

# ARL16 (S-13): sc-107421

## 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). ARL16 (ADP-ribosylation factor-like protein 16) is a 197 amino acid protein that belongs to the ARF family of ADP-ribosylation factors. The gene that encodes ARL16 maps to human chromosome 16, which makes up over 2.5% of the human genome with about 81 million bases encoding over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes. Chromosome 17 is also linked to neurofibromatosis, a condition characterized by neural and epidermal lesions, and dysregulated Schwann cell growth. Alexander disease, Birt-Hogg-Dube syndrome and Canavan disease are also associated with chromosome 17.

## 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. 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.
3. Kahn, R.A., et al. 2005. Arf family GTPases: roles in membrane traffic and microtubule dynamics. *Biochem. Soc. Trans.* 33: 1269-1272.
4. 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.

## CHROMOSOMAL LOCATION

Genetic locus: ARL16 (human) mapping to 17q25.3; Arl16 (mouse) mapping to 11 E2.

## SOURCE

ARL16 (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ARL16 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-107421 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

ARL16 (S-13) is recommended for detection of ARL16 of mouse and human origin by Western Blotting (starting dilution 1:200, 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).

ARL16 (S-13) is also recommended for detection of ARL16 in additional species, including bovine.

Suitable for use as control antibody for ARL16 siRNA (h): sc-94047, ARL16 siRNA (m): sc-141241, ARL16 shRNA Plasmid (h): sc-94047-SH, ARL16 shRNA Plasmid (m): sc-141241-SH, ARL16 shRNA (h) Lentiviral Particles: sc-94047-V and ARL16 shRNA (m) Lentiviral Particles: sc-141241-V.

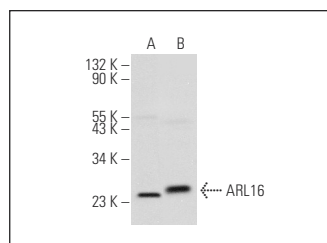
Molecular Weight of ARL16: 21 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 or A549 cell lysate: sc-2413.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



ARL16 (S-13): sc-107421. Western blot analysis of ARL16 expression in HL-60 (A) and A549 (B) whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.