AFG3L2 siRNA – AFG3-Like Protein 2 (Mouse)

PRODUCT OVERVIEW

Product Name	AFG3L2, siRNA
Full Product Name	AFG3L2 siRNA (Mouse)
Product Gene Name	AFG3L2 sirna
Product Synonym Names	AFG3-like protein 2
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	AFG3L2 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	89,519 Da
3D Structure	ModBase 3D Structure for Q8JZQ2
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 AFG3L2 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 AFG3L2 sirna	RNA Interference (RNAi)
Related Product Information for AFG3L2 sirna	MBS8221635 is an siRNA targeting AFG3L2. Also known as AFG3L2 siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit AFG3L2 expression using RNA interference
Other Notes	Small volumes of AFG3L2 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 AFG3L2. It may not necessarily be applicable to this product.

NCBI GI #	110625761

NCBI GeneID	69597
NCBI Accession #	NP_081406.1
UniProt Primary Accession #	Q8JZQ2
UniProt Related Accession #	Q8JZQ2
GenBank Nucleotide #	NM_027130.1
NCBI Official Full Name	AFG3-like protein 2
NCBI Official Synonym Full Names	AFG3-like AAA ATPase 2
NCBI Official Symbol	Afg3l2
NCBI Official Synonym Symbols	par; Emv66; AW260507; 2310036I02Rik
UniProt Protein Name	AFG3-like protein 2
Protein Family	AFG3-like protein
UniProt Gene Name	Afg3l2
UniProt Entry Name	AFG32_MOUSE
NCBI Protein Information	AFG3-like protein 2
UniProt Comments for AFG3L2	AFG3L2: ATP-dependent protease which is essential for axonal development. Defects in AFG3L2 are the cause of spinocerebellar ataxia type 28 (SCA28). It is a clinically and genetically heterogeneous group of cerebellar disorders. Patients show progressive incoordination of gait and often poor coordination of hands, speech and eye movements, due to degeneration of the cerebellum with variable involvement of the brainstem and spinal cord. SCA28 is an autosomal dominant cerebellar ataxia (ADCA) with a slow progressive course and no evidence of sensory involvement or cognitive impairment. Defects in AFG3L2 are the cause of spastic ataxia autosomal recessive type 5 (SPAX5). A neurodegenerative disorder characterized by early onset spasticity, peripheral neuropathy, ptosis, oculomotor apraxia, dystonia, cerebellar atrophy, and progressive myoclonic epilepsy. Protein type: Membrane protein, multi-pass; Mitochondrial; Cell development/differentiation; EC 3.4.24.-; Chaperone; Membrane protein, integral; Protease Cellular Component: membrane; mitochondrion; mitochondrial inner membrane; integral to membrane Molecular Function: peptidase activity; zinc ion binding; metallopeptidase activity; hydrolase activity; metal ion binding; metalloendopeptidase activity; nucleotide binding; ATP binding Biological Process: myelination; mitochondrion organization and biogenesis; axonogenesis; cristae formation; mitochondrial fusion; righting reflex; death; regulation of multicellular organism growth; nerve development; proteolysis; muscle fiber development; neuromuscular junction development
Research Articles on AFG3L2	**1.** Reactive oxygen species signaling leads to cytoskeletal modifications that impair mitochondrial transport in neurons lacking AFGL.
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