SANTA CRUZ BIOTECHNOLOGY, INC.

ARL5A (N-12): sc-107427

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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). 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.
5. 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.
6. Kahn, R.A., et al. 2005. Arf family GTPases: roles in membrane traffic and microtubule dynamics. Biochem. Soc. Trans. 33: 1269-1272.
7. Wang, Z.X., et al. 2005. 2.0 A crystal structure of human ARL5-GDP3'P, a novel member of the small GTP-binding proteins. Biochem. Biophys. Res. Commun. 332: 640-645.
8. Kahn, R.A., et al. 2006. Nomenclature for the human Arf family of GTP-binding proteins: ARF, ARL, and SAR proteins. J. Cell Biol. 172: 645-650.
9. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 608960. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

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

SOURCE

ARL5A (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ARL5A of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107427 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ARL5A (N-12) is recommended for detection of ARL5A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

ARL5A (N-12) is also recommended for detection of ARL5A in additional species, including equine and bovine.

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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

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