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SANTA CRUZ BIOTECHNOLOGY, INC.

ORCTL2 siRNA (m): sc-151311

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ORCTL2 (organic cation transporter-like protein 2), also known as HET, ITM, BWR1A, IMPT1, TSSC5, BWSCR1A, SLC22A1L, p45-BWR1A or SLC22A18, is a 424 amino acid multi-pass membrane protein that localizes at the apical membrane surface of renal proximal tubules. ORCTL2 is expressed at high levels in the kidney, liver, colon and in fetal renal proximal tubules and present at lower levels in heart, brain and lung. Belonging to the major facilitator superfamily, ORCTL2 may act as a transporter of organic cations based on a proton efflux antiport mechanism and may also play a role in the transport of chloroquine and quinidine-related compounds in kidney. Defects in ORCTL2 are associated with breast and lung cancer and are the cause of rhabdomyosarcoma type 1, a malignant tumor derived from striated muscle.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Slc22a18 (mouse) mapping to 7 F5.

PRODUCT

ORCTL2 siRNA (m) is a pool of 2 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 ORCTL2 shRNA Plasmid (m): sc-151311-SH and ORCTL2 shRNA (m) Lentiviral Particles: sc-151311-V as alternate gene silencing products.

For independent verification of ORCTL2 (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-151311A and sc-151311B.

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

ORCTL2 siRNA (m) is recommended for the inhibition of ORCTL2 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 ORCTL2 gene expression knockdown using RT-PCR Primer: ORCTL2 (m)-PR: sc-151311-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.