SANTA CRUZ BIOTECHNOLOGY, INC.

LPLUNC1 siRNA (h): sc-75694

BACKGROUND

LPLUNC1 (long palate, lung and nasal epithelium carcinoma-associated protein 1), also known as C20orf114, is a 484 amino acid secreted protein that belongs to the BPI/LBP/PLUNC superfamily. Expressed in lung, trachea and nasal septal epithelia, LPLUNC1 is thought to be involved in the innate immune response to bacterial exposure in the mouth, nasal cavities and lungs. LPLUNC1, which exists as multiple alternatively spliced isoforms, is encoded by a gene which maps to a BPI/LBP/PLUNC gene cluster on human chromosome 20. Comprising approximately 2% of the human genome, chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome.

REFERENCES

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2. Zhang, B., et al. 2003. Identification of tissue-specific genes in nasopharyngeal epithelial tissue and differentially expressed genes in nasopharyngeal carcinoma by suppression subtractive hybridization and cDNA microarray. Genes Chromosomes Cancer 38: 80-90.
3. Hou, J., et al. 2004. Identification of a novel left-right asymmetrically expressed gene in the mouse belonging to the BPI/PLUNC superfamily. Dev. Dyn. 229: 373-379.
4. LeClair, E.E., et al. 2004. Cloning and expression of a mouse member of the PLUNC protein family exclusively expressed in tongue epithelium. Genomics 83: 658-666.
5. Casado, B., et al. 2005. Identification of human nasal mucous proteins using proteomics. Proteomics 5: 2949-2959.
6. Flach, C.F., et al. 2007. Broad upregulation of innate defense factors during acute cholera. Infect. Immun. 75: 2343-2350.
7. Vargas, P.A., et al. 2008. Expression of PLUNC family members in benign and malignant salivary gland tumours. Oral Dis. 14: 613-619.

CHROMOSOMAL LOCATION

Genetic locus: BPIFB1 (human) mapping to 20q11.21.

PRODUCT

LPLUNC1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LPLUNC1 shRNA Plasmid (h): sc-75694-SH and LPLUNC1 shRNA (h) Lentiviral Particles: sc-75694-V as alternate gene silencing products.

For independent verification of LPLUNC1 (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-75694A, sc-75694B and sc-75694C.

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

LPLUNC1 siRNA (h) is recommended for the inhibition of LPLUNC1 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 LPLUNC1 gene expression knockdown using RT-PCR Primer: LPLUNC1 (h)-PR: sc-75694-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.