

COX7a2 siRNA (m): sc-142531

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. COX7a2 (cytochrome c oxidase subunit VIIa polypeptide 2), also known as COX7AL or COX7AL1, is an 83 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. Like COX7a2, COX7a3 (also known as COX7AP2 or COX7AL2) is a mitochondrial membrane protein that functions in conjunction with other COX proteins in the final steps of the respiratory chain.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Cox7a2 (mouse) mapping to 9 E1.

PROTOCOLS

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

PRODUCT

COX7a2 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 COX7a2 shRNA Plasmid (m): sc-142531-SH and COX7a2 shRNA (m) Lentiviral Particles: sc-142531-V as alternate gene silencing products.

For independent verification of COX7a2 (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-142531A and sc-142531B.

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

COX7a2 siRNA (m) is recommended for the inhibition of COX7a2 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 COX7a2 gene expression knockdown using RT-PCR Primer: COX7a2 (m)-PR: sc-142531-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.