BSN siRNA – Protein Bassoon (Human)

PRODUCT OVERVIEW

Product Name	BSN, siRNA
Full Product Name	BSN siRNA (Human)
Product Gene Name	BSN sirna
Product Synonym Names	KIAA0434; ZNF231; Protein bassoon; Zinc finger protein 231
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	BSN 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	416,469 Da
OMIM	604020
3D Structure	ModBase 3D Structure for Q9UPA5
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 BSN 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 BSN sirna	RNA Interference (RNAi)
Related Product Information for BSN sirna	MBS8234785 is an siRNA targeting BSN. Also known as BSN siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit BSN expression using RNA interference
Other Notes	Small volumes of BSN 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 BSN. It may not necessarily be applicable to this product.

NCBI GI #	91208420
NCBI GeneID	8927
NCBI Accession #	NP_003449.2
UniProt Primary Accession #	Q9UPA5
UniProt Secondary Accession #	O43161; Q7LGH3
UniProt Related Accession #	Q9UPA5
GenBank Nucleotide #	NM_003458.3
NCBI Official Full Name	protein bassoon
NCBI Official Synonym Full Names	bassoon presynaptic cytomatrix protein
NCBI Official Symbol	BSN
NCBI Official Synonym Symbols	ZNF231
UniProt Protein Name	Protein bassoon
UniProt Synonym Protein Names	Zinc finger protein 231
Protein Family	Extracellular ribonuclease
UniProt Gene Name	BSN
UniProt Synonym Gene Names	KIAA0434; ZNF231
UniProt Entry Name	BSN_HUMAN
NCBI Protein Information	protein bassoon
NCBI Summary for BSN	Neurotransmitters are released from a specific site in the axon terminal called the active zone, which is composed of synaptic vesicles and a meshwork of cytoskeleton underlying the plasma membrane. The protein encoded by this gene is thought to be a scaffolding protein involved in organizing the presynaptic cytoskeleton. The gene is expressed primarily in neurons in the brain. A similar gene product in rodents is concentrated in the active zone of axon terminals and tightly associated with cytoskeletal structures, and is essential for regulating neurotransmitter release from a subset of synapses. [provided by RefSeq, Jul 2008]
UniProt Comments for BSN	BSN: involved in the organization of the cytomatrix at the nerve terminals active zone (CAZ) which regulates neurotransmitter release. Essential in regulated neurotransmitter release from a subset of brain glutamatergic synapses. Involved in the formation of the retinal photoreceptor ribbon synapses. Interacts with CAST1, RIMS1 and UNC13A. Part of a complex consisting of ERC2, RIMS1 and BSN. Localized to the active zone of presynaptic density. Mice lacking functional BSN showed a reduced excitability attributed to inactivation of a fraction of brain glutamatergic synapses. At these synapses, vesicles are clustered and docked in normal numbers, but are unable to fuse. In retina, mutants lacking functional BSN showed normal retinal anatomy, but synapses lacked anchoring of the photoreceptor ribbon to the presynaptic active zone resulting in impaired photoreceptor synaptic transmission. Two alternatively spliced isoforms have been reported. Protein type: Cytoskeletal Chromosomal Location of Human Ortholog: 3p21.31 Cellular Component: axon; postsynaptic density; dendrite; presynaptic active zone; excitatory synapse; cell junction; nucleus Molecular Function: metal ion binding Biological Process: synaptic transmission
Research Articles on BSN	**1.** D-amino acid oxidase activity is inhibited by an interaction with bassoon protein at the presynaptic active zone.

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