SANTA CRUZ BIOTECHNOLOGY, INC.

ARL8A/B (H-8): sc-398635

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). ARL8B (ADP-ribosylation factor-like protein 8B), also known as ARL10C or GIE1, is a 186 amino acid protein that localizes to the late endosome membrane and belongs to the ARL family of ARF-like GTPase proteins. Expressed ubiquitously, ARL8A interacts with Tubulin and is thought to play a role in lysosome motility, as well as in chromosomal segregation. The gene encoding ARL8B maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

CHROMOSOMAL LOCATION

Genetic locus: ARL8A (human) mapping to 1q32.1, ARL8B (human) mapping to 3p26.1; Arl8a (mouse) mapping to 1 E4, Arl8b (mouse) mapping to 6 E2.

SOURCE

ARL8A/B (H-8) is a mouse monoclonal antibody raised against amino acids 121-186 mapping at the C-terminus of ARL8B of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ARL8A/B (H-8) is available conjugated to agarose (sc-398635 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398635 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398635 PE), fluorescein (sc-398635 FITC), Alexa Fluor® 488 (sc-398635 AF488), Alexa Fluor® 546 (sc-398635 AF546), Alexa Fluor® 594 (sc-398635 AF594) or Alexa Fluor® 647 (sc-398635 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398635 AF680) or Alexa Fluor® 790 (sc-398635 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

ARL8A/B (H-8) is recommended for detection of ARL8A and ARL8B 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).

ARL8A/B (H-8) is also recommended for detection of ARL8A and ARL8B in additional species, including equine, canine, bovine and porcine.

Molecular Weight of ARL8A: 21 kDa.

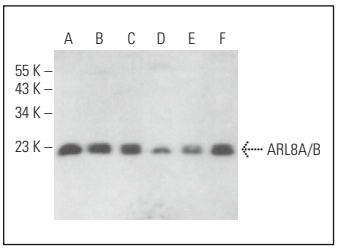
Molecular Weight of ARL8B: 22 kDa.

Positive Controls: ARL8A (h2): 293T Lysate: sc-371502, Neuro-2A whole cell lysate: sc-364185 or NIH/3T3 whole cell lysate: sc-2210.

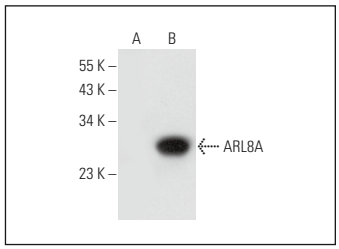
RECOMMENDED SUPPORT REAGENTS

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



ARL8A/B (H-8): sc-398635. Western blot analysis of ARL8A/B expression in NIH/3T3 (**A**), Neuro-2A (**B**), WEHI-231 (**C**), F9 (**D**), T98G (**E**) and JAR (**F**) whole cell lysates.



ARL8A/B (H-8): sc-398635. Western blot analysis of ARL8A expression in non-transfected: sc-117752 (**A**) and human ARL8A transfected: sc-371502 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Marwaha, R., et al. 2017. The Rab7 effector PLEKHM1 binds ARL8B to promote cargo traffic to lysosomes. J. Cell Biol. 216: 1051-1070.
2. Jeschke, A. and Haas, A. 2018. Sequential actions of phosphatidylinositol phosphates regulate phagosome-lysosome fusion. Mol. Biol. Cell 29: 452-465.
3. Kwon, Y., et al. 2020. Amitriptyline interferes with autophagy-mediated clearance of protein aggregates via inhibiting autophagosome maturation in neuronal cells. Cell Death Dis. 11: 874.
4. Saffi, G.T., et al. 2021. Reactive oxygen species prevent lysosome coalescence during PIKfyve inhibition. PLoS ONE 16: e0259313.
5. Schleinitz, A., et al. 2023. Consecutive functions of small GTPases guide HOPS-mediated tethering of late endosomes and lysosomes. Cell Rep. 42: 111969.
6. Ng, P.Y., et al. 2023. Sugar transporter Slc37a2 regulates bone metabolism in mice via a tubular lysosomal network in osteoclasts. Nat. Commun. 14: 906.

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.