

COX7a1 siRNA (m): sc-142530

BACKGROUND

The cytochrome c oxidase (COX) family of proteins function as the final electron donor in the respiratory chain to drive a proton gradient across the inner mitochondrial membrane, ultimately resulting in the production of water and ATP. The mammalian COX apoenzyme is a dimer, with each monomer consisting of 13 subunits, some of which are mitochondrial and some of which are nuclear. COX7a1 (cytochrome c oxidase subunit VIIa polypeptide 1) is an 79 amino acid protein that localizes to the inner mitochondrial membrane and exists as a component of the COX complex, playing an important role in electron transport. Expression of COX7a1 is specific to heart and skeletal muscle. The gene encoding COX7a1 lies within the FXD5-COX7A1 region of human chromosome 19, which is used as a model to study DNA methylation.

REFERENCES

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3. Taanman, J.W., et al. 1993. Tissue distribution of cytochrome c oxidase isoforms in mammals. Characterization with monoclonal and polyclonal antibodies. *Biochim. Biophys. Acta* 1225: 95-100.
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5. Lenka, N., et al. 1998. Structural organization and transcription regulation of nuclear genes encoding the mammalian cytochrome c oxidase complex. *Prog. Nucleic Acid Res. Mol. Biol.* 61: 309-344.
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CHROMOSOMAL LOCATION

Genetic locus: Cox7a1 (mouse) mapping to 7 B1.

PRODUCT

COX7a1 siRNA (m) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see COX7a1 shRNA Plasmid (m): sc-142530-SH and COX7a1 shRNA (m) Lentiviral Particles: sc-142530-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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

COX7a1 siRNA (m) is recommended for the inhibition of COX7a1 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 μ M in 66 μ l. 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.

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.