SLC17A5 siRNA – Sialin Isoform B (Mouse)

PRODUCT OVERVIEW

Product Name	SLC17A5, siRNA
Full Product Name	SLC17A5 siRNA (Mouse)
Product Gene Name	SLC17A5 sirna
Product Synonym Names	Sialin; H(+)/nitrate cotransporter; H(+)/sialic acid cotransporter; AST; Solute carrier family 17 member 5; Vesicular H(+)/Aspartate-glutamate cotransporter
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	SLC17A5 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	25,879 Da
3D Structure	ModBase 3D Structure for Q8BN82
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 SLC17A5 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 SLC17A5 sirna	RNA Interference (RNAi)
Related Product Information for SLC17A5 sirna	MBS827942 is an siRNA targeting SLC17A5. Also known as SLC17A5 siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit SLC17A5 expression using RNA interference
Other Notes	Small volumes of SLC17A5 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 SLC17A5. It may not necessarily be applicable to this product.

NCBI GI #	451172071
NCBI GeneID	235504
NCBI Accession #	NP_001263381.1
UniProt Primary Accession #	Q8BN82
UniProt Secondary Accession #	Q3TE25
UniProt Related Accession #	Q8BN82
GenBank Nucleotide #	NM_001276452.1
NCBI Official Full Name	sialin isoform b
NCBI Official Synonym Full Names	solute carrier family 17 (anion/sugar transporter), member 5
NCBI Official Symbol	Slc17a5
NCBI Official Synonym Symbols	SD; AST; NSD; SLD; ISSD; SIASD; SIALIN; 4732491M05; 4631416G20Rik
UniProt Protein Name	Sialin
UniProt Synonym Protein Names	H(+)/nitrate cotransporter; H(+)/sialic acid cotransporter; AST; Solute carrier family 17 member 5; Vesicular H(+)/Aspartate-glutamate cotransporter
Protein Family	Sialin
UniProt Gene Name	Slc17a5
UniProt Synonym Gene Names	AST
UniProt Entry Name	S17A5_MOUSE
NCBI Protein Information	sialin
UniProt Comments for SLC17A5	SLC17A5: Primary solute translocator for anionic substances; particularly it is a free sialic acid transporter in the lysosomes (Probable). Defects in SLC17A5 are the cause of Salla disease (SD); also known as Finnish type sialuria. SD is a sialic acid storage disease (SASD). SASDs are autosomal recessive neurodegenerative disorders characterized by hypotonia, cerebellar ataxia and mental retardation. They are caused by a defect in the metabolism of sialic acid which results in increased urinary excretion of unconjugated sialic acid, specifically N-acetylneuraminic acid. Enlarged lysosomes are seen on electron microscopic studies. Clinical symptoms of SD present usually at age less than 1 year and progression is slow. Defects in SLC17A5 are the cause of infantile sialic acid storage disorder (ISSD); also known as N- acetylneuraminic acid storage disease (NSD). ISSD is a severe form of sialic acid storage disease. Affected newborns exhibit visceromegaly, coarse features and failure to thrive immediately after birth. These patients have a shortened life span, usually less than 2 years. Infantile sialic acid storage disorder is associated with non-immune hydrops fetalis, a generalized edema of the fetus with fluid accumulation in the body cavities due to non-immune causes. Non-immune hydrops fetalis is not a diagnosis in itself but a symptom, a feature of many genetic disorders, and the end- stage of a wide variety of disorders. Belongs to the major facilitator superfamily. Sodium/anion cotransporter family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, multi-pass; Transporter, SLC family; Transporter; Vesicle; Membrane protein, integral Cellular Component: membrane; lysosomal membrane; lysosome; cytoplasmic membrane-bound vesicle; cytoplasm; integral to membrane; plasma membrane; synapse; cytoplasmic vesicle; cell junction Molecular Function: symporter activity; sialic acid transmembrane transporter activity Biological Process: sialic acid transport; amino acid transport; transport; transmembrane transport
Research Articles on SLC17A5	**1.** The uptake of N-acetylaspartylglutamate into synaptic vesicles depends on sialic acid transporter sialin, SLC17A5.

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