USF1 siRNA – Upstream Stimulatory Factor 1 Isoform 1 (Human)

PRODUCT OVERVIEW

Product Name	USF1, siRNA
Full Product Name	USF1 siRNA (Human)
Product Gene Name	USF1 sirna
Product Synonym Names	BHLHB11; USF; Upstream stimulatory factor 1; Class B basic helix-loop-helix protein 11; bHLHb11; Major late transcription factor 1
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	USF1 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	27,372 Da
OMIM	144250
3D Structure	ModBase 3D Structure for P22415
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 USF1 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 USF1 sirna	RNA Interference (RNAi)
Related Product Information for USF1 sirna	MBS8205210 is an siRNA targeting USF1. Also known as USF1 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit USF1 expression using RNA interference
Other Notes	Small volumes of USF1 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 USF1. It may not necessarily be applicable to this product.

NCBI GI #	444909174
NCBI GeneID	7391
NCBI Accession #	NP_001263302.1
UniProt Primary Accession #	P22415
UniProt Secondary Accession #	Q5SY46; Q7Z5Y1; B2RBZ4
UniProt Related Accession #	P22415
GenBank Nucleotide #	NM_001276373.1
NCBI Official Full Name	upstream stimulatory factor 1 isoform 1
NCBI Official Synonym Full Names	upstream transcription factor 1
NCBI Official Symbol	USF1
NCBI Official Synonym Symbols	UEF; FCHL; MLTF; FCHL1; MLTFI; HYPLIP1; bHLHb11
UniProt Protein Name	Upstream stimulatory factor 1
UniProt Synonym Protein Names	Class B basic helix-loop-helix protein 11; bHLHb11; Major late transcription factor 1
Protein Family	Upstream stimulatory factor
UniProt Gene Name	USF1
UniProt Synonym Gene Names	BHLHB11; USF; bHLHb11
UniProt Entry Name	USF1_HUMAN
NCBI Protein Information	upstream stimulatory factor 1
NCBI Summary for USF1	This gene encodes a member of the basic helix-loop-helix leucine zipper family, and can function as a cellular transcription factor. The encoded protein can activate transcription through pyrimidine-rich initiator (Inr) elements and E-box motifs. This gene has been linked to familial combined hyperlipidemia (FCHL). Alternative splicing of this gene results in multiple transcript variants. A related pseudogene has been defined on chromosome 21. [provided by RefSeq, Feb 2013]
UniProt Comments for USF1	USF1: Transcription factor that binds to a symmetrical DNA sequence (E-boxes) (5'-CACGTG-3') that is found in a variety of viral and cellular promoters. Efficient DNA binding requires dimerization with another bHLH protein. Binds DNA as an homodimer or a heterodimer (USF1/USF2). Interacts with varicella-zoster virus IE62 protein. Protein type: DNA-binding; Transcription factor Chromosomal Location of Human Ortholog: 1q22-q23 Cellular Component: nucleoplasm; transcription factor complex; nucleus Molecular Function: RNA polymerase II transcription factor activity, enhancer binding; protein binding; protein homodimerization activity; enzyme binding; protein heterodimerization activity; sequence-specific DNA binding; histone deacetylase binding; double-stranded DNA binding; bHLH transcription factor binding; protein kinase binding Biological Process: transcription from RNA polymerase II promoter; lipid homeostasis; glucose metabolic process; late viral mRNA transcription; glucose homeostasis; regulation of transcription from RNA polymerase II promoter; negative regulation of fibrinolysis; cellular response to insulin stimulus; response to hypoxia; regulation of transcription from RNA polymerase II promoter by glucose; regulation of transcription by carbon catabolites; positive regulation of transcription from RNA polymerase II promoter by glucose; positive regulation of transcription from RNA polymerase II promoter; response to UV Disease: Hyperlipidemia, Combined, 1
Research Articles on USF1	**1.** CK2 phosphorylation of USF1 modulates two functionally important properties of USF1, namely hetero-dimerization and transactivation.

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