SANTA CRUZ BIOTECHNOLOGY, INC.

LCTL siRNA (m): sc-146689

BACKGROUND

LCTL (lactase-like protein), also known as KLPH (klotho/lactase-phlorizin hydrolase-related protein) is a 567 amino acid protein belonging to the glycosyl hydrolase 1 family and the klotho subfamily. LCTL is a single-pass membrane protein that consists of an N-terminal signal sequence, glycosidase domain, transmembrane region and short cytoplasmic tail. Unlike Klotho and βKlotho, LCTL contains only a single β-glycosidase-like domain in the extracellular region. LCTL also may be inactive as a glycosidase because it lacks the essential active site Glu at position 201. Localized to the endoplasmic reticulum membrane, LCTL is highly and selectively expressed in brown adipose tissue and eye and may function as an additional coreceptor for FGF-19.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Lctl (mouse) mapping to 9 C.

PRODUCT

LCTL siRNA (m) is a target-specific 19-25 nt siRNA 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 LCTL shRNA Plasmid (m): sc-146689-SH and LCTL shRNA (m) Lentiviral Particles: sc-146689-V as alternate gene silencing products.

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

LCTL siRNA (m) is recommended for the inhibition of LCTL 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 LCTL gene expression knockdown using RT-PCR Primer: LCTL (m)-PR: sc-146689-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.