

ARFGAP1 (C-4): sc-271303

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 phosphoinositides, 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., et al. 1995. The ARF1 GTPase-activating protein: zinc finger motif and Golgi complex localization. *Science* 270: 1999-2002.
2. 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.
3. Majoul, I., et al. 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., et al. 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., et al. 2006. Golgi localization determinants in ARFGAP1 and in new tissue-specific ARFGAP1 isoforms. *J. Biol. Chem.* 281: 3785-3792.

CHROMOSOMAL LOCATION

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

SOURCE

ARFGAP1 (C-4) is a mouse monoclonal antibody raised against amino acids 1-286 mapping at the N-terminus of ARFGAP1 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 (C-4) is available conjugated to agarose (sc-271303 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271303 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271303 PE), fluorescein (sc-271303 FITC), Alexa Fluor® 488 (sc-271303 AF488), Alexa Fluor® 546 (sc-271303 AF546), Alexa Fluor® 594 (sc-271303 AF594) or Alexa Fluor® 647 (sc-271303 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271303 AF680) or Alexa Fluor® 790 (sc-271303 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ARFGAP1 (C-4) is recommended for detection of ARFGAP1 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ARFGAP1 siRNA (h): sc-72529, ARFGAP1 shRNA Plasmid (h): sc-72529-SH and ARFGAP1 shRNA (h) Lentiviral Particles: sc-72529-V.

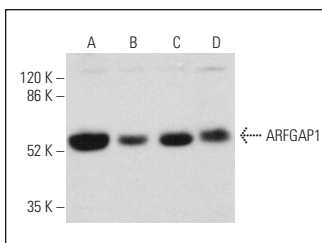
Molecular Weight of ARFGAP1: 45 kDa.

Positive Controls: ZR-75-1 whole cell lysate: sc-2241, MCF7 whole cell lysate: sc-2206 or A549 cell lysate: sc-2413.

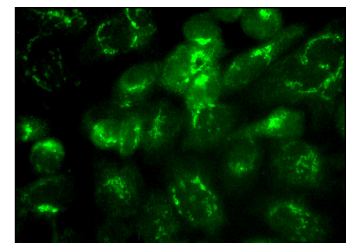
RECOMMENDED SUPPORT REAGENTS

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.

DATA



ARFGAP1 (C-4): sc-271303. Western blot analysis of ARFGAP1 expression in ZR-75-1 (A), A549 (B), MCF7 (C) and K-562 (D) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



ARFGAP1 (C-4): sc-271303. Immunofluorescence staining of formalin-fixed A-431 cells showing Golgi apparatus localization.

SELECT PRODUCT CITATIONS

1. Pauwels, A.M., et al. 2019. Spatiotemporal changes of the phagosomal proteome in dendritic cells in response to LPS stimulation. *Mol. Cell. Proteomics* 18: 909-922.

STORAGE

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

RESEARCH USE

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