# USP45 siRNA – Ubiquitin Carboxyl-Terminal Hydrolase 45 Isoform 2 (Mouse)

## PRODUCT OVERVIEW

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| **Product Name** | USP45, siRNA |
| **Full Product Name** | USP45 siRNA (Mouse) |
| **Product Gene Name** | USP45 sirna |
| **Product Synonym Names** | Ubiquitin carboxyl-terminal hydrolase 45; Deubiquitinating enzyme 45; Ubiquitin thioesterase 45; Ubiquitin-specific-processing protease 45 |
| **Host** | Synthetic |
| **Species Reactivity** | Mouse |
| **Form/Format** | Lyophilized powder |
| **Purity/Purification** | > 97% |
| **Specificity** | USP45 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** | 85,110 Da |
| **3D Structure** | ModBase 3D Structure for Q8K387 |
| **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 USP45 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 USP45 sirna** | RNA Interference (RNAi) |
| **Related Product Information for USP45 sirna** | MBS8206872 is an siRNA targeting USP45. Also known as USP45 siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit USP45 expression using RNA interference |
| **Other Notes** | Small volumes of USP45 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 USP45. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 594150411 |

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| **NCBI GeneID** | 77593 |
| **NCBI Accession #** | NP_001277354.1 |
| **UniProt Primary Accession #** | Q8K387 |
| **UniProt Secondary Accession #** | Q8BU19; Q8BZ19; A2AJT1 |
| **UniProt Related Accession #** | Q8K387 |
| **GenBank Nucleotide #** | NM_001290425.1 |
| **NCBI Official Full Name** | ubiquitin carboxyl-terminal hydrolase 45 isoform 2 |
| **NCBI Official Synonym Full Names** | ubiquitin specific petidase 45 |
| **NCBI Official Symbol** | Usp45 |
| **NCBI Official Synonym Symbols** | Gcap7; AI843191; 3110003C05Rik; 4930550B20Rik |
| **UniProt Protein Name** | Ubiquitin carboxyl-terminal hydrolase 45 |
| **UniProt Synonym Protein Names** | Deubiquitinating enzyme 45; Ubiquitin thioesterase 45; Ubiquitin-specific-processing protease 45 |
| **Protein Family** | Secreted 45 kDa protein |
| **UniProt Gene Name** | Usp45 |
| **UniProt Entry Name** | UBP45_MOUSE |
| **NCBI Protein Information** | ubiquitin carboxyl-terminal hydrolase 45 |
| **UniProt Comments for USP45** | USP45: Belongs to the peptidase C19 family. 3 isoforms of the human protein are produced by alternative splicing.<br><br>Protein type: Ubiquitin-specific protease; Protease; EC 3.4.19.12; Ubiquitin conjugating system<br><br>Molecular Function: peptidase activity; hydrolase activity; zinc ion binding; metal ion binding; cysteine-type endopeptidase activity; ubiquitin-specific protease activity; cysteine-type peptidase activity<br><br>Biological Process: ubiquitin-dependent protein catabolic process; proteasomal ubiquitin-dependent protein catabolic process; protein deubiquitination; proteolysis |
| **Research Articles on USP45** | **1.** these results establish USP45 as a new regulator of XPF-ERCC1 crucial for efficient DNA repair |
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