SANTA CRUZ BIOTECHNOLOGY, INC.

ARL4 (B-10): sc-398352

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ADP-ribosylation factors (ARFs) are highly conserved guanine nucleotide-binding proteins that enhance the ADP-ribosyltransferase activity of cholera toxin. ARF's are important in eukaryotic vesicular trafficking pathways and activating phospholipase D. ARL4 (ADP-ribosylation factor-like protein 4A) is a member of the ARF-like protein (ARL) subfamily of small GTPases. It contains a C terminal nuclear localization signal (NLS) region that interacts with Importin-α. ARL4 localizes to the nucleus and is found in a variety of tissues, but is predominantly expressed in spermatogonia and Sertoli cells. It is most closely related to ARL6 and ARL7. Unlike ARFs, ARL4 does not activate the cholera toxin ADP-ribosyltranferase. ARL4 may play a role in neurogenesis during embryonic development and somitogenesis in the early stages of adult spermatogenesis.

REFERENCES

1. Schurmann, A., et al. 1994. Cloning of two novel ADP-ribosylation factor-like proteins and characterization of their differential expression in 3T3-L1 cells. J. Biol. Chem. 269: 15683-15688.
2. 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.
3. 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.
4. Jacobs, S., et al. 1999. ADP-ribosylation factor (ARF)-like 4, 6, and 7 represent a subgroup of the ARF family characterization by rapid nucleotide exchange and a nuclear localization signal. FEBS Lett. 456: 384-388.

CHROMOSOMAL LOCATION

Genetic locus: ARL4A (human) mapping to 7p21.3; Arl4a (mouse) mapping to 12 B1.

SOURCE

ARL4 (B-10) is a mouse monoclonal antibody raised against amino acids 137-196 mapping near the C-terminus of ARL4 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.

ARL4 (B-10) is available conjugated to agarose (sc-398352 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398352 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398352 PE), fluorescein (sc-398352 FITC), Alexa Fluor® 488 (sc-398352 AF488), Alexa Fluor® 546 (sc-398352 AF546), Alexa Fluor® 594 (sc-398352 AF594) or Alexa Fluor® 647 (sc-398352 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398352 AF680) or Alexa Fluor® 790 (sc-398352 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

ARL4 (B-10) is recommended for detection of ARL4 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).

ARL4 (B-10) is also recommended for detection of ARL4 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for ARL4 siRNA (h): sc-61992, ARL4 siRNA (m): sc-61993, ARL4 shRNA Plasmid (h): sc-61992-SH, ARL4 shRNA Plasmid (m): sc-61993-SH, ARL4 shRNA (h) Lentiviral Particles: sc-61992-V and ARL4 shRNA (m) Lentiviral Particles: sc-61993-V.

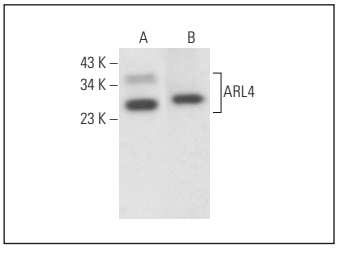
Molecular Weight of ARL4: 22 kDa.

Positive Controls: HUV-EC-C whole cell lysate: sc-364180, rat testis extract: sc-2400 or K-562 whole cell lysate: sc-2203.

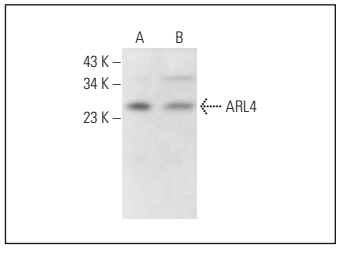
RECOMMENDED SUPPORT REAGENTS

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



ARL4 (B-10): sc-398352. Western blot analysis of ARL4 expression in AN3 CA whole cell lysate (**A**) and rat testis tissue extract (**B**).



ARL4 (B-10): sc-398352. Western blot analysis of ARL4 expression in HUV-EC-C (**A**) and K-562 (**B**) 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.

PROTOCOLS

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