MYH6 siRNA – Myosin-6 (Mouse)

PRODUCT OVERVIEW

Product Name	MYH6, siRNA
Full Product Name	MYH6 siRNA (Mouse)
Product Gene Name	MYH6 sirna
Product Synonym Names	MYHCA; Myosin-6; Myosin heavy chain 6; Myosin heavy chain. cardiac muscle alpha isoform; MyHC-alpha
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	MYH6 siRNA (Mouse) 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	223,565 Da
3D Structure	ModBase 3D Structure for Q02566
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 mouse MYH6 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 MYH6 sirna	RNA Interference (RNAi)
Related Product Information for MYH6 sirna	MBS8233252 is an siRNA targeting MYH6. Also known as MYH6 siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit MYH6 expression using RNA interference
Other Notes	Small volumes of MYH6 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 MYH6. It may not necessarily be applicable to this product.

NCBI GI #	255918225

NCBI GeneID	17888
NCBI Accession #	NP_001157643.1
UniProt Primary Accession #	Q02566
UniProt Secondary Accession #	Q64258; Q64738
UniProt Related Accession #	Q02566
GenBank Nucleotide #	NM_001164171.1
NCBI Official Full Name	myosin-6
NCBI Official Synonym Full Names	myosin, heavy polypeptide 6, cardiac muscle, alpha
NCBI Official Symbol	Myh6
NCBI Official Synonym Symbols	Myhca; Myhc-a; AA517445; alpha-MHC; A830009F23Rik
UniProt Protein Name	Myosin-6
UniProt Synonym Protein Names	Myosin heavy chain 6; Myosin heavy chain, cardiac muscle alpha isoform; MyHC-alpha
Protein Family	Myosin
UniProt Gene Name	Myh6
UniProt Synonym Gene Names	Myhca; MyHC-alpha
UniProt Entry Name	MYH6_MOUSE
NCBI Protein Information	myosin-6

UniProt Comments for MYH6	MYH6: Muscle contraction. Defects in MYH6 are the cause of atrial septal defect type 3 (ASD3). ASD3 is a congenital heart malformation characterized by incomplete closure of the wall between the atria resulting in blood flow from the left to the right atria. Defects in MYH6 are the cause of familial hypertrophic cardiomyopathy type 14 (CMH14). It is a hereditary heart disorder characterized by ventricular hypertrophy, which is usually asymmetric and often involves the interventricular septum. The symptoms include dyspnea, syncope, collapse, palpitations,and chest pain. They can be readily provoked by exercise. The disorder has inter- and intrafamilial variability ranging from benign to malignant forms with high risk of cardiac failure and sudden cardiac death. Defects in MYH6 are the cause of cardiomyopathy dilated type 1EE (CMD1EE). It is a disorder characterized by ventricular dilation and impaired systolic function, resulting in congestive heart failure and arrhythmia. Patients are at risk of premature death. Defects in MYH6 are the cause of susceptibility to sick sinus syndrome type 3 (SSS3). The term 'sick sinus syndrome' encompasses a variety of conditions caused by sinus node dysfunction. The most common clinical manifestations are syncope, presyncope, dizziness, and fatigue. Electrocardiogram typically shows sinus bradycardia, sinus arrest, and/or sinoatrial block. Episodes of atrial tachycardias coexisting with sinus bradycardia ('tachycardia-bradycardia syndrome') are also common in this disorder. SSS occurs most often in the elderly associated with underlying heart disease or previous cardiac surgery, but can also occur in the fetus, infant, or child without heart disease or other contributing factors. MYH6 variations are associated with susceptibility to sick sinus syndrome (PubMed:21378987). The lifetime risk of being diagnosed with sick sinus syndrome is higher for carriers of variant p.Arg721Trp than for non-carriers (PubMed:21378987). Protein type: Motility/polarity/chemotaxis; Motor Cellular Component: nucleoplasm; focal adhesion; mitochondrion; myofibril; cytoplasm; stress fiber; muscle myosin complex; myosin complex; Z disc Molecular Function: identical protein binding; protein homodimerization activity; ATPase activity; nucleotide binding; motor activity; actin binding; actin-dependent ATPase activity; protein kinase binding; calcium-dependent ATPase activity; calmodulin binding; microfilament motor activity; protein binding; protein heterodimerization activity; ATP binding Biological Process: adult heart development; striated muscle contraction; atrial cardiac muscle morphogenesis; regulation of heart rate; metabolic process; in utero embryonic development; actin filament-based movement; sarcomere organization; Wnt receptor signaling pathway through beta-catenin; regulation of heart contraction; visceral muscle development; muscle filament sliding; BMP signaling pathway; regulation of ATPase activity; myofibril assembly; muscle contraction; cardiac muscle fiber development; regulation of blood pressure; ventricular cardiac muscle morphogenesis; regulation of the force of heart contraction
Research Articles on MYH6	**1.** Data indicate that the cardiac myosin heavy chain alpha isoform (alphaMHC(403)) transgenic model closely recapitulates human disease.
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
Disclaimer	While every efforts were made to ensure the accuracy of the information provided in this datasheet, MyBioSource will not be liable for any omissions or errors contained herein. MyBioSource reserves the right to make changes to this datasheet at any time without prior notice. It is the responsibility of the customer to report product performance issues to MyBioSource within 30 days of receipt of the product. Please visit our Terms & Conditions page for more information.
Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.