ARFRP1 (N-16): sc-85278



The Power to Question

BACKGROUND

The ADP-ribosylation factor (ARF) protein family are structurally and functionally conserved members of the Ras superfamily of regulatory GTP-binding proteins. ARFs influence vesicle trafficking and signal transduction in eukary-otic cells and they play a central role in the maintenance of organelle integrity, assembly of coat proteins and activation of phospholipase D (PC-PLD). ARFRP1 (ADP-ribosylation factor related protein 1), also known as ARP or ARL18, is a 201 amino acid membrane-associated GTPase that localizes to the plasma membrane and the Golgi apparatus and is related to the ARF family of regulatory proteins. Expressed in a variety of tissues, ARFRP1 interacts with SYS1 and is thought to be involved in plasma membrane-related signaling events. ARFRP1 exists as multiple alternatively spliced isoforms and is encoded by a gene which maps to a gene cluster on chromosome 20 that is commonly overexpressed in tumors, suggesting a role for ARFRP1 in carcinogenesis.

REFERENCES

- Schürmann, A., et al. 1995. ARP is a plasma membrane-associated Ras-related GTPase with remote similarity to the family of ADP-ribosylation factors. J. Biol. Chem. 270: 30657-30663.
- Schürmann, A., et al. 1999. The ADP-ribosylation factor (ARF)-related GTPase ARF-related protein binds to the ARF-specific guanine nucleotide exchange factor cytohesin and inhibits the ARF-dependent activation of phospholipase D. J. Biol. Chem. 274: 9744-9751.
- 3. Bai, C., et al. 2000. Overexpression of M68/DcR3 in human gastrointestinal tract tumors independent of gene amplification and its location in a four-gene cluster. Proc. Natl. Acad. Sci. USA 97: 1230-1235.
- 4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604699. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Behnia, R., et al. 2004. Targeting of the ARF-like GTPase ARL3p to the Golgi requires N-terminal acetylation and the membrane protein SYS1p. Nat. Cell Biol. 6: 405-413.
- Shin, H.W., et al. 2005. Roles of ARFRP1 (ADP-ribosylation factor-related protein 1) in post-Golgi membrane trafficking. J. Cell Sci. 118: 4039-4048.
- Zahn, C., et al. 2006. Knockout of ARFRP1 leads to disruption of ARF-like1 (ARL1) targeting to the *trans*-Golgi in mouse embryos and HeLa cells. Mol. Membr. Biol. 23: 475-485.
- 8. Paratore, S., et al. 2008. Distribution of ADP-ribosylation factor-related protein 1 in mouse brain. Arch. Ital. Biol. 146: 53-61.
- Zahn, C., et al. 2008. ADP-ribosylation factor-like GTPase ARFRP1 is required for *trans*-Golgi to plasma membrane trafficking of E-cadherin. J. Biol. Chem. 283: 27179-27188.

CHROMOSOMAL LOCATION

Genetic locus: ARFRP1 (human) mapping to 20q13.33; Arfrp1 (mouse) mapping to 2 H4.

RESEARCH USE

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

SOURCE

ARFRP1 (N-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of ARFRP1 of human origin.

PRODUCT

Each vial contains 100 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85278 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ARFRP1 (N-16) is recommended for detection of ARFRP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

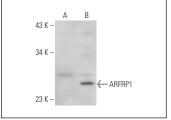
ARFRP1 (N-16) is also recommended for detection of ARFRP1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ARFRP1 siRNA (h): sc-72531, ARFRP1 siRNA (m): sc-141192, ARFRP1 shRNA Plasmid (h): sc-72531-SH, ARFRP1 shRNA Plasmid (m): sc-141192-SH, ARFRP1 shRNA (h) Lentiviral Particles: sc-72531-V and ARFRP1 shRNA (m) Lentiviral Particles: sc-141192-V.

Molecular Weight of ARFRP1: 25 kDa.

Positive Controls: ARFRP1 (m2): 293T Lysate: sc-110180 or Hep G2 cell lysate: sc-2227.

DATA



ARFRP1 (N-16): sc-85278. Western blot analysis of ARFRP1 expression in non-transfected: sc-117752 (A) and mouse ARFRP1 transfected: sc-110180 (B) 293T whole cell lysates.

STORAGE

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

PROTOCOLS

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