

ARFGAP1/2/3 (F-3): sc-390955

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 phosphoinositides and inhibited by phosphatidylcholine. The genes encoding ARFGAP1, ARFGAP2 and ARFGAP3 map to human chromosomes 20q13.33, 11p11.2 and 22q13.2, respectively.

REFERENCES

- 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.
- Liu, X., et al. 2001. Functional characterization of novel human ARFGAP3. *FEBS Lett.* 490: 79-83.
- 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.
- Parnis, A., et al. 2006. Golgi localization determinants in ARFGAP1 and in new tissue-specific ARFGAP1 isoforms. *J. Biol. Chem.* 281: 3785-3792.
- Frigerio, G., et al. 2007. Two human ARFGAPs associated with COP-I-coated vesicles. *Traffic* 8: 1644-1655.
- Weimer, C., et al. 2008. Differential roles of ARFGAP1, ARFGAP2, and ARFGAP3 in COPI trafficking. *J. Cell Biol.* 183: 725-735.
- Saitoh, A., et al. 2009. Three homologous ARFGAPs participate in coat protein I-mediated transport. *J. Biol. Chem.* 284: 13948-13957.

SOURCE

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

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ARFGAP1/2/3 (F-3) is available conjugated to agarose (sc-390955 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390955 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390955 PE), fluorescein (sc-390955 FITC), Alexa Fluor® 488 (sc-390955 AF488), Alexa Fluor® 546 (sc-390955 AF546), Alexa Fluor® 594 (sc-390955 AF594) or Alexa Fluor® 647 (sc-390955 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390955 AF680) or Alexa Fluor® 790 (sc-390955 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

ARFGAP1/2/3 (F-3) is recommended for detection of ARFGAP1, ARFGAP2 and ARFGAP3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 (F-3) is also recommended for detection of ARFGAP1, ARFGAP2 and ARFGAP3 in additional species, including bovine and porcine.

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

Molecular Weight of ARFGAP2: 57 kDa.

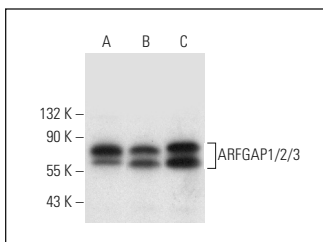
Molecular Weight of ARFGAP3: 57 kDa.

Positive Controls: Ramos cell lysate: sc-2216, RT-4 whole cell lysate: sc-364257 or U-251-MG whole cell lysate: sc-364176.

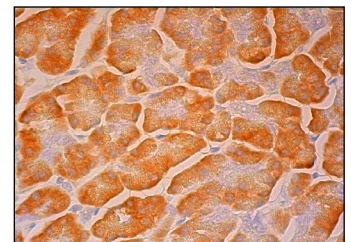
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



ARFGAP1/2/3 (F-3): sc-390955. Western blot analysis of ARFGAP1/2/3 expression in Ramos (A), RT-4 (B) and U-251-MG (C) whole cell lysates.



ARFGAP1/2/3 (F-3): sc-390955. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells.

STORAGE

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

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