SANTA CRUZ BIOTECHNOLOGY, INC.

OCTL2 siRNA (h): sc-78076

BACKGROUND

Organic cations, such as quaternary ammoniums, are a group of compounds that carry a positive charge. Organic cation transport is essential for drug absorption, targeting and deposition. OCTL2, also known as SLC22A14 (solute carrier family 22 member 14) or ORCTL4 (organic cation transporter-like 4), is a 594 amino acid multi-pass membrane protein belonging to the major facilitator superfamily and organic cation transporter family. OCTL2 contains eleven transmembrane domains as well as motifs characteristic of membrane transporter proteins. Ubiquitously expressed, OCTL2 shares 32-35% protein sequence identity with OCTL1, OCT1 and a group of eukaryotic and prokaryotic sugar-transporting proteins. The gene encoding OCTL2 maps to human chromosome 3p22.2.

REFERENCES

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3. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 604048. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/604048
4. Daigo, Y., et al. 1999. Characterization of a 1200-kb genomic segment of chromosome 3p22-p21.3. DNA Res. 6: 37-44.
5. Wieland, A., et al. 2000. Analysis of the gene structure of the human (SLC22A3) and murine (Slc22a3) extraneuronal monoamine transporter. J. Neural Transm. 107: 1149-1157.
6. Yamada, H., et al. 2005. Effect of splice-site polymorphisms of the TMPRSS4, NPHP4 and ORCTL4 genes on their mRNA expression. J. Genet. 84: 131-136.
7. Muzny, D.M., et al. 2006. The DNA sequence, annotation and analysis of human chromosome 3. Nature 440: 1194-1198.

CHROMOSOMAL LOCATION

Genetic locus: SLC22A14 (human) mapping to 3p22.2.

PRODUCT

OCTL2 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 OCTL2 shRNA Plasmid (h): sc-78076-SH and OCTL2 shRNA (h) Lentiviral Particles: sc-78076-V as alternate gene silencing products.

For independent verification of OCTL2 (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-78076A, sc-78076B and sc-78076C.

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

OCTL2 siRNA (h) is recommended for the inhibition of OCTL2 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 OCTL2 gene expression knockdown using RT-PCR Primer: OCTL2 (h)-PR: sc-78076-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.