NCBP2 siRNA – Nuclear Cap-Binding Protein Subunit 2 (Mouse)

PRODUCT OVERVIEW

Product Name	NCBP2, siRNA
Full Product Name	NCBP2 siRNA (Mouse)
Product Gene Name	NCBP2 sirna
Product Synonym Names	CBP20; Nuclear cap-binding protein subunit 2; 20 kDa nuclear cap-binding protein; NCBP 20 kDa subunit; CBP20
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	NCBP2 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	18,017 Da
3D Structure	ModBase 3D Structure for Q9CQ49
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 NCBP2 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 NCBP2 sirna	RNA Interference (RNAi)
Related Product Information for NCBP2 sirna	MBS8234063 is an siRNA targeting NCBP2. Also known as NCBP2 siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit NCBP2 expression using RNA interference
Other Notes	Small volumes of NCBP2 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 NCBP2. It may not necessarily be applicable to this product.

NCBI GI #	13386056

NCBI GeneID	68092
NCBI Accession #	NP_080830.1
UniProt Primary Accession #	Q9CQ49
UniProt Secondary Accession #	Q0VF93; Q3UI86
UniProt Related Accession #	Q9CQ49
GenBank Nucleotide #	NM_026554.4
NCBI Official Full Name	nuclear cap-binding protein subunit 2
NCBI Official Synonym Full Names	nuclear cap binding protein subunit 2
NCBI Official Symbol	Ncbp2
NCBI Official Synonym Symbols	20kDa; C79367; AA536802; AI843301; 5930413E18Rik
UniProt Protein Name	Nuclear cap-binding protein subunit 2
UniProt Synonym Protein Names	20 kDa nuclear cap-binding protein; NCBP 20 kDa subunit; CBP20
Protein Family	Nuclear cap-binding protein
UniProt Gene Name	Ncbp2
UniProt Synonym Gene Names	Cbp20; CBP20
UniProt Entry Name	NCBP2_MOUSE
NCBI Protein Information	nuclear cap-binding protein subunit 2
UniProt Comments for NCBP2	NCBP2: Component of the cap-binding complex (CBC), which binds co-transcriptionally to the 5' cap of pre-mRNAs and is involved in various processes such as pre-mRNA splicing, translation regulation, nonsense-mediated mRNA decay, RNA-mediated gene silencing (RNAi) by microRNAs (miRNAs) and mRNA export. The CBC complex is involved in mRNA export from the nucleus via its interaction with ALYREF/THOC4/ALY, leading to the recruitment of the mRNA export machinery to the 5' end of mRNA and to mRNA export in a 5' to 3' direction through the nuclear pore. The CBC complex is also involved in mediating U snRNA and intronless mRNAs export from the nucleus. The CBC complex is essential for a pioneer round of mRNA translation, before steady state translation when the CBC complex is replaced by cytoplasmic cap-binding protein eIF4E. The pioneer round of mRNA translation mediated by the CBC complex plays a central role in nonsense-mediated mRNA decay (NMD), NMD only taking place in mRNAs bound to the CBC complex, but not on eIF4E-bound mRNAs. The CBC complex enhances NMD in mRNAs containing at least one exon-junction complex (EJC) via its interaction with UPF1, promoting the interaction between UPF1 and UPF2. The CBC complex is also involved in 'failsafe' NMD, which is independent of the EJC complex, while it does not participate in Staufen-mediated mRNA decay (SMD). During cell proliferation, the CBC complex is also involved in microRNAs (miRNAs) biogenesis via its interaction with SRRT/ARS2, thereby being required for miRNA- mediated RNA interference. The CBC complex also acts as a negative regulator of PARN, thereby acting as an inhibitor of mRNA deadenylation. In the CBC complex, NCBP2/CBP20 recognizes and binds capped RNAs (m7GpppG-capped RNA) but requires NCBP1/CBP80 to stabilize the movement of its N-terminal loop and lock the CBC into a high affinity cap-binding state with the cap structure. Belongs to the RRM NCBP2 family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Spliceosome; RNA-binding; RNA splicing; Translation Cellular Component: nucleoplasm; mRNA cap complex; cytoplasm; nucleus Molecular Function: nucleic acid binding; RNA binding; RNA 7-methylguanosine cap binding; nucleotide binding; RNA cap binding Biological Process: nuclear mRNA splicing, via spliceosome; regulation of translation; mRNA capping; mRNA transport; transport; RNA splicing; mRNA catabolic process, nonsense-mediated decay; RNA-mediated gene silencing; nuclear mRNA cis splicing, via U2-type spliceosome; mRNA processing; regulation of translational initiation

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