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COX6a1 siRNA (m): sc-142527

BACKGROUND

Members of 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. The mammalian COX apoenzyme is a dimer, with each monomer consisting of thirteen subunits, some of which are mitochondrial and some of which are nuclear. COX6a1 (cytochrome c oxidase subunit VIa polypeptide 1), also known as COX6AL (cytochrome c oxidase polypeptide VIa-liver) or COX6A, is a 109 amino acid protein that localizes to mitochondrial inner membrane and belongs to the cytochrome c oxidase subunit 6A family. COX6a1 is one of multiple terminal oxidases in mitochondrial electron transport and is encoded by a gene that maps to human chromosome 12q24.31.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Cox6a1 (mouse) mapping to 5 F.

PRODUCT

COX6a1 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 COX6a1 shRNA Plasmid (m): sc-142527-SH and COX6a1 shRNA (m) Lentiviral Particles: sc-142527-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

COX6a1 siRNA (m) is recommended for the inhibition of COX6a1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor COX6a1 gene expression knockdown using RT-PCR Primer: COX6a1 (m)-PR: sc-142527-PR (20 μ l). 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.