SANTA CRUZ BIOTECHNOLOGY, INC.

OCTL1 siRNA (h): sc-78381

BACKGROUND

Organic cations, such as quaternary ammoniums, are a group of compounds that carry a positive charge. OCTL1 (organic cation transporter-like 3), also known as SLC22A13, OCTL3 or ORCTL3, belongs to the major facilitator superfamily which includes the organic cation transport family. OCTL1 is a conserved 551 amino acid transmembrane protein that has a fundamental role in mammalian systems. OCTL1 functions in the uptake of catecholamines and neurotoxic organic cations. Organic cation transport is essential for drug absorption, targeting and deposition. OCTL1 is highly expressed in glial cells and kidney tissue, and is ubiquitously expressed at low levels in all other tissues.

REFERENCES

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6. Yamada, H., Shinmura, K., Tsuneyoshi, T. and Sugimura, H. 2005. Effect of splice-site polymorphisms of the TMPRSS4, NPHP4 and ORCTL4 genes on their mRNA expression. J. Genet. 84: 131-136.

CHROMOSOMAL LOCATION

Genetic locus: SLC22A13 (human) mapping to 3p22.2.

PRODUCT

OCTL1 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 OCTL1 shRNA Plasmid (h): sc-78381-SH and OCTL1 shRNA (h) Lentiviral Particles: sc-78381-V as alternate gene silencing products.

For independent verification of OCTL1 (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-78381A, sc-78381B and sc-78381C.

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

OCTL1 siRNA (h) is recommended for the inhibition of OCTL1 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.

GENE EXPRESSION MONITORING

OCTL1 (B-5): sc-390931 is recommended as a control antibody for monitoring of OCTL1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor OCTL1 gene expression knockdown using RT-PCR Primer: OCTL1 (h)-PR: sc-78381-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.