YME1L1 siRNA – ATP-Dependent Zinc Metalloprotease YME1L1 (Mouse)

PRODUCT OVERVIEW

Product Name	YME1L1, siRNA
Full Product Name	YME1L1 siRNA (Mouse)
Product Gene Name	YME1L1 sirna
Product Synonym Names	ATP-dependent zinc metalloprotease YME1L1; ATP-dependent metalloprotease FtsH1; YME1-like protein 1
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	YME1L1 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	80,028 Da
3D Structure	ModBase 3D Structure for O88967
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 YME1L1 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 YME1L1 sirna	RNA Interference (RNAi)
Related Product Information for YME1L1 sirna	MBS8227162 is an siRNA targeting YME1L1. Also known as YME1L1 siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit YME1L1 expression using RNA interference
Other Notes	Small volumes of YME1L1 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 YME1L1. It may not necessarily be applicable to this product.

NCBI GI #	7305635

NCBI GeneID	27377
NCBI Accession #	NP_038799.1
UniProt Primary Accession #	O88967
UniProt Secondary Accession #	Q7TNN5
UniProt Related Accession #	O88967
GenBank Nucleotide #	NM_013771.5
NCBI Official Full Name	ATP-dependent zinc metalloprotease YME1L1
NCBI Official Synonym Full Names	YME1-like 1 (S. cerevisiae)
NCBI Official Symbol	Yme1l1
NCBI Official Synonym Symbols	Ftsh; FtsH1
UniProt Protein Name	ATP-dependent zinc metalloprotease YME1L1
UniProt Synonym Protein Names	ATP-dependent metalloprotease FtsH1; YME1-like protein 1
Protein Family	ATP-dependent zinc metalloprotease
UniProt Gene Name	Yme1l1
UniProt Entry Name	YMEL1_MOUSE
NCBI Protein Information	ATP-dependent zinc metalloprotease YME1L1
UniProt Comments for YME1L1	YME1L1: Putative ATP-dependent protease which plays a role in mitochondrial protein metabolism. Ensures cell proliferation, maintains normal cristae morphology and complex I respiration activity, promotes antiapoptotic activity and protects mitochondria from the accumulation of oxidatively damaged membrane proteins. Requires to control the accumulation of nonassembled respiratory chain subunits (NDUFB6, OX4 and ND1). Seems to act in the processing of OPA1. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Protease; EC 3.4.24.-; Mitochondrial Cellular Component: membrane; mitochondrion; mitochondrial inner membrane; integral to membrane Molecular Function: peptidase activity; hydrolase activity; metallopeptidase activity; metalloendopeptidase activity; metal ion binding; nucleotide binding; ATP binding Biological Process: cell proliferation; mitochondrion organization and biogenesis; misfolded or incompletely synthesized protein catabolic process; proteolysis
Research Articles on YME1L1	**1.** Constitutive OPA1 cleavage by YME1L and OMA1 at two distinct sites leads to the accumulation of both long and short forms of OPA1 and maintains mitochondrial fusion.
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