SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

NDUFA1 siRNA (m): sc-149866

BACKGROUND

NDUFA1 (NADH dehydrogenase (ubiquinone) 1 α subcomplex, 1), also known as ZNF183 or MWFE, is one of about 45 subunits comprising Complex I of the oxidative phosphorylation electron transport chain. Consisting of 70 amino acids and expressed predominantly in skeletal muscle and heart, NDUFA1 functions as an accessory subunit of the multi-protein mitochondrial membrane respiratory chain NADH dehydrogenase complex (known as Complex I). Complex I plays an important role in the transfer of electrons from NADH to the respiratory chain, a process that is essential for cellular respiration. As a single-pass membrane protein, NDUFA1 localizes to the matrix side of the mitochondrial inner membrane and is a member of the complex I NDUFA1 subunit family. The gene encoding NDUFA1 maps to human chromosome Xq24 and mouse chromosome X A3.3. NDUFA1 defects may cause mitochondrial Complex I deficiency, a mitochondrial disorder with wide symptoms ranging from cardiomyopathy, myopathy, liver disease and neurological disorders.

REFERENCES

1. Zhuchenko, O., et al. 1996. Isolation, mapping, and genomic structure of an X-linked gene for a subunit of human mitochondrial complex I. Genomics 37: 281-288.
2. Au, H.C., et al. 1999. The NDUFA1 gene product (MWFE protein) is essential for activity of complex I in mammalian mitochondria. Proc. Natl. Acad. Sci. USA 96: 4354-4359.
3. Gaikwad, J.S., et al. 2001. Identification of tooth-specific downstream targets of Runx2. Gene 279: 91-97.
4. Yadava, N., et al. 2002. Species-specific and mutant MWFE proteins. Their effect on the assembly of a functional mammalian mitochondrial complex I. J. Biol. Chem. 277: 21221-21230.
5. Qi, X., et al. 2004. SOD2 gene transfer protects against optic neuropathy induced by deficiency of complex I. Ann. Neurol. 56: 182-191.
6. Fernandez-Moreira, D., et al. 2007. X-linked NDUFA1 gene mutations associated with mitochondrial encephalomyopathy. Ann. Neurol. 61: 73-83.
7. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 300078. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: Ndufa1 (mouse) mapping to X A3.3.

PRODUCT

NDUFA1 siRNA (m) is a pool of 2 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 NDUFA1 shRNA Plasmid (m): sc-149866-SH and NDUFA1 shRNA (m) Lentiviral Particles: sc-149866-V as alternate gene silencing products.

For independent verification of NDUFA1 (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-149866A and sc-149866B.

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

NDUFA1 siRNA (m) is recommended for the inhibition of NDUFA1 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 NDUFA1 gene expression knockdown using RT-PCR Primer: NDUFA1 (m)-PR: sc-149866-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.

PROTOCOLS

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