SANTA CRUZ BIOTECHNOLOGY, INC.

LANCL1 siRNA (h): sc-94288

BACKGROUND

LANCL1 (LanC lantibiotic synthetase component C-like 1), also known as p40 or GPR69A, is a 399 amino acid protein that localizes to both the cytoplasm and the membrane and belongs to the LanC-like protein family. Expressed ubiquitously with strong expression in heart, brain, kidney, pancreas, testis, ovary and skeletal muscle, LANCL1 interacts with Stomatin and may function as a peptide-modifying enzyme component in eukaryotic cells. The gene encoding LANCL1 maps to human chromosome 2q34, which houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes. Additionally, an extremely rare recessive genetic disorder, Alström syndrome, is caused by mutations in the ALMS1 gene, which maps to chromosome 2p13.1.

REFERENCES

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2. Bauer, H., et al. 2000. Characterization of p40/GPR69A as a peripheral membrane protein related to the lantibiotic synthetase component C. Biochem. Biophys. Res. Commun. 275: 69-74.
3. Mayer, H., et al. 2001. Organization and chromosomal localization of the human and mouse genes coding for LanC-like protein 1 (LANCL1). Cytogenet. Cell Genet. 93: 100-104.
4. Nielsen, J.E., et al. 2003. Germ cell differentiation-dependent and stage-specific expression of LANCL1 in rodent testis. Eur. J. Histochem. 47: 215-222.
5. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 604155. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Marschang, P., et al. 2004. Normal development and fertility of knockout mice lacking the tumor suppressor gene LRP1b suggest functional compensation by LRP1. Mol. Cell. Biol. 24: 3782-3793.

CHROMOSOMAL LOCATION

Genetic locus: LANCL1 (human) mapping to 2q34.

PRODUCT

LANCL1 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 LANCL1 shRNA Plasmid (h): sc-94288-SH and LANCL1 shRNA (h) Lentiviral Particles: sc-94288-V as alternate gene silencing products.

For independent verification of LANCL1 (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-94288A, sc-94288B and sc-94288C.

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

LANCL1 siRNA (h) is recommended for the inhibition of LANCL1 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 LANCL1 gene expression knockdown using RT-PCR Primer: LANCL1 (h)-PR: sc-94288-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.