



ARL2 siRNA (h): sc-106782

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). ARL2 (ADP-ribosylation factor-like protein 2), also known as ARFL2, is a 184 amino acid protein that belongs to the ARF family of ADP-ribosylation factors. Expressed ubiquitously, ARL2 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. Unlike other members of the ARF family, ARL2 does not act as an activator of the catalytic subunit of cholera toxin.

REFERENCES

1. Clark, J., et al. 1993. Selective amplification of additional members of the ADP-ribosylation factor (ARF) family: cloning of additional human and *Drosophila* ARF-like genes. *Proc. Natl. Acad. Sci. USA* 90: 8952-8956.
2. Bhamidipati, A., et al. 2000. ADP ribosylation factor-like protein 2 (Arl2) regulates the interaction of Tubulin-folding cofactor D with native Tubulin. *J. Cell Biol.* 149: 1087-1096.
3. Hanzal-Bayer, M., et al. 2002. The complex of ARL2-GTP and PDEδ: from structure to function. *EMBO J.* 21: 2095-2106.
4. Sharer, J.D., et al. 2002. ARL2 and BART enter mitochondria and bind the adenine nucleotide transporter. *Mol. Biol. Cell* 13: 71-83.
5. Kobayashi, A., et al. 2003. Photoreceptor synaptic protein HRG4 (UNC119) interacts with ARL2 via a putative conserved domain. *FEBS Lett.* 534: 26-32.
6. Shern, J.F., et al. 2003. Cytosolic ARL2 is complexed with cofactor D and protein phosphatase 2A. *J. Biol. Chem.* 278: 40829-40836.
7. Zhou, C., et al. 2006. ARL2 and ARL3 regulate different microtubule-dependent processes. *Mol. Biol. Cell* 17: 2476-2487.

CHROMOSOMAL LOCATION

Genetic locus: ARL2 (human) mapping to 11q13.1.

PRODUCT

ARL2 siRNA (h) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ARL2 shRNA Plasmid (h): sc-106782-SH and ARL2 shRNA (h) Lentiviral Particles: sc-106782-V as alternate gene silencing products.

RESEARCH USE

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

PROTOCOLS

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

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNases and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

ARL2 siRNA (h) is recommended for the inhibition of ARL2 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ARL2 gene expression knockdown using RT-PCR Primer: ARL2 (h)-PR: sc-106782-PR (20 μ l, 523 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.