

SLC7A10 siRNA (h): sc-97607

BACKGROUND

SLC7A10 (solute carrier family 7, (neutral amino acid transporter, γ^+ system) member 10), also known as ASC1 (asc-type amino acid transporter 1), is a 523 amino acid multi-pass membrane protein that belongs to the amino acid-polyamine-organocation (APC) superfamily. SLC7A10 forms a disulfide-linked heterodimer with CD98 to regulate high-affinity transport of several neutral amino acids, including D-serine. Expressed in pancreas, skeletal muscle, placenta, heart, brain, kidney, lung and liver, SLC7A10 is encoded by a gene that maps to human chromosome 19q13.11 and is considered a candidate gene for cystinuria. Chromosome 19 consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SLC7A10 (human) mapping to 19q13.11.

PRODUCT

SLC7A10 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 SLC7A10 shRNA Plasmid (h): sc-97607-SH and SLC7A10 shRNA (h) Lentiviral Particles: sc-97607-V as alternate gene silencing products.

For independent verification of SLC7A10 (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-97607A, sc-97607B and sc-97607C.

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

SLC7A10 siRNA (h) is recommended for the inhibition of SLC7A10 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 SLC7A10 gene expression knockdown using RT-PCR Primer: SLC7A10 (h)-PR: sc-97607-PR (20 μl). Annealing temperature for the primers should be $55-60^\circ\text{C}$ and the extension temperature should be $68-72^\circ\text{C}$.

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.