SANTA CRUZ BIOTECHNOLOGY, INC.

Rab L2B siRNA (h): sc-76329

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. Rab proteins are also an integral part of endocytic pathways. Rab L2B (RAB, member of RAS oncogene family-like 2B), also known as FLJ93981, FLJ98216 or RABL2B, is a 228 amino acid protein encoded by a gene which maps to a subtelomeric region of human chromosome 22q13.33. Two isoforms of Rab L2B exist as a result of alternative splicing. Rab L2B has been found to be highly expressed adult brain, pancreas, kidney and heart.

REFERENCES

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2. Chen, D., et al. 1997. RAB GTPases expressed in human melanoma cells. Biochim. Biophys. Acta 1355: 1-6.
3. Wong, A.C., et al. 1999. Two novel human RAB genes with near identical sequence each map to a telomere-associated region: the subtelomeric region of 22q13.3 and the ancestral telomere band 2q13. Genomics 59: 326-334.
4. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 605413. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Zhao, H., et al. 2002. Intracellular membrane trafficking pathways in bone-resorbing osteoclasts revealed by cloning and subcellular localization studies of small GTP-binding rab proteins. Biochem. Biophys. Res. Commun. 293: 1060-1065.
6. Fukuda, M., et al. 2008. Large scale screening for novel rab effectors reveals unexpected broad Rab binding specificity. Mol. Cell. Proteomics 7: 1031-1042.

CHROMOSOMAL LOCATION

Genetic locus: RABL2B (human) mapping to 22q13.33.

PRODUCT

Rab L2B siRNA (h) is a pool of 2 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 Rab L2B shRNA Plasmid (h): sc-76329-SH and Rab L2B shRNA (h) Lentiviral Particles: sc-76329-V as alternate gene silencing products.

For independent verification of Rab L2B (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-76329A and sc-76329B.

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

Rab L2B siRNA (h) is recommended for the inhibition of Rab L2B 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 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 Rab L2B gene expression knockdown using RT-PCR Primer: Rab L2B (h)-PR: sc-76329-PR (20 µl, 546 bp). 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.