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SANTA CRUZ BIOTECHNOLOGY, INC.

SLC7A9 siRNA (m): sc-153583

BACKGROUND

SLC7A9 (solute carrier family 7 (glycoprotein-associated amino acid transporter light chain, bo,+ system), member 9), also known as BAT1, is a 487 amino acid multi-pass membrane protein that belongs to the amino acid-polyamine-organocation (APC) superfamily. Expressed in kidney, small intestine, liver and placenta,SLC7A9 is a disulfide-linked heterodimer with the amino acid transport protein SLC3A1. Involved in the high-affinity, sodium-independent transport of cystine and neutral as well as dibasic amino acids, SLC7A9 is thought to be responsible for the high-affinity reabsorption of cystine in the kidney tubule. Defects in SLC7A9 are a cause of non-type I cystinuria (CSNU). CSNU arises from impaired transport of cystine and dibasic amino acids through the epithelial cells of the renal tubule and gastrointestinal tract. The SLC7A9 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly and mosquito, and maps to human chromosome 19q13.11.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Slc7a9 (mouse) mapping to 7 B2.

PRODUCT

SLC7A9 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 SLC7A9 shRNA Plasmid (m): sc-153583-SH and SLC7A9 shRNA (m) Lentiviral Particles: sc-153583-V as alternate gene silencing products.

For independent verification of SLC7A9 (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-153583A and sc-153583B.

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

SLC7A9 siRNA (m) is recommended for the inhibition of SLC7A9 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 SLC7A9 gene expression knockdown using RT-PCR Primer: SLC7A9 (m)-PR: sc-153583-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.