SANTA CRUZ BIOTECHNOLOGY, INC.

RFPL2 siRNA (h) : sc-76395

BACKGROUND

RFPL1, RFPL2 and RFPL3 (ret finger protein-like 1, 2 and 3, respectively), exist as a cluster of genes mapping to human chromosome 22q12.2-q13.3, sharing 95%-96% identity. RFPL1, 2 and 3, are thought to contribute to neocortex organization and size in primates, and show high expression in fetal neocortex as well as embryonic stem-cell neurogenesis. Each of the three RFPL genes encodes two exons giving rise to a putative RING-like motifs and B30-2 domains. RFPL1, also known as RNF78 or MGC132428, is a 317 amino acid protein known to have high expression in prostate with lower expression in adult brain, fetal liver and fetal kidney. RFPL2, or RNF79, is 378 amino acids long and is also highly expressed in prostate with lower expression in fetal kidney and fetal liver. As a result of alternative splicing, three isoforms of RFPL2 exist. The RFPL3 protein is 371 amino acids long and may have been emerged due to intrachromosomal duplication.

REFERENCES

1. Seroussi, E., et al. 1999. Duplications on human chromosome 22 reveal a novel Ret finger protein-like gene family with sense and endogenous antisense transcripts. Genome Res. 9: 803-814.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605970. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Bonnefont, J., et al. 2008. Evolutionary forces shape the human RFPL1,2,3 genes toward a role in neocortex development. Am. J. Hum. Genet. 83: 208-218.

CHROMOSOMAL LOCATION

Genetic locus: RFPL2 (human) mapping to 22q12.3.

PRODUCT

RFPL2 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 RFPL2 shRNA Plasmid (h): sc-76395-SH and RFPL2 shRNA (h) Lentiviral Particles: sc-76395-V as alternate gene silencing products.

For independent verification of RFPL2 (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-76395A and sc-76395B.

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

RFPL2 siRNA (h) is recommended for the inhibition of RFPL2 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 RFPL2 gene expression knockdown using RT-PCR Primer: RFPL2 (h) -PR: sc-76395-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.

PROTOCOLS

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