KCNH2 siRNA – Potassium Voltage-Gated Channel Subfamily H Member 2 Isoform 2 (Mouse)

PRODUCT OVERVIEW

Product Name	KCNH2, siRNA
Full Product Name	KCNH2 siRNA (Mouse)
Product Gene Name	KCNH2 sirna
Product Synonym Names	ERG; MERG1; Potassium voltage-gated channel subfamily H member 2; Ether-a-go-go-related gene potassium channel 1; ERG-1; Eag-related protein 1; Ether-a-go-go-related protein 1; MERG; Voltage-gated potassium channel subunit Kv11.1
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	KCNH2 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	90,129 Da
3D Structure	ModBase 3D Structure for O35219
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 KCNH2 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 KCNH2 sirna	RNA Interference (RNAi)
Related Product Information for KCNH2 sirna	MBS8205318 is an siRNA targeting KCNH2. Also known as KCNH2 siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit KCNH2 expression using RNA interference
Other Notes	Small volumes of KCNH2 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 KCNH2. It may not necessarily be applicable to this product.

NCBI GI #	659667809
NCBI GeneID	16511
NCBI Accession #	NP_001281091.1
UniProt Primary Accession #	O35219
UniProt Secondary Accession #	O35220; O35221; O35989
UniProt Related Accession #	O35219
GenBank Nucleotide #	NM_001294162.1
NCBI Official Full Name	potassium voltage-gated channel subfamily H member 2 isoform 2
NCBI Official Synonym Full Names	potassium voltage-gated channel, subfamily H (eag-related), member 2
NCBI Official Symbol	Kcnh2
NCBI Official Synonym Symbols	LQT; ERG1; Lqt2; M-erg; Merg1; merg1a; merg1b; AI326795
UniProt Protein Name	Potassium voltage-gated channel subfamily H member 2
UniProt Synonym Protein Names	Ether-a-go-go-related gene potassium channel 1; ERG-1; Eag-related protein 1; Ether-a-go-go-related protein 1; MERG; Voltage-gated potassium channel subunit Kv11.1
Protein Family	Potassium voltage-gated channel subfamily
UniProt Gene Name	Kcnh2
UniProt Synonym Gene Names	Erg; Merg1; ERG-1; Eag-related protein 1; Ether-a-go-go-related protein 1; MERG
UniProt Entry Name	KCNH2_MOUSE
NCBI Protein Information	potassium voltage-gated channel subfamily H member 2
UniProt Comments for KCNH2	Kv11.1: the ether-a-go-go related gene is a pore-forming (alpha) subunit of voltage-gated inwardly rectifying potassium channel is associated with cardiac arrhythmias and rhythmic excitability of the pituitary. Channel properties are modulated by cAMP and subunit assembly. Mediates the rapidly activating component of the delayed rectifying potassium current in heart (IKr). The potassium channel is probably composed of a homo- or heterotetrameric complex of pore-forming alpha subunits that can associate with modulating beta subunits. Heteromultimer with Kv11.2 and Kv11.3. Interacts with ALG10B. Heteromultimer with KCNE1 and KCNE2. Defects in Kv11.1 are the cause of long QT syndrome type 2 (LQT2), a heart disorder characterized by a prolonged QT interval on the ECG and polymorphic ventricular arrhythmias. They cause syncope and sudden death in response to exercise or emotional stress. Deafness is often associated with LQT2. Defects in Kv11.1 are the cause of short QT syndrome type 1 (SQT1), a heart disorder characterized by idiopathic persistently and uniformly short QT interval on ECG in the absence of structural heart disease in affected individuals. They cause syncope and sudden death. Four isoforms of the human protein are produced by alternative splicing. Isoform 3 has no channel activity by itself, but modulates channel characteristics when associated with isoform 1. Protein type: Membrane protein, integral; Motility/polarity/chemotaxis; Channel, potassium; Membrane protein, multi-pass Cellular Component: voltage-gated potassium channel complex; cell surface; membrane; integral to plasma membrane; cytoplasm; plasma membrane; integral to membrane; nuclear envelope Molecular Function: identical protein binding; voltage-gated potassium channel activity; signal transducer activity; protein homodimerization activity; potassium channel activity; delayed rectifier potassium channel activity; ubiquitin protein ligase binding; ion channel activity; voltage-gated ion channel activity; inward rectifier potassium channel activity; two-component sensor activity Biological Process: regulation of membrane potential; transport; protein heterooligomerization; two-component signal transduction system (phosphorelay); ion transport; signal transduction; transmembrane transport; potassium ion homeostasis; potassium ion transport; cardiac muscle contraction

Research Articles on KCNH2	**1.** Enhancement of HERG protein expression through Hsp90 inhibition of CHIP binding might be a novel therapeutic strategy for long QT syndrome 2 caused by trafficking abnormalities of HERG proteins.
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
Disclaimer	While every efforts were made to ensure the accuracy of the information provided in this datasheet, MyBioSource will not be liable for any omissions or errors contained herein. MyBioSource reserves the right to make changes to this datasheet at any time without prior notice. It is the responsibility of the customer to report product performance issues to MyBioSource within 30 days of receipt of the product. Please visit our Terms & Conditions page for more information.
Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

MyBioSource | Tel: +1.858.633.0165 | Fax: +1.858.633.0166 | mybiosource.com/contact-us
Online datasheet: https://www.mybiosource.com/mouse-sirna/kcnh2/8205318