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COX6a2 siRNA (m): sc-142528

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. 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. COX6a2 (cytochrome c oxidase subunit VIa polypeptide 2), also known as COX6AH, COXVIAH (cytochrome c oxidase polypeptide VIa-heart) or COXVIAM (cytochrome c oxidase subunit VIA-muscle), is a 97 amino acid protein that localizes to mitochondrial inner membrane and belongs to the cytochrome c oxidase subunit 6A family. COX6a2 is expressed in muscle and heart, and is one of multiple terminal oxidases in mitochondrial electron transport. The gene encoding COX6a2 maps to human chromosome 16p11.2.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Cox6a2 (mouse) mapping to 7 F3.

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.

PRODUCT

COX6a2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see COX6a2 shRNA Plasmid (m): sc-142528-SH and COX6a2 shRNA (m) Lentiviral Particles: sc-142528-V as alternate gene silencing products.

For independent verification of COX6a2 (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-142528A and sc-142528B.

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

COX6a2 siRNA (m) is recommended for the inhibition of COX6a2 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 COX6a2 gene expression knockdown using RT-PCR Primer: COX6a2 (m)-PR: sc-142528-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.