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SANTA CRUZ BIOTECHNOLOGY, INC.

SLC6A19 siRNA (m): sc-153576

BACKGROUND

SLC6A19 (solute carrier family 6 (neurotransmitter transporter), member 19), also known as sodium-dependent neutral amino acid transporter B^0AT1 or system B^0 neutral amino acid transporter AT1, is a 634 amino acid multi-pass membrane protein that functions as a transporter responsible for mediating the resorption of neutral amino acids across the apical membrane of renal and intestinal epithelial cells. A member of the sodium:neurotransmitter symporter (SNF) family, SLC6A19 has the ability to bind all large neutral non-aromatic L-amino acids but prefers leucine as its substrate, which it uptakes in a sodium-dependent manner. Expressed in skin, kidney and intestine, SLC6A19 distribution is most prominent in renal cortex, proximal tubules and villus enterocytes. Mutations in the gene encoding SLC6A19 are linked to the development of Hartnup disorder, an autosomal recessive defect characterized by cerebellar ataxia, psychosis and rashes.

REFERENCES

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6. Romeo, E., Dave, M.H., Bacic, D., Ristic, Z., Camargo, S.M., Loffing, J., Wagner, C.A. and Verrey, F. 2006. Luminal kidney and intestine SLC6 amino acid transporters of B0AT-cluster and their tissue distribution in Mus musculus. Am. J. Physiol. Renal Physiol. 290: F376-F383.

CHROMOSOMAL LOCATION

Genetic locus: Slc6a19 (mouse) mapping to 13 C1.

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.

PRODUCT

SLC6A19 siRNA (m) 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 SLC6A19 shRNA Plasmid (m): sc-153576-SH and SLC6A19 shRNA (m) Lentiviral Particles: sc-153576-V as alternate gene silencing products.

For independent verification of SLC6A19 (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-153576A, sc-153576B and sc-153576C.

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

SLC6A19 siRNA (m) is recommended for the inhibition of SLC6A19 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 SLC6A19 gene expression knockdown using RT-PCR Primer: SLC6A19 (m)-PR: sc-153576-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.