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SANTA CRUZ BIOTECHNOLOGY, INC.

RAB3IL1 siRNA (m): sc-152665

BACKGROUND

RAB3IL1, also known as guanine nucleotide exchange factor for Rab-3A, is a 382 amino acid protein that belongs to the SEC2 family. As a GTPase that regulates synaptic vesicle exocytosis, RAB3IL1 is a guanine nucleotide exchange factor (GEF) for Rab3A. RAB3IL1 competes for an interaction with Rab3A and IHPK1 through its coiled coil domain, which does not require IHPK1 kinase activity. Existing as two alternatively splice isoforms, the RAB3IL1 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken and *C. elegans,* and maps to human chromosome 11q12.3. With approximately 135 million base pairs and 1,400 genes, chromosome 11 makes up around 4% of human genomic DNA and is considered a gene and disease association dense chromosome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are also associated with defects in chromosome 11.

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CHROMOSOMAL LOCATION

Genetic locus: Rab3il1 (mouse) mapping to 19 A.

PROTOCOLS

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

PRODUCT

RAB3IL1 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 RAB3IL1 shRNA Plasmid (m): sc-152665-SH and RAB3IL1 shRNA (m) Lentiviral Particles: sc-152665-V as alternate gene silencing products.

For independent verification of RAB3IL1 (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-152665A, sc-152665B and sc-152665C.

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

RAB3IL1 siRNA (m) is recommended for the inhibition of RAB3IL1 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 RAB3IL1 gene expression knockdown using RT-PCR Primer: RAB3IL1 (m)-PR: sc-152665-PR (20 µl). 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.