SANTA CRUZ BIOTECHNOLOGY, INC.

TSLC1 siRNA (m): sc-37519

BACKGROUND

Homologous to the poliovirus receptor (PVR/CD155), the Nectin immunoglobulin superfamily comprises four known isoforms, Nectin 1, 2, 3 and 4 (also designated TSLC1 or tumor supressor in lung cancer 1). TSLC1 is encoded by a tumor-suppressor gene in human non-small-cell lung cancer mapping to chromosome 11q23.3. The TSLC1 protein is an N-linked membrane glycoprotein that co-localizes with the Actin filament-binding protein, afadin, at cadherin-based adherens junctions in MDCKII epithelial cells. TSLC1 also interacts with the tumor-suppressor gene product DAL-1 (for differentially expressed in adenocarcinoma of the lung protein 1) to target Actin rearrangement and cellular motility. TSLC1 may also form homodimers that function in homophilic, intracellular adhesion. TSLC1 expression is reduced or absent in a number of characterized cancer cell lines including A549. In prostate and breast cancer, as well as in pancreatic ductal adenocarcinoma, the TSLC1 promoter is commonly silenced by hypermethylation. Unlike other Nectins, which are more widely expressed, TSLC1 is mainly expressed in the placenta.

REFERENCES

1. Kuramochi, M., et al. 2001. TSLC1 is a tumor-suppressor gene in human non-small-cell lung cancer. Nat. Genet. 27: 427-430.
2. Reymond, N., et al. 2001. Nectin 4/PRR4, a new afadin-associated member of the Nectin family that *trans*-interacts with Nectin 1/PRR1 through V domain interaction. J. Biol. Chem. 276: 43205-43215.
3. Allinen, M., et al. 2002. Analysis of 11q21-24 loss of heterozygosity candidate target genes in breast cancer: indications of TSLC1 promoter hypermethylation. Genes Chromosomes Cancer 34: 384-389.
4. Fukuhara, H., et al. 2002. Promoter methylation of TSLC1 and tumor suppression by its gene product in human prostate cancer. Jpn. J. Cancer Res. 93: 605-609.
5. Jansen, M., et al. 2002. Aberrant methylation of the 5' CpG island of TSLC1 is common in pancreatic ductal adenocarcinoma and is first manifest in high-grade PanINs. Cancer Biol. Ther. 1: 293-296.
6. Masuda, M., et al. 2002. The tumor suppressor protein TSLC1 is involved in cell-cell adhesion. J. Biol. Chem. 277: 31014-31019.

CHROMOSOMAL LOCATION

Genetic locus: Cadm1 (mouse) mapping to 9 A5.3.

PRODUCT

TSLC1 siRNA (m) 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 TSLC1 shRNA Plasmid (m): sc-37519-SH and TSLC1 shRNA (m) Lentiviral Particles: sc-37519-V as alternate gene silencing products.

For independent verification of TSLC1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-37519A, sc-37519B and sc-37519C.

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

TSLC1 siRNA (m) is recommended for the inhibition of TSLC1 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 TSLC1 gene expression knockdown using RT-PCR Primer: TSLC1 (m)-PR: sc-37519-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Sumida, M., et al. 2015. Rapid trimming of cell surface polysialic acid (polySia) by exovesicular sialidase triggers release of preexisting surface neurotrophin. J. Biol. Chem. 290: 13202-13214.

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.