SANTA CRUZ BIOTECHNOLOGY, INC.

ARL5A (G-9): sc-514680

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). 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, ARL5 is thought to lack ADP-ribosylation enhancing activity. Localized to the nucleus, ARL5A has been found to interact with HP1α, indicating that it is developmentally regulated and has a possible role in nuclear dynamics and embryonic development signaling cascades.

REFERENCES

1. 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.
2. He, H., et al. 2002. Identification and characterization of nine novel human small GTPases showing variable expressions in liver cancer tissues. Gene Expr. 10: 231-242.
3. Lin, C.Y., et al. 2002. A developmentally regulated ARF-like 5 protein (ARL5), localized to nuclei and nucleoli, interacts with heterochromatin protein 1. J. Cell Sci. 115: 4433-4445.
4. Louro, R., et al. 2004. RASL11A, member of a novel small monomeric GTPase gene family, is down-regulated in prostate tumors. Biochem. Biophys. Res. Commun. 316: 618-627.

CHROMOSOMAL LOCATION

Genetic locus: ARL5A (human) mapping to 2q23.3; Arl5a (mouse) mapping to 2 C1.1.

SOURCE

ARL5A (G-9) is a mouse monoclonal antibody raised against amino acids 92-179 mapping at the C-terminus of ARL5A 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.

ARL5A (G-9) is available conjugated to agarose (sc-514680 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514680 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514680 PE), fluorescein (sc-514680 FITC), Alexa Fluor® 488 (sc-514680 AF488), Alexa Fluor® 546 (sc-514680 AF546), Alexa Fluor® 594 (sc-514680 AF594) or Alexa Fluor® 647 (sc-514680 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514680 AF680) or Alexa Fluor® 790 (sc-514680 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

ARL5A (G-9) is recommended for detection of ARL5A 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 ARL5A siRNA (h): sc-94309, ARL5A siRNA (m): sc-141244, ARL5A shRNA Plasmid (h): sc-94309-SH, ARL5A shRNA Plasmid (m): sc-141244-SH, ARL5A shRNA (h) Lentiviral Particles: sc-94309-V and ARL5A shRNA (m) Lentiviral Particles: sc-141244-V.

Molecular Weight (predicted) of ARL5A: 21 kDa.

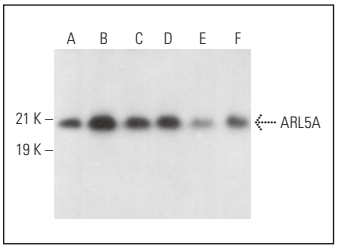
Molecular Weight (observed) of ARL5A: 27 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, IMR-32 cell lysate: sc-2409 or THP-1 cell lysate: sc-2238.

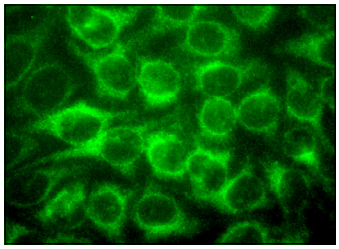
RECOMMENDED SUPPORT REAGENTS

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



ARL5A (G-9): sc-514680. Western blot analysis of ARL5A expression in K-562 (**A**), IMR-32 (**B**), THP-1 (**C**), 3T3-L1 (**D**), L6 (**E**) and BYDP (**F**) whole cell lysates.



ARL5A (G-9): sc-514680. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Ishida, M. and Bonifacino, J.S. 2019. ARFRP1 functions upstream of ARL1 and ARL5 to coordinate recruitment of distinct tethering factors to the *trans*-Golgi network. J. Cell Biol. 218: 3681-3696.

STORAGE

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