

# arfaptin 1 (F-3): sc-374361

## BACKGROUND

ADP-ribosylation factors, or ARFs, enhance the ADP ribosyltransferase activity of cholera toxin and are implicated in vesicle transport between endoplasmic reticulum and the Golgi complex. Arfaptin 1 is recruited from the cytosol to Golgi membranes by ARFs in a guanosine 5-prime-O-(3-thiotriphosphate)-dependent and brefeldin A-sensitive manner but is not a constituent of coatomer. Arfaptin 1 binds to nonmyristoylated GTP-bound ARF3, but not to GDP-bound ARF3, and also to ARF1, another class I ARF. It binds with lower affinity to ARF5, a class II ARF, and with very little affinity to ARF6, a class III ARF. POR1 (also designated arfaptin 2) was first isolated as a Rac 1 binding protein necessary for Rac mediated Actin polymerization and the subsequent formation of membrane ruffles and lamellipodia. POR1 has also been shown to interact with the ADP ribosylation factor ARF6, a GTPase that associates with the plasma membrane and intracellular endosome vesicles, in a GTP dependent manner. The association of POR1 with ARF6 stimulates induction of Actin polymerization. POR1 appears to play a regulatory role through multiple signaling pathways in the reorganization of the cytoskeletal structure.

## REFERENCES

1. Joneson, T., et al. 1996. RAC regulation of Actin polymerization and proliferation by a pathway distinct from Jun kinase. *Science* 274: 1374-1376.
2. Van Aelst, L., et al. 1996. Identification of a novel Rac1-interacting protein involved in membrane ruffling. *EMBO J.* 15: 3778-3786.
3. D'Souza-Schorey, C., et al. 1997. A role for POR1, a Rac1-interacting protein, in ARF6-mediated cytoskeletal rearrangements. *EMBO J.* 16: 5445-5454.
4. Kanoh, H., et al. 1997. Arfaptin 1, a putative cytosolic target protein of ADP-ribosylation factor, is recruited to Golgi membranes. *J. Biol. Chem.* 272: 5421-5429.

## CHROMOSOMAL LOCATION

Genetic locus: ARFIP1 (human) mapping to 4q31.3.

## SOURCE

arfaptin 1 (F-3) is a mouse monoclonal antibody raised against amino acids 1-69 mapping at the N-terminus of arfaptin 1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

arfaptin 1 (F-3) is available conjugated to agarose (sc-374361 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374361 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374361 PE), fluorescein (sc-374361 FITC), Alexa Fluor® 488 (sc-374361 AF488), Alexa Fluor® 546 (sc-374361 AF546), Alexa Fluor® 594 (sc-374361 AF594) or Alexa Fluor® 647 (sc-374361 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374361 AF680) or Alexa Fluor® 790 (sc-374361 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

arfaptin 1 (F-3) is recommended for detection of arfaptin 1 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 arfaptin 1 siRNA (h): sc-41190, arfaptin 1 shRNA Plasmid (h): sc-41190-SH and arfaptin 1 shRNA (h) Lentiviral Particles: sc-41190-V.

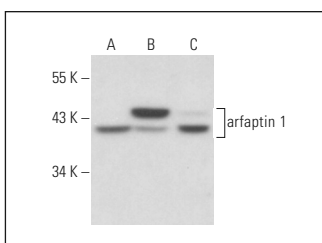
Molecular Weight of arfaptin 1: 44 kDa.

Positive Controls: JAR cell lysate: sc-2276, HEL 92.1.7 cell lysate: sc-2270 or Jurkat whole cell lysate: sc-2204.

## 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



arfaptin 1 (F-3): sc-374361. Western blot analysis of arfaptin 1 expression in Jurkat (A), JAR (B) and HEL 92.1.7 (C) whole cell lysates.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.