SANTA CRUZ BIOTECHNOLOGY, INC.

BART1 (N-12): sc-133043

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The Power to Question

BACKGROUND

ADP-ribosylation factors (ARFs) are important in eukaryotic vesicular trafficking pathways and they play an essential role in the activation of phospholipase D (PC-PLD). ARL2 (ADP-ribosylation factor-like protein 2) functions as a component of a secretory pathway that is involved in the calcium-dependent release of acetylcholine. Additionally, ARL2 plays a role in the folding of tubule proteins, thereby playing an important role in microtubule dynamics and cell cycle progression. BART1 (Binder of ARL2 protein 1), also known as ARL2BP (ADP-ribosylation factor-like protein 2-binding protein), is a 163 amino acid protein that interacts with GTP-bound ARL2 complexes and therefore may play a role in modulating ARL2 activity. Though predominantly cytosolic, BART1 can enter the mitochondria and bind the adenine nucleotide transporter when bound to ARL2. There are two isoforms of BART1 that are produced as a result of alternative splicing events.

REFERENCES

1. Sharer, J.D. and Kahn, R.A. 1999. The ARF-like 2 (ARL2)-binding protein, BART. Purification, cloning, and initial characterization. J. Biol. Chem. 274: 27553-27561.
2. Van Valkenburgh, H., Shern, J.F., Sharer, J.D., Zhu, X. and Kahn, R.A. 2001. ADP-ribosylation factors (ARFs) and ARF-like 1 (ARL1) have both specific and shared effectors: characterizing ARL1-binding proteins. J. Biol. Chem. 276: 22826-22837.
3. Sharer, J.D., Shern, J.F., Van Valkenburgh, H., Wallace, D.C. and Kahn, R.A. 2002. ARL2 and BART enter mitochondria and bind the adenine nucleotide transporter. Mol. Biol. Cell. 13: 71-83.
4. Zhou, C., Cunningham, L., Marcus, A.I., Li and Y. and Kahn, R.A. 2006. ARL2 and ARL3 regulate different microtubule-dependent processes. Mol. Biol. Cell. 17: 2476-2487.
5. Bailey, L.K., Campbell, L.J., Evetts, K.A., Littlefield, K., Rajendra, E., Nietlispach, D., Owen, D. and Mott, H.R. 2009. 1H, 13C and 15N resonance assignments for Binder of ARL2, BART. Biomol NMR Assign. 3: 33-36.
6. Zhang, T., Li, S., Zhang, Y., Zhong, C., Lai, Z. and Ding, J. 2009. Crystal structure of the ARL2-GTP-BART complex reveals a novel recognition and binding mode of small GTPase with effector. Structure 17: 602-610.

CHROMOSOMAL LOCATION

Genetic locus: ARL2BP (human) mapping to 16q13; Arl2bp (mouse) mapping to 8 C5.

SOURCE

BART1 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of BART1 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-133043 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BART1 (N-12) is recommended for detection of BART1 isoform 1 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 BART1 isoform 2.

Suitable for use as control antibody for BART1 siRNA (h): sc-93111, BART1 siRNA (m): sc-141469, BART1 shRNA Plasmid (h): sc-93111-SH, BART1 shRNA Plasmid (m): sc-141469-SH, BART1 shRNA (h) Lentiviral Particles: sc-93111-V and BART1 shRNA (m) Lentiviral Particles: sc-141469-V.

Molecular Weight of BART1: 19 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) 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.