

LAPTM4A siRNA (h): sc-94824

BACKGROUND

Lysosomal-associated transmembrane protein 4A (LAPTM4A), also known as Golgi 4-transmembrane spanning transporter MTP, is a 233 amino acid protein belonging to the LAPTM5/LAPTM5 transporter family. LAPTM4A is subcellularly localized to the intracytoplasmic membrane and has the potential to reside in intracellular membrane-bound compartments. LAPTM4A is thought to function as a transporter of nucleosides and/or nucleoside derivatives between the cytosol and the lumen of intracellular compartments. LAPTM4A is predicted to have four transmembrane domains, with the C-terminal domain being required for retention of the protein within intracellular membranes.

REFERENCES

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2. Hogue, D.L., et al. 1996. Identification of a novel membrane transporter associated with intracellular membranes by phenotypic complementation in the yeast *Saccharomyces cerevisiae*. *J. Biol. Chem.* 271: 9801-9808.
3. Cabrita, M.A., et al. 1999. Mouse transporter protein, a membrane protein that regulates cellular multidrug resistance, is localized to lysosomes. *Cancer Res.* 59: 4890-4897.
4. Hogue, D.L., et al. 2002. Lysosome-associated protein transmembrane 4 α (LAPTM4 α) requires two tandemly arranged tyrosine-based signals for sorting to lysosomes. *Biochem. J.* 365: 721-730.
5. Liu, X.R., et al. 2004. Structure analysis and expressions of a novel tetra-transmembrane protein, lysosoma-associated protein transmembrane 4 β associated with hepatocellular carcinoma. *World J. Gastroenterol.* 10: 1555-1559.
6. Maeda, K., et al. 2005. MATN and LAPTM are parts of larger transcription units produced by intergenic splicing: intergenic splicing may be a common phenomenon. *DNA Res.* 12: 365-372.
7. Pak, Y., et al. 2006. Transport of LAPTM5 to lysosomes requires association with the ubiquitin ligase Nedd4, but not LAPTM5 ubiquitination. *J. Cell Biol.* 175: 631-645.

CHROMOSOMAL LOCATION

Genetic locus: LAPTM4A (human) mapping to 2p24.1.

PRODUCT

LAPTM4A 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LAPTM4A shRNA Plasmid (h): sc-94824-SH and LAPTM4A shRNA (h) Lentiviral Particles: sc-94824-V as alternate gene silencing products.

For independent verification of LAPTM4A (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-94824A, sc-94824B and sc-94824C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

LAPTM4A siRNA (h) is recommended for the inhibition of LAPTM4A 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 μ M in 66 μ l. 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 LAPTM4A gene expression knockdown using RT-PCR Primer: LAPTM4A (h)-PR: sc-94824-PR (20 μ l). 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.