

# ARL5B (E-3): sc-393511

## 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 they play an essential role in the activation of phospholipase D (PC-PLD). ARL5B (ADP-ribosylation factor-like protein 5B), 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. Expressed in brain, heart, lung, cartilage and kidney, but not in spleen, ARL5B is most related to ARL5, with which it shares 80% protein sequence identity. Two isoforms of ARL5B exist as a result of alternative splicing events.

## REFERENCES

- Secombe, J. and Parkhurst, S.M. 2004. *Drosophila* topors is a RING finger-containing protein that functions as a ubiquitin-protein isopeptide ligase for the hairy basic helix-loop-helix repressor protein. *J. Biol. Chem.* 279: 17126-17133.
- Okai, T., et al. 2004. Novel small GTPase subfamily capable of associating with Tubulin is required for chromosome segregation. *J. Cell Sci.* 117: 4705-4715.
- Burd, C.G., et al. 2004. Arf-like GTPases: not so Arf-like after all. *Trends Cell Biol.* 14: 687-694.
- Kahn, R.A., et al. 2005. Arf family GTPases: roles in membrane traffic and microtubule dynamics. *Biochem. Soc. Trans.* 33: 1269-1272.

## CHROMOSOMAL LOCATION

Genetic locus: ARL5B (human) mapping to 10p12.31; Arl5b (mouse) mapping to 2 A2.

## SOURCE

ARL5B (E-3) is a mouse monoclonal antibody raised against amino acids 1-179 representing full length ARL5B 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.

ARL5B (E-3) is available conjugated to agarose (sc-393511 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393511 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393511 PE), fluorescein (sc-393511 FITC), Alexa Fluor® 488 (sc-393511 AF488), Alexa Fluor® 546 (sc-393511 AF546), Alexa Fluor® 594 (sc-393511 AF594) or Alexa Fluor® 647 (sc-393511 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393511 AF680) or Alexa Fluor® 790 (sc-393511 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## RESEARCH USE

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

## APPLICATIONS

ARL5B (E-3) is recommended for detection of ARL5B 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 ARL5B siRNA (h): sc-90426, ARL5B siRNA (m): sc-141249, ARL5B shRNA Plasmid (h): sc-90426-SH, ARL5B shRNA Plasmid (m): sc-141249-SH, ARL5B shRNA (h) Lentiviral Particles: sc-90426-V and ARL5B shRNA (m) Lentiviral Particles: sc-141249-V.

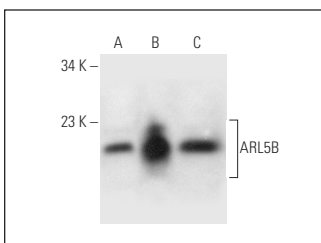
Molecular Weight of ARL5B: 20 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, NCI-H929 whole cell lysate: sc-364786 or human liver extract: sc-363766.

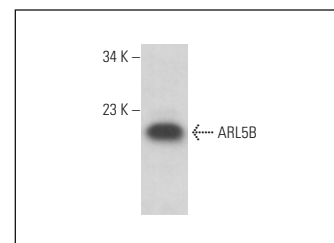
## RECOMMENDED SUPPORT REAGENTS

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



ARL5B (E-3): sc-393511. Western blot analysis of ARL5B expression in HL-60 (A) and NCI-H929 (B) whole cell lysates and human liver tissue extract (C).



ARL5B (E-3): sc-393511. Western blot analysis of ARL5B expression in Caco-2 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Xie, X., et al. 2020. Advanced glycation end products reduce macrophage-mediated killing of *Staphylococcus aureus* by ARL8 upregulation and inhibition of autolysosome formation. *Eur. J. Immunol.* 50: 1174-1186.
- Jaimon, E., et al. 2021. Binding with heat shock cognate protein HSC70 fine-tunes the Golgi association of the small GTPase ARL5B. *J. Biol. Chem.* 297: 101422.

## STORAGE

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