COX6B1 siRNA – Cytochrome C Oxidase Subunit 6b1 (Human)

PRODUCT OVERVIEW

Product Name	COX6B1, siRNA
Full Product Name	COX6B1 siRNA (Human)
Product Gene Name	COX6B1 sirna
Product Synonym Names	COX6B; Cytochrome c oxidase subunit 6B1; Cytochrome c oxidase subunit VIb isoform 1; COX VIb-1
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	COX6B1 siRNA (Human) is a target-specific 19-23 nt siRNA oligo duplexes designed to knock down gene expression.
Preparation and Storage	Shipped at 4 degree C. Store at -20 degree C for one year.
Molecular Weight	10,192 Da
OMIM	124089
3D Structure	ModBase 3D Structure for P14854
Negative Control	siRNA Negative Control (Catalog# MBS8241404) is a non-targeting 21 nt siRNA recommended as a negative control for experiments using targeted siRNA transfection.
Quality Control	Oligonucleotide synthesis is monitored base by base through trityl analysis to ensure appropriate coupling efficiency. The oligo is subsequently purified by affinity-solid phase extraction. The annealed RNA duplex is further analyzed by mass spectrometry to verify the exact composition of the duplex. Each lot is compared to the previous lot by mass spectrometry to ensure maximum lot-to-lot consistency.
Directions for Use	We recommends transfection with 100 nM siRNA 48 to 72 hours prior to cell lysis. Before resuspending, briefly centrifuge the tube to ensure the lyophilized siRNA is at the bottom of the tube. Resuspend the siRNA oligos to an appropriate concentration with DEPC water. For each vial, suitable for 250 transfections in 24 well plate (20 pmol for each well).
Components	We offer pre-designed sets of 3 different target-specific siRNA oligo duplexes of human COX6B1 gene. Each vial contains 5 nmol of lyophilized siRNA. The duplexes can be transfected individually or pooled together to achieve knockdown of the target gene, which is most commonly assessed by qPCR or western blot. Our siRNA oligos are also chemically modified (2'-OMe) at no extra charge for increased stability and enhanced knockdown in vitro and in vivo.
Applications Tested/Suitable for COX6B1 sirna	RNA Interference (RNAi)
Related Product Information for COX6B1 sirna	MBS8230158 is an siRNA targeting COX6B1. Also known as COX6B1 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit COX6B1 expression using RNA interference
Other Notes	Small volumes of COX6B1 sirna vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for COX6B1. It may not necessarily be applicable to this product.

NCBI GI #	4502985
NCBI GeneID	1340
NCBI Accession #	NP_001854.1
UniProt Primary Accession #	P14854
UniProt Secondary Accession #	Q6IBL4; B2R5C9
UniProt Related Accession #	P14854
GenBank Nucleotide #	NM_001863.4
NCBI Official Full Name	cytochrome c oxidase subunit 6B1
NCBI Official Synonym Full Names	cytochrome c oxidase subunit VIb polypeptide 1 (ubiquitous)
NCBI Official Symbol	COX6B1
NCBI Official Synonym Symbols	COXG; COX6B; COXVIb1
UniProt Protein Name	Cytochrome c oxidase subunit 6B1
UniProt Synonym Protein Names	Cytochrome c oxidase subunit VIb isoform 1; COX VIb-1
Protein Family	Cytochrome c oxidase
UniProt Gene Name	COX6B1
UniProt Synonym Gene Names	COX6B; COX VIb-1
UniProt Entry Name	CX6B1_HUMAN
NCBI Protein Information	cytochrome c oxidase subunit 6B1
NCBI Summary for COX6B1	Cytochrome c oxidase (COX), the terminal enzyme of the mitochondrial respiratory chain, catalyzes the electron transfer from reduced cytochrome c to oxygen. It is a heteromeric complex consisting of 3 catalytic subunits encoded by mitochondrial genes and multiple structural subunits encoded by nuclear genes. The mitochondrially-encoded subunits function in electron transfer, and the nuclear-encoded subunits may be involved in the regulation and assembly of the complex. This nuclear gene encodes subunit VIb. Mutations in this gene are associated with severe infantile encephalomyopathy. Three pseudogenes COX6BP-1, COX6BP-2 and COX6BP-3 have been found on chromosomes 7, 17 and 22q13.1-13.2, respectively. [provided by RefSeq, Jan 2010]
UniProt Comments for COX6B1	COX6B1: Connects the two COX monomers into the physiological dimeric form. Defects in COX6B1 are a cause of mitochondrial complex IV deficiency (MT-C4D); also known as cytochrome c oxidase deficiency. A disorder of the mitochondrial respiratory chain with heterogeneous clinical manifestations, ranging from isolated myopathy to severe multisystem disease affecting several tissues and organs. Features include hypertrophic cardiomyopathy, hepatomegaly and liver dysfunction, hypotonia, muscle weakness, excercise intolerance, developmental delay, delayed motor development and mental retardation. A subset of patients manifest Leigh syndrome. Belongs to the cytochrome c oxidase subunit 6B family. Protein type: Mitochondrial; Energy Metabolism - oxidative phosphorylation Chromosomal Location of Human Ortholog: 19q13.1 Cellular Component: mitochondrion; mitochondrial inner membrane; mitochondrial intermembrane space Molecular Function: cytochrome-c oxidase activity Biological Process: cellular metabolic process; substantia nigra development; transmembrane transport Disease: Mitochondrial Complex Iv Deficiency
Research Articles on COX6B1	**1.** Observational study of gene-disease association. (HuGE Navigator)

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