CTSH siRNA – Pro-Cathepsin H Isoform 1 Preproprotein (Mouse)

PRODUCT OVERVIEW

Product Name	CTSH, siRNA
Full Product Name	CTSH siRNA (Mouse)
Product Gene Name	CTSH sirna
Product Synonym Names	Pro-cathepsin H; Cathepsin B3; Cathepsin BA
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	CTSH 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	37,170 Da
3D Structure	ModBase 3D Structure for P49935
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 CTSH 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 CTSH sirna	RNA Interference (RNAi)
Related Product Information for CTSH sirna	MBS8215802 is an siRNA targeting CTSH. Also known as CTSH siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit CTSH expression using RNA interference
Other Notes	Small volumes of CTSH 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 CTSH. It may not necessarily be applicable to this product.

NCBI GI #	166235890

NCBI GeneID	13036
NCBI Accession #	NP_031827.2
UniProt Primary Accession #	P49935
UniProt Secondary Accession #	Q3UCD6
UniProt Related Accession #	P49935
GenBank Nucleotide #	NM_007801.3
NCBI Official Full Name	pro-cathepsin H isoform 1 preproprotein
NCBI Official Synonym Full Names	cathepsin H
NCBI Official Symbol	Ctsh
NCBI Official Synonym Symbols	AL022844
UniProt Protein Name	Pro-cathepsin H
UniProt Synonym Protein Names	Cathepsin B3; Cathepsin BA
Protein Family	Pro-cathepsin
UniProt Gene Name	Ctsh
UniProt Entry Name	CATH_MOUSE
NCBI Protein Information	pro-cathepsin H
NCBI Summary for CTSH	This gene encodes a member of the peptidase C1 (papain) family of cysteine proteases. Alternative splicing results in multiple transcript variants, at least one of which encodes a preproprotein that is proteolytically processed to generate multiple protein products. These products include the cathepsin H mini, heavy, and light chains. In rat and human, these three chains can associate to form the mature enzyme, which has both aminopeptidase and endopeptidase activities. Homozygous knockout mice for this gene exhibit impaired lung surfactant processing and reduced tumorigenesis in a pancreatic cancer model. Multiple pseudogenes of this gene have been identified in the genome. [provided by RefSeq, Aug 2015]
UniProt Comments for CTSH	CTSH: Important for the overall degradation of proteins in lysosomes. Belongs to the peptidase C1 family. Protein type: Protease; EC 3.4.22.16 Cellular Component: extracellular space; lysosome; acrosome; axoneme; outer dense fiber; cytosol Molecular Function: peptidase activity; protein self-association; HLA-A specific activating MHC class I receptor activity; hydrolase activity; cysteine-type endopeptidase activity; serine-type endopeptidase activity; endopeptidase activity; apoptotic protease activator activity; protein complex binding; caspase activator activity; kininogen binding; aminopeptidase activity; cysteine-type peptidase activity Biological Process: caspase activation; positive regulation of angiogenesis; response to retinoic acid; protein destabilization; apoptosis; membrane protein proteolysis; positive regulation of cell proliferation; zymogen activation; proteolysis; surfactant homeostasis; immune response-regulating signal transduction; positive regulation of cell migration; negative regulation of apoptosis; T cell mediated cytotoxicity
Research Articles on CTSH	**1.** The data provide strong evidence that CTSH is an important regulator of beta-cell function during progression of T1D
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