ARF1 (ARFS 3F1): sc-53167

SANTA CRUZ®
BIOTECHNOLOGY

The Power to Question

BACKGROUND

The ADP-ribosylation factor (ARF) protein family are structurally and functionally conserved members of the Ras superfamily of regulatory GTP-binding proteins. ARFs influence vesicle trafficking and signal transduction in eukaryotic cells. ARF-dependent regulatory mechanisms include the coordination of spectrin interactions with Golgi membranes and the association of Actin to the Golgi via Rho family-dependent G protein localization (Rac, Cdc42) and WASP/Arp2/3 complexes. Additionally, ARFs play a central role in maintenance of organelle integrity, assembly of coat proteins and activation of phospholipase D. ARF proteins are categorized as class I (ARF1, ARF2, and ARF3), class II (ARF4 and ARF5) and class III (ARF6); members of each class share a common gene organization.

CHROMOSOMAL LOCATION

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

SOURCE

ARF1 (ARFS 3F1) is a mouse monoclonal antibody raised against the C-terminus of ARF1 of human origin.

PRODUCT

Each vial contains 200 µg IgG$_{2a}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ARF1 (ARFS 3F1) is available conjugated to agarose (sc-53167 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53167 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53167 PE), fluorescein (sc-53167 FITC), Alexa Fluor® 488 (sc-53167 AF488), Alexa Fluor® 546 (sc-53167 AF546), Alexa Fluor® 594 (sc-53167 AF594) or Alexa Fluor® 647 (sc-53167 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53167 AF680) or Alexa Fluor® 790 (sc-53167 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

ARF1 (ARFS 3F1) 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 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.
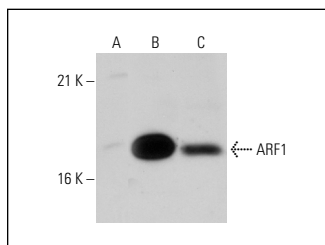
Molecular Weight of ARF1: 20 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Caki-1 cell lysate: sc-2224 or ARF1 (h): 293T Lysate: sc-113571.
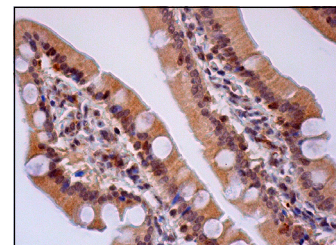
RECOMMENDED SUPPORT REAGENTS

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) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA

ARF (ARFS 3F1): sc-53167. Western blot analysis of ARF1 expression in non-transfected 293T: sc-117752 (**A**), human ARF1 transfected 293T: sc-113571 (**B**) and Caki-1 (**C**) whole cell lysates.

ARF1 (ARFS 3F1): sc-53167. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic and nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Yang, Y., et al. 2019. MicroRNA-488-3p inhibits proliferation and induces apoptosis by targeting ZBTB2 in esophageal squamous cell carcinoma. J. Cell. Biochem. 120: 18702-18713.

2. Ramos-Miguel, A., et al. 2019. The SNAP25 interactome in ventromedial caudate in schizophrenia includes the mitochondrial protein ARF1. Neuroscience 420: 97-111.

3. Obata, Y., et al. 2019. N822K- or V560G-mutated KIT activation preferentially occurs in lipid rafts of the Golgi apparatus in leukemia cells. Cell Commun. Signal. 17: 114.

4. Mu, Q., et al. 2024. THUMPD3-AS1 inhibits ovarian cancer cell apoptosis through the miR-320d/ARF1 axis. FASEB J. 38: e23772.

RESEARCH USE

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

PROTOCOLS

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

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