ABCC9 siRNA – ATP-Binding Cassette Sub-Family C Member 9 Isoform D (Mouse)

PRODUCT OVERVIEW

Product Name	ABCC9, siRNA
Full Product Name	ABCC9 siRNA (Mouse)
Product Gene Name	ABCC9 sirna
Product Synonym Names	SUR2; ATP-binding cassette sub-family C member 9; Sulfonylurea receptor 2
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	ABCC9 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	170,091 Da
3D Structure	ModBase 3D Structure for P70170
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 ABCC9 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 ABCC9 sirna	RNA Interference (RNAi)
Related Product Information for ABCC9 sirna	MBS8229986 is an siRNA targeting ABCC9. Also known as ABCC9 siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit ABCC9 expression using RNA interference
Other Notes	Small volumes of ABCC9 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 ABCC9. It may not necessarily be applicable to this product.

NCBI GI #	113722108

NCBI GeneID	20928
NCBI Accession #	NP_001038185.1
UniProt Primary Accession #	P70170
UniProt Secondary Accession #	O08902; O08920; P70171
UniProt Related Accession #	P70170
GenBank Nucleotide #	NM_001044720.1
NCBI Official Full Name	ATP-binding cassette sub-family C member 9 isoform d
NCBI Official Synonym Full Names	ATP-binding cassette, sub-family C (CFTR/MRP), member 9
NCBI Official Symbol	Abcc9
NCBI Official Synonym Symbols	Sur2; SUR2A; SUR2B; AI414027; AI449286
UniProt Protein Name	ATP-binding cassette sub-family C member 9
UniProt Synonym Protein Names	Sulfonylurea receptor 2
Protein Family	ABC transporter C family
UniProt Gene Name	Abcc9
UniProt Synonym Gene Names	Sur2
UniProt Entry Name	ABCC9_MOUSE
NCBI Protein Information	ATP-binding cassette sub-family C member 9
NCBI Summary for ABCC9	The membrane-associated protein encoded by this gene is a member of the superfamily of ATP-binding cassette (ABC) transporters. ABC proteins transport various molecules across extra- and intra-cellular membranes. ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the MRP subfamily which is involved in multi-drug resistance. The human protein is thought to form ATP-sensitive potassium channels in cardiac, skeletal, and vascular and non-vascular smooth muscle. Protein structure suggests a role as the drug-binding channel-modulating subunit of the extrapancreatic ATP-sensitive potassium channels. Alternative splicing of this gene results in multiple transcript variants. [provided by RefSeq, Jul 2015]

UniProt Comments for ABCC9	ABCC9: Subunit of ATP-sensitive potassium channels (KATP). Can form cardiac and smooth muscle-type KATP channels with KCNJ11. KCNJ11 forms the channel pore while ABCC9 is required for activation and regulation. Defects in ABCC9 are the cause of cardiomyopathy dilated type 1O (CMD1O); also known as dilated cardiomyopathy with ventricular tachycardia. Dilated cardiomyopathy is a disorder characterized by ventricular dilation and impaired systolic function, resulting in congestive heart failure and arrhythmia. Patients are at risk of premature death. Defects in ABCC9 are the cause of familial atrial fibrillation type 12 (ATFB12). ATFB12 is a familial form of atrial fibrillation, a common sustained cardiac rhythm disturbance. Atrial fibrillation is characterized by disorganized atrial electrical activity and ineffective atrial contraction promoting blood stasis in the atria and reduces ventricular filling. It can result in palpitations, syncope, thromboembolic stroke, and congestive heart failure. Defects in ABCC9 are the cause of hypertrichotic osteochondrodysplasia (HTOCD). A rare disorder characterized by congenital hypertrichosis, neonatal macrosomia, a distinct osteochondrodysplasia, and cardiomegaly. The hypertrichosis leads to thick scalp hair, which extends onto the forehead, and a general increase in body hair. In addition, macrocephaly and coarse facial features, including a broad nasal bridge, epicanthal folds, a wide mouth, and full lips, can be suggestive of a storage disorder. About half of affected individuals are macrosomic and edematous at birth, whereas in childhood they usually have a muscular appearance with little subcutaneous fat. Thickened calvarium, narrow thorax, wide ribs, flattened or ovoid vertebral bodies, coxa valga, osteopenia, enlarged medullary canals, and metaphyseal widening of long bones have been reported. Cardiac manifestations such as patent ductus arteriosus, ventricular hypertrophy, pulmonary hypertension, and pericardial effusions are present in approximately 80% of cases. Motor development is usually delayed due to hypotonia. Most patients have a mild speech delay, and a small percentage have learning difficulties or intellectual disability. Belongs to the ABC transporter superfamily. ABCC family. Conjugate transporter (TC 3.A.1.208) subfamily. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Channel, potassium; Transporter; Transporter, ABC family; Membrane protein, multi-pass; Membrane protein, integral Cellular Component: voltage-gated potassium channel complex; sarcomere; mitochondrion; membrane; T-tubule; integral to membrane; plasma membrane; ATP-sensitive potassium channel complex; sarcolemma Molecular Function: identical protein binding; potassium channel regulator activity; syntaxin binding; potassium channel activity; sulfonylurea receptor activity; ATPase activity, coupled to transmembrane movement of substances; ATPase activity; nucleotide binding; drug binding; ATP binding Biological Process: potassium ion import; transport; signal transduction; transmembrane transport; defense response to virus; potassium ion transport
Research Articles on ABCC9	**1.** Sulfhydration of SUR2B subunit modifies tyrosine nitration of Kir6.1 subunit within the KATP channel complex.
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