SANTA CRUZ BIOTECHNOLOGY, INC.

ARF1 (ARFS 5F2/2): sc-53169



BACKGROUND

ADP-ribosylation factors (ARFs), are small guanine nucleotide-binding proteins that enhance the enzymatic activities of cholera toxin, and constitute one family of the RAS superfamily. ARFs are essential and ubiquitous in eukaryotes, as they are involved in vesicular transport and functioning via phospholipase D activation. ARF proteins play a role in membrane traffic and organelle integrity and are intimately tied to their reversible association with membranes and distinct interactions with membrane phospholipids. ARF1 is regulated by the binding and hydrolysis of GTP. Coatomer, or COPI, is a heptameric protein recruited to membranes by ARF1. Research demonstrates that guanine nucleotide exchange-activated ARF1, when located at the Golgi membrane, recruits and binds cytoplasmic COPI to the membranes.

REFERENCES

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- Lee, C.M., et al. 1992. Characterization of the human gene encoding ADP-ribosylation factor 1, a guanine nucleotide-binding activator of cholera toxin. J. Biol. Chem. 267: 9028-9034.
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- Hirai, M., et al. 1997. Assignment of human ADP ribosylation factor (ARF) genes ARF1 and ARF3 to chromosomes 1q42 and 12q13, respectively. Genomics 34: 263-265.
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CHROMOSOMAL LOCATION

Genetic locus: ARF1 (human) mapping to 1q42.13; Arf1 (mouse) mapping to 11 B1.3.

SOURCE

ARF1 (ARFS 5F2/2) is a mouse monoclonal antibody raised against amino acids 174-180 of ARF1 of human origin.

PRODUCT

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

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

ARF1 (ARFS 5F2/2) is recommended for detection of ARF1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 ARF1 siRNA (h): sc-105086, ARF1 siRNA (m): sc-141186, ARF1 shRNA Plasmid (h): sc-105086-SH, ARF1 shRNA Plasmid (m): sc-141186-SH, ARF1 shRNA (h) Lentiviral Particles: sc-105086-V and ARF1 shRNA (m) Lentiviral Particles: sc-141186-V.

Molecular Weight of ARF1: 20 kDa.

Positive Controls: ARF1 (m2): 293T Lysate: sc-124986, HeLa whole cell lysate: sc-2200 or Caki-1 cell lysate: sc-2224.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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





ARF1 (ARFS 5F2/2): sc-53169. Western blot analysis of ARF1 expression in non-transfected: sc-117752 (**A**) and mouse ARF1 transfected: sc-124986 (**B**) 293T whole cell lysates.

ARF1 (ARFS 5F2/2): sc-53169. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

RESEARCH USE

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



See **ARF1 (ARFS 1A9/5): sc-53168** for ARF1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.