LEMD3 siRNA – Inner Nuclear Membrane Protein Man1 (Mouse)

PRODUCT OVERVIEW

Product Name	LEMD3, siRNA
Full Product Name	LEMD3 siRNA (Mouse)
Product Gene Name	LEMD3 sirna
Product Synonym Names	MAN1; Inner nuclear membrane protein Man1; LEM domain-containing protein 3
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	LEMD3 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	102,739 Da
3D Structure	ModBase 3D Structure for Q9WU40
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 LEMD3 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 LEMD3 sirna	RNA Interference (RNAi)
Related Product Information for LEMD3 sirna	MBS8211124 is an siRNA targeting LEMD3. Also known as LEMD3 siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit LEMD3 expression using RNA interference
Other Notes	Small volumes of LEMD3 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 LEMD3. It may not necessarily be applicable to this product.

NCBI GI #	145864461

NCBI GeneID	380664
NCBI Accession #	NP_001074662.2
UniProt Primary Accession #	Q9WU40
UniProt Secondary Accession #	Q0VGU6; Q3USB5
UniProt Related Accession #	Q9WU40
GenBank Nucleotide #	NM_001081193.2
NCBI Official Full Name	inner nuclear membrane protein Man1
NCBI Official Synonym Full Names	LEM domain containing 3
NCBI Official Symbol	Lemd3
NCBI Official Synonym Symbols	Man1; AI316861
UniProt Protein Name	Inner nuclear membrane protein Man1
UniProt Synonym Protein Names	LEM domain-containing protein 3
Protein Family	Inner nuclear membrane protein
UniProt Gene Name	Lemd3
UniProt Synonym Gene Names	Man1
UniProt Entry Name	MAN1_MOUSE
NCBI Protein Information	inner nuclear membrane protein Man1
UniProt Comments for LEMD3	MAN1: Can function as a specific repressor of TGF-beta, activin, and BMP signaling through its interaction with the R-SMAD proteins. Antagonizes TGF-beta-induced cell proliferation arrest. Defects in LEMD3 are the cause of Buschke-Ollendorff syndrome (BOS); also known as dermatoosteopoikilosis or disseminated dermatofibrosis with osteopoikilosis or dermatofibrosis lenticularis disseminata with osteopoikilosis or osteopathia condensans disseminata. BOS refers to the association of osteopoikilosis with disseminated connective-tissue nevi. Osteopoikilosis is a skeletal dysplasia characterized by a symmetric but unequal distribution of multiple hyperostotic areas in different parts of the skeleton. Both elastic-type nevi (juvenile elastoma) and collagen-type nevi (dermatofibrosis lenticularis disseminata) have been described in BOS. Skin or bony lesions can be absent in some family members, whereas other relatives may have both. Defects in LEMD3 are a cause of melorheostosis (MEL). Melorheostosis is a rare mesenchymal dysplasia and one of the sclerosing bone disorders. It is caused by a developmental error, with a sclerotomal distribution, frequently involving one limb. It may be asymptomatic, but pain, stiffness with limitation of motion, leg-length discrepancy and limb deformity may occur. Protein type: Membrane protein, integral; Nuclear envelope; Membrane protein, multi-pass Cellular Component: membrane; integral to membrane; nuclear inner membrane; nuclear envelope; integral to nuclear inner membrane; nucleus Molecular Function: DNA binding; nucleotide binding Biological Process: blood vessel endothelial cell migration during intussusceptive angiogenesis; negative regulation of activin receptor signaling pathway; regulation of cell cycle; angiogenesis; negative regulation of transforming growth factor beta receptor signaling pathway; nuclear organization and biogenesis; negative regulation of BMP signaling pathway
Research Articles on LEMD3	**1.** a nuclear envelope-localized mechanism of inactivating TGF-beta signaling in which MAN1 competes with transcription factors for binding to Smad2 and Smad3 and facilitates their dephosphorylation by PPM1A.
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