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SANTA CRUZ BIOTECHNOLOGY, INC.

OAT6 siRNA (m): sc-150153

BACKGROUND

The organic anion transporter (OAT) family of proteins is comprised of OAT1 (SLC22A6), OAT2 (SLC22A7), OAT3 (SLC22A8), OAT4 (SLC22A11), OAT5 (SLC22A19), OAT6 (SLC22A20) and URAT1 (SLC22A12). The OAT family mediates the absorption, distribution and excretion of endogenous metabolites, such as urate and acidic neurotransmitter metabolites, as well as a multitude of exogenous compounds, including antibiotics, antihypertensives, antivirals, anti-inflammatory drugs, diuretics and uricosurics. Members of the OAT family are mainly located in kidney with some specific members also being expressed in liver, placenta and brain. Disruption of OAT function in any of these organs may lead to renal, hepatic, neurological and fetal toxicity and diseases. OAT6 (organic anion transporter 6) is a 555 amino acid multi-pass membrane protein that belongs to the major facilitator superfamily and organic cation transporter family. Existing as two alternatively spliced isoforms, OAT6 mediates the uptake of estrone sulfate. OAT6 is inhibited by probenecid, propionate, 2-methylbutyrate, 3-methylbutyrate, benzoate, heptanoate and 2-ethylhaxanoate and may act as an odorant transporter.

REFERENCES

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6. Zhou, F. and You, G. 2007. Molecular insights into the structure-function relationship of organic anion transporters OATs. Pharm. Res. 24: 28-36.
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CHROMOSOMAL LOCATION

Genetic locus: Slc22a20 (mouse) mapping to 19 A.

PRODUCT

OAT6 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 OAT6 shRNA Plasmid (m): sc-150153-SH and OAT6 shRNA (m) Lentiviral Particles: sc-150153-V as alternate gene silencing products.

For independent verification of OAT6 (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-150153A, sc-150153B and sc-150153C.

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

OAT6 siRNA (m) is recommended for the inhibition of OAT6 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.

GENE EXPRESSION MONITORING

OAT6 (D-5): sc-514966 is recommended as a control antibody for monitoring of OAT6 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor OAT6 gene expression knockdown using RT-PCR Primer: OAT6 (m)-PR: sc-150153-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.