SANTA CRUZ BIOTECHNOLOGY, INC.

ARL13B (C-5): sc-515784

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. ARFs are important in eukaryotic vesicular trafficking pathways and they play an essential role in the activation of phospholipase D (PC-PLD). ARL13B (ADP-ribosylation factor-like 13B), also known as ARL2L1 or JBTS8, is a 428 amino acid protein that belongs to the ARL subfamily of ARF-like GTPases and is thought to be involved in cilia formation. Defects in the gene encoding ARL13B are associated with Joubert syndrome (JS), a rare genetic disorder of the brain that is characterized by an underdeveloped cerebellum and brain stem and often leads to ataxia, abnormal breathing and seizures.

CHROMOSOMAL LOCATION

Genetic locus: ARL13B (human) mapping to 3q11.1; Arl13b (mouse) mapping to 16 C1.3.

SOURCE

ARL13B (C-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 414-428 at the C-terminus of ARL13B of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ARL13B (C-5) is available conjugated to agarose (sc-515784 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515784 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515784 PE), fluorescein (sc-515784 FITC), Alexa Fluor® 488 (sc-515784 AF488), Alexa Fluor® 546 (sc-515784 AF546), Alexa Fluor® 594 (sc-515784 AF594) or Alexa Fluor® 647 (sc-515784 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515784 AF680) or Alexa Fluor® 790 (sc-515784 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ARL13B (C-5) is recommended for detection of ARL13B 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 ARL13B siRNA (h): sc-78165, ARL13B siRNA (m): sc-141239, ARL13B shRNA Plasmid (h): sc-78165-SH, ARL13B shRNA Plasmid (m): sc-141239-SH, ARL13B shRNA (h) Lentiviral Particles: sc-78165-V and ARL13B shRNA (m) Lentiviral Particles: sc-141239-V.

Molecular Weight of ARL13B: 49 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

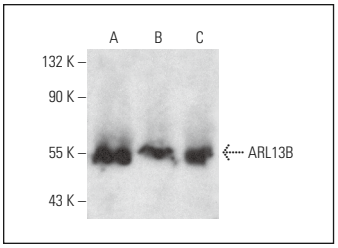
STORAGE

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

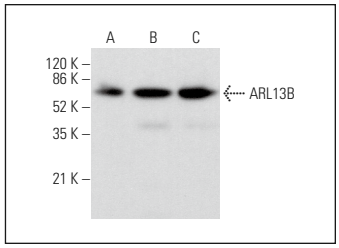
RESEARCH USE

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

DATA



ARL13B (C-5): sc-515784. Western blot analysis of ARL13B expression in human testis (**A**), human adrenal gland (**B**) and human eye (**C**) tissue extracts.



ARL13B (C-5): sc-515784. Western blot analysis of ARL13B expression in HeLa (**A**), Jurkat (**B**) and K-562 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zemirli, N., et al. 2019. The primary cilium protein folliculin is part of the autophagy signaling pathway to regulate epithelial cell size in response to fluid flow. Cell Stress 3: 100-109.
2. Peraldi, P., et al. 2020. The primary cilium of adipose progenitors is necessary for their differentiation into cancer-associated fibroblasts that promote migration of breast cancer cells *in vitro*. Cells 9: 2251.
3. Tripathi, P., et al. 2021. Palmitoylation of acetylated Tubulin and association with ceramide-rich platforms is critical for ciliogenesis. J. Lipid Res. 62: 100021.
4. Boukhalfa, A., et al. 2021. The autophagy protein ATG16L1 cooperates with IFT20 and INPP5E to regulate the turnover of phosphoinositides at the primary cilium. Cell Rep. 35: 109045.
5. Schweizer, N., et al. 2021. Sub-centrosomal mapping identifies augmin-γTuRC as part of a centriole-stabilizing scaffold. Nat. Commun. 12: 6042.
6. Dutto, I., et al. 2022. Pathway-specific effects of ADSL deficiency on neurodevelopment. Elife 11: e70518.
7. Lalioti, V., et al. 2022. Cell surface detection of vimentin, ACE2 and SARS-CoV-2 Spike proteins reveals selective colocalization at primary cilia. Sci. Rep. 12: 7063.
8. Binó, L., et al. 2023. Tau tubulin kinase 1 and 2 regulate ciliogenesis and human pluripotent stem cells-derived neural rosettes. Sci. Rep. 13: 12884.
9. Andersen, J.S., et al. 2024. Uncovering structural themes across cilia microtubule inner proteins with implications for human cilia function. Nat. Commun. 15: 2687.

PROTOCOLS

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