SANTA CRUZ BIOTECHNOLOGY, INC.

NDUFAB1 siRNA (h): sc-93536

BACKGROUND

NDUFAB1 (NADH dehydrogenase (ubiquinone) 1, α/β subcomplex, 1), also known as SDAP, ACP (acyl carrier protein) or FASN2A, is one of about 45 subunits comprising complex I of the oxidative phosphorylation electron transport chain. Consisting of 156 amino acids and localizing to mitocondria, NDUFAB1 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. NDUFAB1 contains one acyl carrier domain and is encoded by a gene that maps to human chromosome 16p12.2 and mouse chromosome 7 F3.

REFERENCES

1. Runswick, M.J., et al. 1991. Presence of an acyl carrier protein in NADH:ubiquinone oxidoreductase from bovine heart mitochondria. FEBS Lett. 286: 121-124.
2. Loeffen, J.L., et al. 1998. cDNA of eight nuclear encoded subunits of NADH:ubiquinone oxidoreductase: human complex I cDNA characterization completed. Biochem. Biophys. Res. Commun. 253: 415-422.
3. Emahazion, T., et al. 1998. Intron based radiation hybrid mapping of 15 complex I genes of the human electron transport chain. Cytogenet. Cell Genet. 82: 115-119.
4. Smeitink, J. and van den Heuvel, L. 1999. Human mitochondrial complex I in health and disease. Am. J. Hum. Genet. 64: 1505-1510.
5. Triepels, R., et al. 1999. The human nuclear-encoded acyl carrier subunit (NDUFAB1) of the mitochondrial complex I in human pathology. J. Inherit. Metab. Dis. 22: 163-173.
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CHROMOSOMAL LOCATION

Genetic locus: NDUFAB1 (human) mapping to 16p12.2.

PRODUCT

NDUFAB1 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 NDUFAB1 shRNA Plasmid (h): sc-93536-SH and NDUFAB1 shRNA (h) Lentiviral Particles: sc-93536-V as alternate gene silencing products.

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.

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

NDUFAB1 siRNA (h) is recommended for the inhibition of NDUFAB1 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 NDUFAB1 gene expression knockdown using RT-PCR Primer: NDUFAB1 (h)-PR: sc-93536-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.