI vesicle biogenesis. Traffic 10: 307-315.
9. Bai, M., et al. 2011. ARFGAP1 promotes AP-2-dependent endocytosis. Nat. Cell Biol. 13: 559-567.

SOURCE

ARFGAP1/2/3 (H-84) is a rabbit polyclonal antibody raised against amino acids 1-84 mapping at the N-terminus of ARFGAP3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

ARFGAP1/2/3 (H-84) is recommended for detection of ARFGAP1, ARFGAP2 and ARFGAP3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ARFGAP1/2/3 (H-84) is also recommended for detection of ARFGAP1, ARFGAP2 and ARFGAP3 in additional species, including equine, canine, bovine and porcine.

Molecular Weight of ARFGAP1: 45/46/44 kDa.

Molecular Weight of ARFGAP2: 57 kDa.

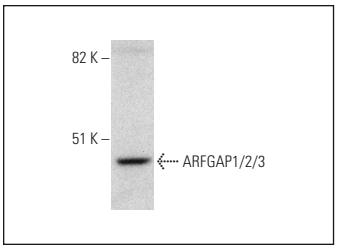
Molecular Weight of ARFGAP3: 57 kDa.

Positive Controls: mouse kidney extract: sc-2255.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ARFGAP1/2/3 (H-84): 292277. Western blot analysis of ARFGAP1/2/3 expression in mouse kidney tissue extract.

RESEARCH USE

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

PROTOCOLS

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