GSN siRNA – Gelsolin Isoform a (Human)

PRODUCT OVERVIEW

Product Name	GSN, siRNA
Full Product Name	GSN siRNA (Human)
Product Gene Name	GSN sirna
Product Synonym Names	Gelsolin; AGEL; Actin-depolymerizing factor; ADF; Brevin
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	GSN 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	81,485 Da
OMIM	105120
3D Structure	ModBase 3D Structure for P06396
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 GSN 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 GSN sirna	RNA Interference (RNAi)
Related Product Information for GSN sirna	MBS8231882 is an siRNA targeting GSN. Also known as GSN siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit GSN expression using RNA interference
Other Notes	Small volumes of GSN 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 GSN. It may not necessarily be applicable to this product.

NCBI GI #	4504165
NCBI GeneID	2934
NCBI Accession #	NP_000168.1
UniProt Primary Accession #	P06396
UniProt Secondary Accession #	Q5T0I2; Q8WVV7; A2A418; A8MUD1; A8MYN7; B7Z373; B7Z5V1; F5H1A8
UniProt Related Accession #	P06396
GenBank Nucleotide #	NM_000177.4
NCBI Official Full Name	gelsolin isoform a
NCBI Official Synonym Full Names	gelsolin
NCBI Official Symbol	GSN
NCBI Official Synonym Symbols	ADF; AGEL
UniProt Protein Name	Gelsolin
UniProt Synonym Protein Names	AGEL; Actin-depolymerizing factor; ADF; Brevin
Protein Family	Putative uncharacterized protein
UniProt Gene Name	GSN
UniProt Synonym Gene Names	ADF
UniProt Entry Name	GELS_HUMAN
NCBI Protein Information	gelsolin
NCBI Summary for GSN	The protein encoded by this gene binds to the "plus" ends of actin monomers and filaments to prevent monomer exchange. The encoded calcium-regulated protein functions in both assembly and disassembly of actin filaments. Defects in this gene are a cause of familial amyloidosis Finnish type (FAF). Multiple transcript variants encoding several different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]
UniProt Comments for GSN	Gelsolin: a calcium-regulated, actin-modulating protein that binds to the plus (or barbed) ends of actin monomers or filaments, preventing monomer exchange (end-blocking or capping). It can promote the assembly of monomers into filaments (nucleation) as well as sever filaments already formed. Its expression is significantly decreased in many tumors and transformed cell lines. Gelsolin and other proteins including E-cadherin, BRCA, p21WAF, HoxA5, and retinoic acid receptor II are regulated by epigenetic changes in breast cancers. Gelsolin helps mediate the ability of HDAC inhibitors to protect neurons from oxygen/glucose deprivation. Two human isoforms are produced by alternative initiation. Protein type: Nuclear receptor co-regulator; Actin-binding; Motility/polarity/chemotaxis; Secreted, signal peptide; Secreted Chromosomal Location of Human Ortholog: 9q33 Cellular Component: ruffle; protein complex; focal adhesion; lamellipodium; perinuclear region of cytoplasm; extracellular region; cytosol; actin cytoskeleton Molecular Function: protein binding; calcium ion binding; actin binding Biological Process: regulation of cell adhesion; actin filament severing; phosphoinositide-mediated signaling; apoptosis; actin nucleation; vesicle-mediated transport; response to ethanol; actin filament polymerization; tissue regeneration; response to folic acid; barbed-end actin filament capping; oligodendrocyte development; aging; cell structure disassembly during apoptosis Disease: Amyloidosis, Finnish Type
Research Articles on GSN	**1.** Group B Streptococcus-beta-haemolysin is solely responsible for gelsolin increase causing, through membrane permeability defects, calcium influx and calpain activation.

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