MBNL2 siRNA – Muscleblind-Like Protein 2 Isoform 4 (Human)

PRODUCT OVERVIEW

Product Name	MBNL2, siRNA
Full Product Name	MBNL2 siRNA (Human)
Product Gene Name	MBNL2 sirna
Product Synonym Names	MBLL; MBLL39; MLP1; Muscleblind-like protein 2; Muscleblind-like protein 1; Muscleblind-like protein-like; Muscleblind-like protein-like 39
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	MBNL2 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	39,356 Da
OMIM	607327
3D Structure	ModBase 3D Structure for Q5VZF2
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 MBNL2 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 MBNL2 sirna	RNA Interference (RNAi)
Related Product Information for MBNL2 sirna	MBS829285 is an siRNA targeting MBNL2. Also known as MBNL2 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit MBNL2 expression using RNA interference
Other Notes	Small volumes of MBNL2 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 MBNL2. It may not necessarily be applicable to this product.

NCBI GI #	807045900
NCBI GeneID	10150
NCBI Accession #	NP_001292999.1
UniProt Primary Accession #	Q5VZF2
UniProt Secondary Accession #	Q3SXY5; Q58F19; Q8NEV3; Q8TD82
UniProt Related Accession #	Q5VZF2
GenBank Nucleotide #	NM_001306070.1
NCBI Official Full Name	muscleblind-like protein 2 isoform 4
NCBI Official Synonym Full Names	muscleblind-like splicing regulator 2
NCBI Official Symbol	MBNL2
NCBI Official Synonym Symbols	MBLL; MBLL39; PRO2032
UniProt Protein Name	Muscleblind-like protein 2
UniProt Synonym Protein Names	Muscleblind-like protein 1; Muscleblind-like protein-like; Muscleblind-like protein-like 39
Protein Family	Muscleblind-like protein
UniProt Gene Name	MBNL2
UniProt Synonym Gene Names	MBLL; MBLL39; MLP1
UniProt Entry Name	MBNL2_HUMAN
NCBI Protein Information	muscleblind-like protein 2
NCBI Summary for MBNL2	This gene is a member of the muscleblind protein family which was initially described in Drosophila melanogaster. This gene encodes a C3H-type zinc finger protein that modulates alternative splicing of pre-mRNAs. Muscleblind proteins bind specifically to expanded dsCUG RNA but not to normal size CUG repeats and may thereby play a role in the pathophysiology of myotonic dystrophy. Several alternatively spliced transcript variants have been described but the full-length natures of only some have been determined. [provided by RefSeq, Mar 2012]
UniProt Comments for MBNL2	MBNL2: Mediates pre-mRNA alternative splicing regulation. Acts either as activator or repressor of splicing on specific pre-mRNA targets. Inhibits cardiac troponin-T (TNNT2) pre-mRNA exon inclusion but induces insulin receptor (IR) pre-mRNA exon inclusion in muscle. Antagonizes the alternative splicing activity pattern of CELF proteins. RNA-binding protein that binds to 5'ACACCC-3' core sequence, termed zipcode, within the 3'UTR of ITGA3. Binds to CUG triplet repeat expansion in myotonic dystrophy muscle cells by sequestering the target RNAs. Seems to regulate expression and localization of ITGA3 by transporting it from the nucleus to cytoplasm at adhesion plaques. May play a role in myotonic dystrophy pathophysiology (DM). Belongs to the muscleblind family. 3 isoforms of the human protein are produced by alternative splicing. Protein type: RNA-binding Chromosomal Location of Human Ortholog: 13q32.1 Cellular Component: cytoplasm; nucleus Molecular Function: metal ion binding Biological Process: regulation of RNA splicing; RNA splicing; mRNA processing; regulation of alternative nuclear mRNA splicing, via spliceosome
Research Articles on MBNL2	**1.** both MBNL1 and MBNL2 are involved in the regulation of Tau exon 2 splicing and the mis-splicing of Tau in DM1 is due to the combined inactivation of both

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