

ARL5A/5B/5C (D-7): sc-390269

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 play an essential role in the activation of phospholipase D (PC-PLD). ARL5 (ADP-ribosylation factor-like protein 5), also known as ARFLP5 or ARL5A, is a 179 amino acid member of the ARF protein family. Unlike many ARF family members, ARL5A is thought to lack ADP-ribosylation enhancing activity. Localized to the nucleus, ARL5A has been found to interact with HP1 α , indicating that it is developmentally regulated and has a possible role in nuclear dynamics and embryonic development signaling cascades. Expressed in brain, heart, lung, cartilage and kidney, but not in spleen, ARL5B is most closely related to ARL5A, with which it shares 80% sequence identity. ARL5B (ADP-ribosylation factor-like protein 8), also known as ARL8, is a 179 amino acid protein that belongs to the RAS superfamily of regulatory GTPases. Human ARL5B shares 100% identity with mouse *Arl5b* and 71% identity with the *Drosophila* homolog. Two isoforms of ARL5B exist as a result of alternative splicing events.

REFERENCES

- Pasqualato, S., et al. 2002. Arf, Arl, Arp and Sar proteins: a family of GTP-binding proteins with a structural device for "front-back" communication. *EMBO Rep.* 3: 1035-1041.
- Sebald, E., et al. 2003. Isolation of a new member of the ADP-ribosylation like factor gene family, ARL8, from a cartilage cDNA library. *Gene* 311: 147-151.
- Burd, C.G., et al. 2004. Arf-like GTPases: not so Arf-like after all. *Trends Cell Biol.* 14: 687-694.
- Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608909. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Kahn, R.A., et al. 2005. Arf family GTPases: roles in membrane traffic and microtubule dynamics. *Biochem. Soc. Trans.* 33: 1269-1272.

SOURCE

ARL5A/5B/5C (D-7) is a mouse monoclonal antibody raised against amino acids 1-113 mapping at the N-terminus of ARL5B of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ARL5A/5B/5C (D-7) is available conjugated to agarose (sc-390269 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390269 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390269 PE), fluorescein (sc-390269 FITC), Alexa Fluor® 488 (sc-390269 AF488), Alexa Fluor® 546 (sc-390269 AF546), Alexa Fluor® 594 (sc-390269 AF594) or Alexa Fluor® 647 (sc-390269 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390269 AF680) or Alexa Fluor® 790 (sc-390269 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ARL5A/5B/5C (D-7) is recommended for detection of ARL5A, ARL5B and ARL5C of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Molecular Weight of ARL5: 21 kDa.

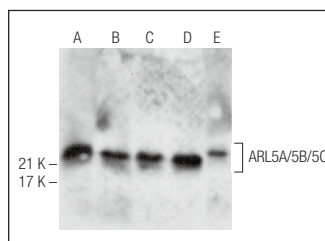
Molecular Weight of ARL8: 20 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, AML-193 whole cell lysate: sc-364182 or SK-N-MC cell lysate: sc-2237.

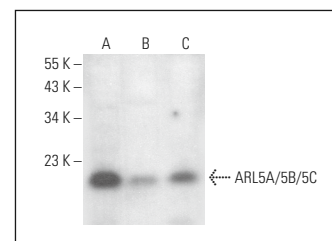
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



ARL5A/5B/5C (D-7): sc-390269. Western blot analysis of ARL5A/5B/5C expression in HL-60 (A), PANC-1 (B), AML-193 (C) and SK-N-MC (D) whole cell lysates and human liver tissue extract (E).



ARL5A/5B/5C (D-7): sc-390269. Western blot analysis of ARL5A/5B/5C expression in Hep G2 (A), H4 (B) and c4 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Shi, H., et al. 2023. Circ-N4BP2L2 enhances mitochondrial function in non-small cell lung cancer cells through regulating the miR-135a-5p/ARL5B axis. *Environ. Toxicol.* 38: 883-898.

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.