SANTA CRUZ BIOTECHNOLOGY, INC.

SLC38A7 siRNA (h): sc-93433

BACKGROUND

SLC38A7 (solute carrier family 38, member 7), also known as SNAT7, is a 462 amino acid multi-pass membrane protein that belongs to the amino acid/polyamine transporter 2 family. Members of the SLC38 family encode sodium-coupled neutral amino acid transporters (SNATs). SNATs can be further classified into system A or system N transporters based on their functional properties and patterns of substrate recognition. SLC38A7 is a system N transporter that has a substrate preference for L-glutamine. SLC38A7 also transports other amino acids with polar side chains, as well as L-histidine and L-alanine. The SLC38A7 protein is exclusively expressed in liver. Existing as two alternatively spliced isoforms, the SLC38A7 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken and zebrafish, and maps to human chromosome 16q21. Chromosome 16 encodes over 900 genes in approximately 90 million base pairs, makes up nearly 3% of human cellular DNA and is associated with a variety of genetic disorders.

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: SLC38A7 (human) mapping to 16q21.

PRODUCT

SLC38A7 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 SLC38A7 shRNA Plasmid (h): sc-93433-SH and SLC38A7 shRNA (h) Lentiviral Particles: sc-93433-V as alternate gene silencing products.

For independent verification of SLC38A7 (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-93433A, sc-93433B and sc-93433C.

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

SLC38A7 siRNA (h) is recommended for the inhibition of SLC38A7 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SLC38A7 gene expression knockdown using RT-PCR Primer: SLC38A7 (h)-PR: sc-93433-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.