SANTA CRUZ BIOTECHNOLOGY, INC.

ARL4D (F-2): sc-271273

BACKGROUND

ADP-ribosylation factors (ARFs) are highly conserved guanine nucleotide-binding proteins that enhance the ADP-ribosyltransferase activity of cholera toxin. ARFs are important in eukaryotic vesicular trafficking pathways and activating phospholipase D. ARL4D (ADP-ribosylation factor-like 4D), also known as ARL6 or ARF4L, is a 201 amino acid nuclear protein that is a member of the ADP-ribosylation factor family of GTP-binding proteins. ARL4D may play a role in membrane-associated intracellular trafficking and may promote ARF6 activation and modulate actin remodeling by regulating ARNO. It is suggested that mutations of ARL4D is associated with Bardet-Biedl syndrome.

REFERENCES

1. Smith, S.A., et al. 1995. Isolation and mapping of a gene encoding a novel human ADP-ribosylation factor on chromosome 17q12-q21. Genomics 28: 113-115.
2. Katayama, T., et al. 1998. Expression of an ADP-ribosylation factor like gene, ARF4L, is induced after transient forebrain ischemia in the gerbil. Brain Res. Mol. Brain Res. 56: 66-75.
3. Lin, C.Y., et al. 2000. ARL4, an ARF-like protein that is developmentally regulated and localized to nuclei and nucleoli. J. Biol. Chem. 275: 37815-37823.
4. Nonaka, Y., et al. 2002. Recognition of ADP-ribosylation factor 4-like by HLA-A2-restricted and tumor-reactive cytotoxic T lymphocytes from patients with brain tumors. Tissue Antigens 60: 319-327.
5. Katayama, T., et al. 2004. Role of ARF4L in recycling between endosomes and the plasma membrane. Cell. Mol. Neurobiol. 24: 137-147.
6. Li, C.C., et al. 2007. ARL4D recruits cytohesin-2/ARNO to modulate Actin remodeling. Mol. Biol. Cell 18: 4420-4437.

CHROMOSOMAL LOCATION

Genetic locus: ARL4D (human) mapping to 17q21.31; Arl4d (mouse) mapping to 11 D.

SOURCE

ARL4D (F-2) is a mouse monoclonal antibody raised against amino acids 135-187 mapping near the C-terminus of ARL4D 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.

ARL4D (F-2) is available conjugated to agarose (sc-271273 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271273 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271273 PE), fluorescein (sc-271273 FITC), Alexa Fluor® 488 (sc-271273 AF488), Alexa Fluor® 546 (sc-271273 AF546), Alexa Fluor® 594 (sc-271273 AF594) or Alexa Fluor® 647 (sc-271273 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271273 AF680) or Alexa Fluor® 790 (sc-271273 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ARL4D (F-2) is recommended for detection of ARL4D of mouse, rat and 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 ARL4D siRNA (h): sc-94138, ARL4D siRNA (m): sc-141243, ARL4D shRNA Plasmid (h): sc-94138-SH, ARL4D shRNA Plasmid (m): sc-141243-SH, ARL4D shRNA (h) Lentiviral Particles: sc-94138-V and ARL4D shRNA (m) Lentiviral Particles: sc-141243-V.

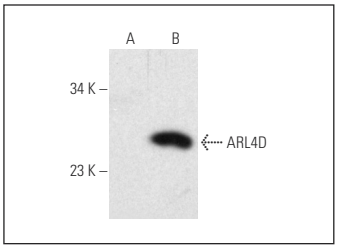
Molecular Weight of ARL4D: 20 kDa.

Positive Controls: T-47D cell lysate: sc-2293, Y79 cell lysate: sc-2240 or ARL4D (m): 293T Lysate: sc-124995.

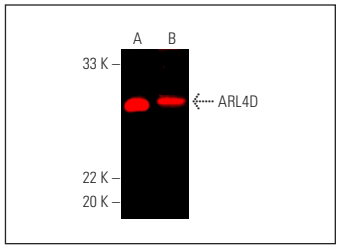
RECOMMENDED SUPPORT REAGENTS

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



ARL4D (F-2): sc-271273. Western blot analysis of ARL4D expression in non-transfected: sc-117752 (**A**) and mouse ARL4D transfected: sc-124995 (**B**) 293T whole cell lysates.



ARL4D (F-2): sc-271273. Near-infrared western blot analysis of ARL4D expression in Y79 (**A**) and T-47D (**B**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.

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 for detailed protocols and support products.