SANTA CRUZ BIOTECHNOLOGY, INC.

SLC22A12 siRNA (m): sc-153497

BACKGROUND

SLC22A12 (solute carrier family 22 (organic anion/urate transporter), member 12), also known as RST, OAT4L or URAT1 (urate transporter-1), is a 553 amino acid multi-pass membrane protein belonging to the major facilitator superfamily and the organic cation transporter family. Expressed in epithelial cells of proximal tubules in renal cortex, SLC22A12 is required for efficient urate re-absorption in the kidney, thereby regulating blood urate levels and mediating saturable urate uptake by facilitating the exchange of urate against organic anions. Defects in the SLC22A12 gene leads to renal hypouricemia (RH), an inherited disorder characterized by impaired tubular uric acid transport. Individuals affected with RH have low serum urate levels due to defects in renal urate re-absorption and high urinary urate excretion. SLC22A12 has three consensus sequences for N-glycosylation and two cyclic AMP-dependent protein kinase phosphorylation sites.

REFERENCES

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3. Jang, W.C., et al. 2008. T6092C polymorphism of SLC22A12 gene is associated with serum uric acid concentrations in Korean male subjects. Clin. Chim. Acta 398: 140-144.
4. Lam, C.W., et al. 2008. A novel mutation of SLC22A12 gene causing primary renal hypouricemia in a patient with metabolic syndrome. Clin. Chim. Acta 398: 157-158.
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7. Endou, H., et al. 2008. Urate transport across the apical membrane of renal proximal tubules. Nucleosides Nucleotides Nucleic Acids 27: 578-584.
8. Tu, H.P., et al. 2010. SLC22A12 Gene is Associated with Gout in Han Chinese and Solomon Islanders. Ann. Rheum. Dis. 69: 1252-1254.

CHROMOSOMAL LOCATION

Genetic locus: Slc22a12 (mouse) mapping to 19 A.

PRODUCT

SLC22A12 siRNA (m) is a target-specific 19-25 nt siRNA 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 SLC22A12 shRNA Plasmid (m): sc-153497-SH and SLC22A12 shRNA (m) Lentiviral Particles: sc-153497-V as alternate gene silencing products.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

SLC22A12 siRNA (m) is recommended for the inhibition of SLC22A12 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 SLC22A12 gene expression knockdown using RT-PCR Primer: SLC22A12 (m)-PR: sc-153497-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.