SANTA CRUZ BIOTECHNOLOGY, INC.

NDUFA4L2 siRNA (h): sc-95677

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The Power to Question

BACKGROUND

The multisubunit NADH:ubiquinone oxidoreductase (complex I) is the first enzyme complex in the electron transport chain of the mitochondria. Through use of chaotropic agents, complex I can be separated into three different fractions: a flavoprotein fraction, a hydrophobic protein (HP) fraction and an iron-sulfur protein (IP) fraction. NADH dehydrogenase [ubiquinone] 1 α subcomplex subunit 4-like 2 (NDUFA4L2), also known as NADH-ubiquinone oxidoreductase MLRQ subunit homolog (NUOMS), is an 87 amino acid protein belonging to the complex I NDUFA4 subunit family. NDUFA4L2 is thought to function as a mitochondrial marker.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: NDUFA4L2 (human) mapping to 12q13.3.

PRODUCT

NDUFA4L2 siRNA (h) is a target-specific 19-25 nt siRNA 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 NDUFA4L2 shRNA Plasmid (h): sc-95677-SH and NDUFA4L2 shRNA (h) Lentiviral Particles: sc-95677-V as alternate gene silencing products.

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

NDUFA4L2 siRNA (h) is recommended for the inhibition of NDUFA4L2 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 NDUFA4L2 gene expression knockdown using RT-PCR Primer: NDUFA4L2 (h)-PR: sc-95677-PR (20 µl, 436 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Mesa-Ciller, C., Turiel, G., Guajardo-Grence, A., Lopez-Rodriguez, A.B., Egea, J., De Bock, K., Aragonés, J. and Urrutia, A.A. 2023. Unique expression of the atypical mitochondrial subunit NDUFA4L2 in cerebral pericytes fine tunes HIF activity in response to hypoxia. J. Cereb. Blood Flow Metab. 43: 44-58.

RESEARCH USE

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