BLM siRNA – Protein Homolog Isoform 2 (Mouse)

PRODUCT OVERVIEW

Product Name	BLM, siRNA
Full Product Name	BLM siRNA (Mouse)
Product Gene Name	BLM sirna
Product Synonym Names	Bloom syndrome protein homolog; mBLM; RecQ helicase homolog
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	BLM 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	158,366 Da
3D Structure	ModBase 3D Structure for O88700
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 BLM 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 BLM sirna	RNA Interference (RNAi)
Related Product Information for BLM sirna	MBS8200007 is an siRNA targeting BLM. Also known as BLM siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit BLM expression using RNA interference
Other Notes	Small volumes of BLM 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 BLM. It may not necessarily be applicable to this product.

NCBI GI #	110225360

NCBI GeneID	12144
NCBI Accession #	NP_001035992.1
UniProt Primary Accession #	O88700
UniProt Secondary Accession #	O88198
UniProt Related Accession #	O88700
GenBank Nucleotide #	NM_001042527.2
NCBI Official Full Name	Bloom syndrome protein homolog isoform 2
NCBI Official Synonym Full Names	Bloom syndrome, RecQ helicase-like
NCBI Official Symbol	Blm
UniProt Protein Name	Bloom syndrome protein homolog
UniProt Synonym Protein Names	RecQ helicase homolog
Protein Family	Bloom syndrome protein
UniProt Gene Name	Blm
UniProt Synonym Gene Names	mBLM
UniProt Entry Name	BLM_MOUSE
NCBI Protein Information	Bloom syndrome protein homolog
UniProt Comments for BLM	BLM: a magnesium-dependent ATP-dependent DNA-helicase that unwinds single- and double-stranded DNA in a 3'-5' direction. A member of the RecQ helicase family that is required for genome stability. Participates in DNA replication, recombination and repair. Part of the BRCA1-associated genome surveillance complex (BASC), which contains BRCA1, MSH2, MSH6, MLH1, ATM, BLM, PMS2 and the RAD50-MRE11-NBS1 protein complex which is a dynamic process changing throughout the cell cycle and within subnuclear domains. Interacts with ubiquitinated FANCD2. Protein type: Helicase; DNA repair, damage; DNA replication; EC 3.6.4.12 Cellular Component: male germ cell nucleus; lateral element; nuclear chromosome; chromosome, telomeric region; PML body; nuclear matrix; pronucleus; cytoplasm; nucleolus; replication fork; intracellular; nucleus Molecular Function: G-quadruplex DNA binding; hydrolase activity; p53 binding; ATPase activity; nucleotide binding; ATP-dependent helicase activity; bubble DNA binding; helicase activity; four-way junction helicase activity; ATP-dependent DNA helicase activity; protein binding; nucleic acid binding; DNA binding; ATP-dependent 3'-5' DNA helicase activity; catalytic activity; ATP binding; single-stranded DNA binding; hydrolase activity, acting on acid anhydrides, in phosphorus-containing anhydrides Biological Process: negative regulation of DNA recombination; regulation of binding; positive regulation of transcription, DNA-dependent; negative regulation of mitotic recombination; DNA double-strand break processing; alpha-beta T cell differentiation; negative regulation of cell division; DNA repair; chromosome organization and biogenesis; DNA duplex unwinding; protein oligomerization; DNA recombination; replication fork processing; cellular metabolic process; mitotic cell cycle G2/M transition DNA damage checkpoint; DNA strand renaturation; positive regulation of alpha-beta T cell proliferation; regulation of cyclin-dependent protein kinase activity; DNA replication; response to DNA damage stimulus; telomere maintenance; response to X-ray
Research Articles on BLM	**1.** Data suggest that BLM suppresses homologous recombination, while full-length BRCA1 promotes this process.
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