

Rab11-FIP4 siRNA (h): sc-93812

BACKGROUND

The Ras superfamily of GTPases can be subdivided into the Ras, Rho/Rac, Sar, Rab, Arf, Rap and Ran subfamilies, all of which control multiple aspects of cell function, including cytoskeletal rearrangement, nuclear signaling and cell growth. Members of the Ras protein superfamily are regulated by a variety of GTPase-interaction proteins that control GTPase function. Rab11-FIP4 (RAB11 family interacting protein 4 (class II)), also known as arfophilin-2, is a 637 amino acid peripheral membrane protein that localizes to the midbody and cleavage furrow during cytokinesis. Highly expressed in testis with weak expression found in other tissues, Rab11-FIP4 plays a role in endocytic trafficking and cytokinesis, and exists as a homodimer that forms a complex with ARF6 and Rab11. Rab11-FIP4 contains one EF-hand domain, an RBD-FIP domain and exists as two alternatively spliced isoforms.

REFERENCES

1. Nagase, T., Nakayama, M., Nakajima, D., Kikuno, R. and Ohara, O. 2001. Prediction of the coding sequences of unidentified human genes. XX. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 8: 85-95.
2. Hales, C.M., Griner, R., Hobdy-Henderson, K.C., Dorn, M.C., Hardy, D., Kumar, R., Navarre, J., Chan, E.K., Lapierre, L.A. and Goldenring, J.R. 2001. Identification and characterization of a family of Rab11-interacting proteins. J. Biol. Chem. 276: 39067-39075.
3. Wallace, D.M., Lindsay, A.J., Hendrick, A.G. and McCaffrey, M.W. 2002. Rab11-FIP4 interacts with Rab11 in a GTP-dependent manner and its over-expression condenses the Rab11 positive compartment in HeLa cells. Biochem. Biophys. Res. Commun. 299: 770-779.
4. Fielding, A.B., Schonteich, E., Matheson, J., Wilson, G., Yu, X., Hickson, G.R., Srivastava, S., Baldwin, S.A., Prekeris, R. and Gould, G.W. 2005. Rab11-FIP3 and FIP4 interact with Arf6 and the exocyst to control membrane traffic in cytokinesis. EMBO J. 24: 3389-3399.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 179508: World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: RAB11FIP4 (human) mapping to 17q11.2.

PRODUCT

Rab11-FIP4 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs 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 Rab11-FIP4 shRNA Plasmid (h): sc-93812-SH and Rab11-FIP4 shRNA (h) Lentiviral Particles: sc-93812-V as alternate gene silencing products.

For independent verification of Rab11-FIP4 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-93812A, sc-93812B and sc-93812C.

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

Rab11-FIP4 siRNA (h) is recommended for the inhibition of Rab11-FIP4 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 Rab11-FIP4 gene expression knockdown using RT-PCR Primer: Rab11-FIP4 (h)-PR: sc-93812-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

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.