SANTA CRUZ BIOTECHNOLOGY, INC.

SLC6A8 siRNA (h): sc-91252

BACKGROUND

SLC6A8 (solute carrier family 6 member 8), also known as CT1 (creatine transporter 1), CRT or CRTR, is a 635 amino acid multi-pass plasma membrane protein that belongs to the sodium/neurotransporter (SNF) family. Expressed in a variety of tissues including kidney, skeletal muscle, heart, brain, prostate, testis and colon, SLC6A8 functions to transport creatine into and out of cells, specifically those found in brain and muscle tissue. Creatine, an organic acid, occurs naturally and is essential for supplying the energy needed for proper muscle and nerve function. Defects in the gene encoding SLC6A8 lead to cerebral creatine deficiency and are the cause of X-linked creatine deficiency syndrome, a rare disorder characterized by facial anomalies, seizures and mental retardation. Multiple isoforms of SLC6A8 exist due to alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SLC6A8 (human) mapping to Xq28.

PRODUCT

SLC6A8 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 SLC6A8 shRNA Plasmid (h): sc-91252-SH and SLC6A8 shRNA (h) Lentiviral Particles: sc-91252-V as alternate gene silencing products.

For independent verification of SLC6A8 (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-91252A, sc-91252B and sc-91252C.

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

SLC6A8 siRNA (h) is recommended for the inhibition of SLC6A8 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 SLC6A8 gene expression knockdown using RT-PCR Primer: SLC6A8 (h)-PR: sc-91252-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.