AAAS siRNA – Aladin Isoform 2 (Human)

PRODUCT OVERVIEW

Product Name	AAAS, siRNA
Full Product Name	AAAS siRNA (Human)
Product Gene Name	AAAS sirna
Product Synonym Names	ADRACALA; Aladin; Adracalin
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	AAAS 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	55,814 Da
OMIM	231550
3D Structure	ModBase 3D Structure for Q9NRG9
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 AAAS 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 AAAS sirna	RNA Interference (RNAi)
Related Product Information for AAAS sirna	MBS8218696 is an siRNA targeting AAAS. Also known as AAAS siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit AAAS expression using RNA interference
Other Notes	Small volumes of AAAS 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 AAAS. It may not necessarily be applicable to this product.

NCBI GI #	291045307
NCBI GeneID	8086
NCBI Accession #	NP_001166937.1
UniProt Primary Accession #	Q9NRG9
UniProt Secondary Accession #	Q5JB47; Q9NWI6; Q9UG19
UniProt Related Accession #	Q9NRG9
GenBank Nucleotide #	NM_001173466.1
NCBI Official Full Name	aladin isoform 2
NCBI Official Synonym Full Names	achalasia, adrenocortical insufficiency, alacrimia
NCBI Official Symbol	AAAS
NCBI Official Synonym Symbols	AAA; AAASb; GL003; ALADIN; ADRACALA; ADRACALIN
UniProt Protein Name	Aladin
UniProt Synonym Protein Names	Adracalin
Protein Family	Aladin
UniProt Gene Name	AAAS
UniProt Synonym Gene Names	ADRACALA
UniProt Entry Name	AAAS_HUMAN
NCBI Protein Information	aladin
NCBI Summary for AAAS	The protein encoded by this gene is a member of the WD-repeat family of regulatory proteins and may be involved in normal development of the peripheral and central nervous system. The encoded protein is part of the nuclear pore complex and is anchored there by NDC1. Defects in this gene are a cause of achalasia-addisonianism-alacrima syndrome (AAAS), also called triple-A syndrome or Allgrove syndrome. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Mar 2010]
UniProt Comments for AAAS	AAAS: Plays a role in the normal development of the peripheral and central nervous system. Defects in AAAS are the cause of achalasia-addisonianism- alacrima syndrome (AAAS); also known as triple-A syndrome or Allgrove syndrome. AAAS is an autosomal recessive disorder characterized by adreno-corticotropic hormone (ACTH)-resistant adrenal failure, achalasia of the esophageal cardia and alacrima. The syndrome is associated with variable and progressive neurological impairment involving the central, peripheral, and autonomic nervous system. Other features such as palmoplantar hyperkeratosis, short stature, facial dysmorphy and osteoporosis may also be present. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, integral; Nuclear envelope Chromosomal Location of Human Ortholog: 12q13 Cellular Component: nucleoplasm; centrosome; nuclear membrane; membrane; cytoplasm; nuclear envelope; nuclear pore; nucleus Biological Process: mRNA transport; viral reproduction; cytokine and chemokine mediated signaling pathway; mitotic nuclear envelope disassembly; nucleocytoplasmic transport; pathogenesis; viral infectious cycle; learning; glucose transport; protein transport; fertilization; regulation of nucleocytoplasmic transport; hexose transport; carbohydrate metabolic process; viral transcription; gene expression; mitotic cell cycle; transmembrane transport Disease: Achalasia-addisonianism-alacrima Syndrome
Research Articles on AAAS	**1.** Data suggest ALADIN is involved in resistance to oxidative stress in adrenocortical cells/neurons; ALADIN knockdown down-regulates StAR (steroidogenic acute regulatory protein) and P45011beta (cytochrome P450 family 11 subfamily B polypeptide 1).

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