

## ARF3 (41): sc-135841



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 and WASP/Arp2/3 complexes. Additionally, ARFs play a central role in the maintenance of organelle integrity, assembly of coat proteins and activation of phospholipase D (PC-PLD). ARF3 (ADP-ribosylation factor 3), is a 181 amino acid protein that localizes to Golgi apparatus and belongs to the small GTPase superfamily. ARF3 interacts with PICK1 and may modulate budding and uncoating of vesicles within the Golgi apparatus. Known to activate cholera toxin, ARF3 maps to human chromosome 12q13.12.

## REFERENCES

1. Tsai, S.C., et al. 1991. Isolation and characterization of the human gene for ADP-ribosylation factor 3, a 20 kDa guanine nucleotide-binding protein activator of cholera toxin. *J. Biol. Chem.* 266: 23053-23059.
2. Hirai, M., et al. 1996. Assignment of human ADP ribosylation factor (ARF) genes ARF1 and ARF3 to chromosomes 1q42 and 12q13, respectively. *Genomics* 34: 263-265.

## CHROMOSOMAL LOCATION

Genetic locus: ARF3 (human) mapping to 12q13.12; Arf3 (mouse) mapping to 15 F1.

## SOURCE

ARF3 (41) is a mouse monoclonal antibody raised against amino acids 1-181 representing full length ARF3 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.

ARF3 (41) is available conjugated to agarose (sc-135841 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-135841 HRP), 200 µg/ml, for WB, IHC(P) and ELISA.

## APPLICATIONS

ARF3 (41) is recommended for detection of ARF3 of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000); not recommended for immunoprecipitation.

Suitable for use as control antibody for ARF3 siRNA (h): sc-156161, ARF3 siRNA (m): sc-141188, ARF3 shRNA Plasmid (h): sc-156161-SH, ARF3 shRNA Plasmid (m): sc-141188-SH, ARF3 shRNA (h) Lentiviral Particles: sc-156161-V and ARF3 shRNA (m) Lentiviral Particles: sc-141188-V.

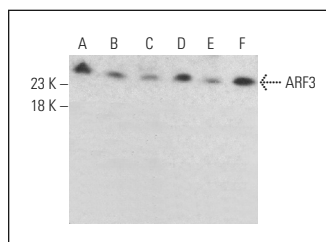
Molecular Weight of ARF3: 20 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, ARF (h5): 293T Lysate: sc-176857 or Caki-1 cell lysate: sc-2224.

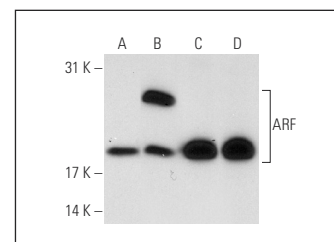
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-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.

## DATA



ARF3 (41): sc-135841. Western blot analysis of ARF3 expression in HeLa (A), Caki-1 (B), WI-38 (C) and Caco-2 (D) whole cell lysates and mouse spleen (E) and rat cerebellum (F) tissue extracts.



ARF3 (41): sc-135841. Western blot analysis of ARF expression in non-transfected 293T: sc-117752 (A), human ARF transfected 293T: sc-176857 (B), HeLa (C) and Caki-1 (D) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Gubern, C., et al. 2013. miRNA expression is modulated over time after focal ischaemia: up-regulation of miR-347 promotes neuronal apoptosis. *FEBS J.* 280: 6233-6246.
2. Reiling, J.H., et al. 2013. A CREB3-ARF4 signalling pathway mediates the response to Golgi stress and susceptibility to pathogens. *Nat. Cell Biol.* 15: 1473-1485.
3. Ramírez-Peinado, S., et al. 2017. TRAPPC13 modulates autophagy and the response to Golgi stress. *J. Cell Sci.* 130: 2251-2265.
4. Ignashkova, T.I., et al. 2017. Cell survival and protein secretion associated with Golgi integrity in response to Golgi stress-inducing agents. *Traffic* 18: 530-544.
5. Ishida, M., et al. 2022. A neurodevelopmental disorder associated with an activating *de novo* missense variant in ARF1. *Hum. Mol. Genet.* E-published.

## 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.