SANTA CRUZ BIOTECHNOLOGY, INC.

ARL10 (P-12): sc-107148



BACKGROUND

ADP-ribosylation factors (ARFs) are highly conserved guanine nucleotide binding proteins that enhance the ADP-ribosyltransferase activity of Cholera Toxin. ARF's are important in eukaryotic vesicular trafficking pathways and they play an essential role in the activation of phospholipase D (PC-PLD). ARL10 (ADP-ribosylation factor-like protein 10), also known as ARL10A, is a 244 amino acid protein that belongs to the ARF family of ADP-ribosylation factors. The gene that encodes ARL10 maps to human chromosome 5, which contains about 6% of human genomic DNA. Chromosome 5 is associated with Cockayne syndrome through the ERCC8 gene and with familial adenomatous polyposis through the adenomatous polyposis coli (APC) tumor suppressor gene. Treacher Collins syndrome is also chromosome 5 associated and is caused by insertions or deletions within the TCOF1 gene. Deletion of the p arm of chromosome 5 leads to cri du chat syndrome. Deletion of 5q or chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

REFERENCES

- Dixon, M.J., et al. 1991. The gene for Treacher Collins syndrome maps to the long arm of chromosome 5. Am. J. Hum. Genet. 49: 17-22.
- Pasqualato, S., et al. 2002. Arf, Arl, Arp and Sar proteins: a family of GTPbinding proteins with a structural device for "front-back" communication. EMBO Rep. 3: 1035-1041.
- 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.
- Kahn, R.A., et al. 2005. Arf family GTPases: roles in membrane traffic and microtubule dynamics. Biochem. Soc. Trans. 33: 1269-1272.
- Kahn, R.A., et al. 2006. Nomenclature for the human Arf family of GTPbinding proteins: ARF, ARL, and SAR proteins. J. Cell Biol. 172: 645-650.
- South, S.T., et al. 2006. A new genomic mechanism leading to cri-du-chat syndrome. Am. J. Med. Genet. A 140: 2714-2720.
- Cleaver, J.E., et al. 2007. Cockayne syndrome exhibits dysregulation of p21 and other gene products that may be independent of transcription-coupled repair. Neuroscience 145: 1300-1308.
- Herry, A., et al. 2007. Redefining monosomy 5 by molecular cytogenetics in 23 patients with MDS/AML. Eur. J. Haematol. 78: 457-467.

CHROMOSOMAL LOCATION

Genetic locus: ARL10 (human) mapping to 5q35.2; Arl10 (mouse) mapping to 13 B1.

SOURCE

ARL10 (P-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ARL10 of human origin.

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

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

Blocking peptide available for competition studies, sc-107148 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ARL10 (P-12) is recommended for detection of ARL10 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); non cross-reactive with other ARL family members.

ARL10 (P-12) is also recommended for detection of ARL10 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ARL10 siRNA (h): sc-91678, ARL10 siRNA (m): sc-141236, ARL10 shRNA Plasmid (h): sc-91678-SH, ARL10 shRNA Plasmid (m): sc-141236-SH, ARL10 shRNA (h) Lentiviral Particles: sc-91678-V and ARL10 shRNA (m) Lentiviral Particles: sc-141236-V.

Molecular Weight of ARL10: 27 kDa.

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) Immunofluo-rescence: use donkey anti-goat IgG-FITC: sc-2783 (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.

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.