SANTA CRUZ BIOTECHNOLOGY, INC.

RAB3IP siRNA (m): sc-152666

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins includes the R-Ras, Rap, Ral/Rec and Rho/Rab subfamilies, all of which are thought to play an important role in either endocytosis or in biosynthetic protein transport. The process of transporting newly synthesized proteins from the endoplasmic reticulum (ER) to various stacks of the Golgi complex and to secretory vesicles involves the movement of carrier vesicles and requires Rab protein function. RAB3IP (RAB3A interacting protein), also known as Rabin-3 or SSX2-IP, is a 406 amino acid protein that localizes to both the nucleus and the cytoplasm, and exists as multiple alternatively spliced isoforms. Expressed in placenta, brain, heart, pancreas and kidney, RAB3IP interacts with Rab 3A, Rab 3B and SSX2 and, via this interaction, may regulate Rab function as well as SSX2-induced malignancies.

REFERENCES

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2. Brondyk, W.H., et al. 1995. Interaction cloning of Rabin3, a novel protein that associates with the Ras-like GTPase Rab 3A. Mol. Cell. Biol. 15: 1137-1143.
3. Chen, D., et al. 1997. Rab GTPases expressed in human melanoma cells. Biochim. Biophys. Acta 1355: 1-6.
4. de Bruijn, D.R., et al. 2002. The cancer-related protein SSX2 interacts with the human homologue of a Ras-like GTPase interactor, RAB3IP, and a novel nuclear protein, SSX2IP. Genes Chromosomes Cancer 34: 285-298.
5. Schlüter, O.M., et al. 2002. Localization versus function of Rab 3 proteins. Evidence for a common regulatory role in controlling fusion. J. Biol. Chem. 277: 40919-40929.
6. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608686. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Fischer, U., et al. 2008. A different view on DNA amplifications indicates frequent, highly complex, and stable amplicons on 12q13-21 in glioma. Mol. Cancer Res. 6: 576-584.

CHROMOSOMAL LOCATION

Genetic locus: Rab3ip (mouse) mapping to 10 D2.

PRODUCT

RAB3IP siRNA (m) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see RAB3IP shRNA Plasmid (m): sc-152666-SH and RAB3IP shRNA (m) Lentiviral Particles: sc-152666-V as alternate gene silencing products.

For independent verification of RAB3IP (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-152666A, sc-152666B and sc-152666C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

RAB3IP siRNA (m) is recommended for the inhibition of RAB3IP expression in mouse 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 µM in 66 µl. 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 RAB3IP gene expression knockdown using RT-PCR Primer: RAB3IP (m)-PR: sc-152666-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Mahmutefendić Lučin, H., et al. 2024. Rab10-associated tubulation as an early marker for biogenesis of the assembly compartment in cytomegalovirus-infected cells. Front. Cell Dev. Biol. 12: 1517236.

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.