

LAPTM4B siRNA (h): sc-77665

BACKGROUND

Lysosomal-associated transmembrane protein 4B (LAPTM4B) is a 370 amino acid protein belonging to the LAPTM4/LAPTM5 transporter family. LAPTM4B is highly expressed in adult heart, skeletal muscle, testis, ovary and fetal liver. In normal cells, LAPTM4B is thought to play a role in the regulation of cell proliferation and survival. In addition to the LAPTM4B protein, the LAPTM4B gene encodes two other variants, LAPTM4B-24 and LAPTM4B-35. LAPTM4B-35 is overexpressed in many human cancers, including ovarian carcinoma, extrahepatic cholangiocarcinoma (EHCC), hepatocellular carcinoma (HCC), colon cancer, gallbladder carcinoma (GBC), gastric cancer and lung cancer. This evidence suggests that LAPTM4B-35 may be a molecular marker of progression and invasiveness of several cancers, subsequently making it a potential therapeutic drug target.

REFERENCES

1. Liu, X., et al. 2003. Identification and characterization of LAPTM4B encoded by a human hepatocellular carcinoma-associated novel gene. *Beijing Da Xue Xue Bao* 35: 340-347.
2. Shao, G.Z., et al. 2003. Molecular cloning and characterization of LAPTM4B, a novel gene upregulated in hepatocellular carcinoma. *Oncogene* 22: 5060-5069.
3. Deng, L.J., et al. 2005. Relationship between LAPTM4B gene polymorphism and susceptibility of lung cancer. *Beijing Da Xue Xue Bao* 37: 302-305.
4. Liu, Y., et al. 2007. Relationship between LAPTM4B gene polymorphism and susceptibility of gastric cancer. *Ann. Oncol.* 18: 311-316.
5. Zhou, L., et al. 2007. Overexpression of LAPTM4B-35 closely correlated with clinicopathological features and post-resectional survival of gallbladder carcinoma. *Eur. J. Cancer* 43: 809-815.
6. Cheng, X.J., et al. 2008. Relationship between LAPTM4B gene polymorphism and susceptibility of colorectal and esophageal cancers. *Ann. Oncol.* 19: 527-532.

CHROMOSOMAL LOCATION

Genetic locus: LAPTM4B (human) mapping to 8q22.1.

PRODUCT

LAPTM4B 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 LAPTM4B shRNA Plasmid (h): sc-77665-SH and LAPTM4B shRNA (h) Lentiviral Particles: sc-77665-V as alternate gene silencing products.

For independent verification of LAPTM4B (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-77665A, sc-77665B and sc-77665C.

PROTOCOLS

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

LAPTM4B siRNA (h) is recommended for the inhibition of LAPTM4B 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 LAPTM4B gene expression knockdown using RT-PCR Primer: LAPTM4B (h)-PR: sc-77665-PR (20 μ l, 387 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Tan, X., et al. 2015. A kinase-independent role for EGF receptor in autophagy initiation. *Cell* 160: 145-160.

RESEARCH USE

For research use only, not for use in diagnostic procedures.