SANTA CRUZ BIOTECHNOLOGY, INC.

SLC25A21 siRNA (h): sc-92119

BACKGROUND

SLC25A21 (solute carrier family 25 (mitochondrial oxodicarboxylate carrier), member 21), also known as ODC, is a 299 amino acid multi-pass membrane protein that belongs to the mitochondrial carrier family. SLC25A21 transports C5-C7 oxodicarboxylates across the inner membranes of mitochondria and can transport 2-oxoadipate, 2-oxoglutarate, adipate, glutarate, and to a lesser extent, pimelate, 2-oxopimelate, 2-aminoadipate, oxaloacetate and citrate. Ubiquitously expressed, SLC25A21 contains three solcar repeats. The human and rat versions of SLC25A21 share about 82% amino acid identity. Human SLC25A21 also shares significant identity with the ODC proteins of *C. elegans* (56%) and *Drosophila* (55%). SLC25A21 additionally shares 32% and 33% identity with the ODC1 and ODC2 proteins of *S. cerevisiae,* respectively. The SLC25A21 gene is conserved in chimpanzee, canine, mouse, rat, chicken, zebrafish, fruit fly, mosquito, *C. elegans, S. pombe, S. cerevisiae, K. lactis, E. gossypii, M. grisea* and *N. crassa,* and maps to human chromosome 14q13.3.

REFERENCES

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2. Das, P., Stockton, D.W., Bauer, C., Shaffer, L.G., D'Souza, R.N., Wright, T. and Patel, P.I. 2002. Haploinsufficiency of PAX9 is associated with autosomal dominant hypodontia. Hum. Genet. 110: 371-376.
3. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607571. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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CHROMOSOMAL LOCATION

Genetic locus: SLC25A21 (human) mapping to 14q13.3.

PRODUCT

SLC25A21 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 SLC25A21 shRNA Plasmid (h): sc-92119-SH and SLC25A21 shRNA (h) Lentiviral Particles: sc-92119-V as alternate gene silencing products.

For independent verification of SLC25A21 (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-92119A, sc-92119B and sc-92119C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

SLC25A21 siRNA (h) is recommended for the inhibition of SLC25A21 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 SLC25A21 gene expression knockdown using RT-PCR Primer: SLC25A21 (h)-PR: sc-92119-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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