USP19 siRNA – Ubiquitin Carboxyl-Terminal Hydrolase 19 Isoform 2 (Mouse)

PRODUCT OVERVIEW

Product Name	USP19, siRNA
Full Product Name	USP19 siRNA (Mouse)
Product Gene Name	USP19 sirna
Product Synonym Names	KIAA0891; Ubiquitin carboxyl-terminal hydrolase 19; Deubiquitinating enzyme 19; Ubiquitin thioesterase 19; Ubiquitin-specific-processing protease 19
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	USP19 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	146,283 Da
3D Structure	ModBase 3D Structure for Q3UJD6
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 USP19 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 USP19 sirna	RNA Interference (RNAi)
Related Product Information for USP19 sirna	MBS8216526 is an siRNA targeting USP19. Also known as USP19 siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit USP19 expression using RNA interference
Other Notes	Small volumes of USP19 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 USP19. It may not necessarily be applicable to this product.

NCBI GI #	270265843

NCBI GeneID	71472
NCBI Accession #	NP_001161843.1
UniProt Primary Accession #	Q3UJD6
UniProt Secondary Accession #	Q3TAC9; Q3TUE6; Q6P9T0; Q80TP5; Q80ZW5
UniProt Related Accession #	Q3UJD6
GenBank Nucleotide #	NM_001168371.2
NCBI Official Full Name	ubiquitin carboxyl-terminal hydrolase 19 isoform 2
NCBI Official Synonym Full Names	ubiquitin specific peptidase 19
NCBI Official Symbol	Usp19
NCBI Official Synonym Symbols	Zmynd9; AI047774; 8430421I07Rik
UniProt Protein Name	Ubiquitin carboxyl-terminal hydrolase 19
UniProt Synonym Protein Names	Deubiquitinating enzyme 19; Ubiquitin thioesterase 19; Ubiquitin-specific-processing protease 19
UniProt Gene Name	Usp19
UniProt Synonym Gene Names	Kiaa0891
UniProt Entry Name	UBP19_MOUSE
NCBI Protein Information	ubiquitin carboxyl-terminal hydrolase 19
UniProt Comments for USP19	USP19: Deubiquitinating enzyme that regulates the degradation of various proteins. Deubiquitinates and prevents proteasomal degradation of RNF123 which in turn stimulates CDKN1B ubiquitin- dependent degradation thereby playing a role in cell proliferation. Involved in decreased protein synthesis in atrophying skeletal muscle. Modulates transcription of major myofibrillar proteins. Also involved in turnover of endoplasmic- reticulum-associated degradation (ERAD) substrates. Regulates the stability of BIRC2/c-IAP1 and BIRC3/c-IAP2 by preventing their ubiquitination. Required for cells to mount an appropriate response to hypoxia and rescues HIF1A from degradation in a non- catalytic manner. Plays an important role in 17 beta-estradiol (E2)-inhibited myogenesis. Decreases the levels of ubiquitinated proteins during skeletal muscle formation and acts to repress myogenesis. Exhibits a preference towards 'Lys-63'-linked Ubiquitin chains. Belongs to the peptidase C19 family. 4 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, integral; Protease; EC 3.4.19.12; Ubiquitin-specific protease; Ubiquitin conjugating system Cellular Component: endoplasmic reticulum membrane; membrane; endoplasmic reticulum; integral to membrane; cytosol Molecular Function: peptidase activity; protein binding; hydrolase activity; cysteine-type endopeptidase activity; metal ion binding; ubiquitin-specific protease activity; cysteine-type peptidase activity Biological Process: ubiquitin-dependent protein catabolic process; negative regulation of skeletal muscle development; ER-associated protein catabolic process; protein deubiquitination; regulation of protein stability; proteolysis
Research Articles on USP19	**1.** Data suggest that, in young female mice, 17beta-estradiol upregulates USP19 expression through Esr1 (estrogen receptor alpha) and leads to down-regulation of muscle mass and down-regulation of ubiquitination of muscle proteins.
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