MIOX siRNA – Inositol Oxygenase (Human)

PRODUCT OVERVIEW

Product Name	MIOX, siRNA
Full Product Name	MIOX siRNA (Human)
Product Gene Name	MIOX sirna
Product Synonym Names	ALDRL6; KSP32; RSOR; Inositol oxygenase; Aldehyde reductase-like 6; Kidney-specific protein 32; Myo-inositol oxygenase; MI oxygenase; Renal-specific oxidoreductase
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	MIOX 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	24,516 Da
OMIM	606774
3D Structure	ModBase 3D Structure for Q9UGB7
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 MIOX 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 MIOX sirna	RNA Interference (RNAi)
Related Product Information for MIOX sirna	MBS8226970 is an siRNA targeting MIOX. Also known as MIOX siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit MIOX expression using RNA interference
Other Notes	Small volumes of MIOX 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 MIOX. It may not necessarily be applicable to this product.

NCBI GI #	33667030
NCBI GeneID	55586
NCBI Accession #	NP_060054.4
UniProt Primary Accession #	Q9UGB7
UniProt Secondary Accession #	Q05DJ6; Q5S8C9; Q9BZZ1; Q9UHB8
UniProt Related Accession #	Q9UGB7
GenBank Nucleotide #	NM_017584.5
NCBI Official Full Name	inositol oxygenase
NCBI Official Synonym Full Names	myo-inositol oxygenase
NCBI Official Symbol	MIOX
NCBI Official Synonym Symbols	ALDRL6
UniProt Protein Name	Inositol oxygenase
UniProt Synonym Protein Names	Aldehyde reductase-like 6; Kidney-specific protein 32; Myo-inositol oxygenase; MI oxygenase; Renal-specific oxidoreductase
Protein Family	Inositol oxygenase
UniProt Gene Name	MIOX
UniProt Synonym Gene Names	ALDRL6; KSP32; RSOR; MI oxygenase
UniProt Entry Name	MIOX_HUMAN
NCBI Protein Information	inositol oxygenase
UniProt Comments for MIOX	MIOX: Belongs to the myo-inositol oxygenase family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Carbohydrate Metabolism - inositol phosphate; Carbohydrate Metabolism - ascorbate and aldarate; Oxidoreductase; EC 1.13.99.1 Chromosomal Location of Human Ortholog: 22q13.3 Cellular Component: cytoplasm; inclusion body Molecular Function: oxidoreductase activity, acting on single donors with incorporation of molecular oxygen; oxidoreductase activity, acting on NADH or NADPH; ferric iron binding; aldo-keto reductase activity; inositol oxygenase activity; NADP binding Biological Process: inositol catabolic process
Research Articles on MIOX	**1.** results demonstrated that the polymorphism (rs761745) in the promoter region of myo-inositol oxygenase(MIOX) gene may be associated with the development of type 1 diabetes mellitus in our studied population
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