CPE siRNA – Carboxypeptidase E Preproprotein (Human)

PRODUCT OVERVIEW

Product Name	CPE, siRNA
Full Product Name	CPE siRNA (Human)
Product Gene Name	CPE sirna
Product Synonym Names	Carboxypeptidase E; CPE; Carboxypeptidase H; CPH; Enkephalin convertase; Prohormone-processing carboxypeptidase
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	CPE 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	49,886 Da
OMIM	114855
3D Structure	ModBase 3D Structure for P16870
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 CPE 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 CPE sirna	RNA Interference (RNAi)
Related Product Information for CPE sirna	MBS828704 is an siRNA targeting CPE. Also known as CPE siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit CPE expression using RNA interference
Other Notes	Small volumes of CPE 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 CPE. It may not necessarily be applicable to this product.

NCBI GI #	4503009
NCBI GeneID	1363
NCBI Accession #	NP_001864.1
UniProt Primary Accession #	P16870
UniProt Secondary Accession #	Q9UIU9; A8K4N1; B3KR42; B4DFN4; D3DP33
UniProt Related Accession #	P16870
GenBank Nucleotide #	NM_001873.2
NCBI Official Full Name	carboxypeptidase E preproprotein
NCBI Official Synonym Full Names	carboxypeptidase E
NCBI Official Symbol	CPE
UniProt Protein Name	Carboxypeptidase E
UniProt Synonym Protein Names	Carboxypeptidase H; CPH; Enkephalin convertase; Prohormone-processing carboxypeptidase
Protein Family	Carboxypeptidase
UniProt Gene Name	CPE
UniProt Synonym Gene Names	CPE; CPH
UniProt Entry Name	CBPE_HUMAN
NCBI Protein Information	carboxypeptidase E
NCBI Summary for CPE	This gene encodes a carboxypeptidase that cleaves C-terminal amino acid residues and is involved in the biosynthesis of peptide hormones and neurotransmitters, including insulin. It is a peripheral membrane protein. The protein specifically binds regulated secretory pathway proteins, including prohormones, but not constitutively secreted proteins. Mutations in this gene are implicated in type II diabetes. [provided by RefSeq, Jul 2008]
UniProt Comments for CPE	CPE: Removes residual C-terminal Arg or Lys remaining after initial endoprotease cleavage during prohormone processing. Processes proinsulin. Belongs to the peptidase M14 family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Secreted, signal peptide; Secreted; EC 3.4.17.10; Protease Chromosomal Location of Human Ortholog: 4q32.3 Cellular Component: Golgi apparatus; secretory granule membrane; plasma membrane; nucleus Molecular Function: zinc ion binding; carboxypeptidase activity; neurexin binding; cell adhesion molecule binding; metallocarboxypeptidase activity Biological Process: insulin processing; cellular protein metabolic process; metabolic process; neuropeptide signaling pathway; protein modification process; proteolysis
Research Articles on CPE	**1.** Downregulation of CPE regulates cell proliferation and chemosensitivity in pancreatic cancer.
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