TRPM5 siRNA – Transient Receptor Potential Cation Channel Subfamily M Member 5 (Human)

PRODUCT OVERVIEW

Product Name	TRPM5, siRNA
Full Product Name	TRPM5 siRNA (Human)
Product Gene Name	TRPM5 sirna
Product Synonym Names	LTRPC5; MTR1; Transient receptor potential cation channel subfamily M member 5; Long transient receptor potential channel 5; LTrpC-5; LTrpC5; MLSN1- and TRP-related gene 1 protein
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	TRPM5 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	97,738 Da
OMIM	604600
3D Structure	ModBase 3D Structure for Q9NZQ8
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 TRPM5 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 TRPM5 sirna	RNA Interference (RNAi)
Related Product Information for TRPM5 sirna	MBS8240636 is an siRNA targeting TRPM5. Also known as TRPM5 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit TRPM5 expression using RNA interference
Other Notes	Small volumes of TRPM5 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 TRPM5. It may not necessarily be applicable to this product.

NCBI GI #	11225266
NCBI GeneID	29850
NCBI Accession #	NP_055370.1
UniProt Primary Accession #	Q9NZQ8
UniProt Secondary Accession #	Q52LU2; Q9NY34; A6NHS0
UniProt Related Accession #	Q9NZQ8
GenBank Nucleotide #	NM_014555.3
NCBI Official Full Name	transient receptor potential cation channel subfamily M member 5
NCBI Official Synonym Full Names	transient receptor potential cation channel, subfamily M, member 5
NCBI Official Symbol	TRPM5
NCBI Official Synonym Symbols	MTR1; LTRPC5
UniProt Protein Name	Transient receptor potential cation channel subfamily M member 5
UniProt Synonym Protein Names	Long transient receptor potential channel 5; LTrpC-5; LTrpC5; MLSN1- and TRP-related gene 1 protein
Protein Family	Transient receptor potential cation channel subfamily
UniProt Gene Name	TRPM5
UniProt Synonym Gene Names	LTrpC-5; LTrpC5
UniProt Entry Name	TRPM5_HUMAN
NCBI Protein Information	transient receptor potential cation channel subfamily M member 5
NCBI Summary for TRPM5	This gene encodes a member of the transient receptor potential (TRP) protein family, which is a diverse group of proteins with structural features typical of ion channels. This protein plays an important role in taste transduction, and has characteristics of a calcium-activated, non-selective cation channel that carries Na+, K+, and Cs+ ions equally well, but not Ca(2+) ions. It is activated by lower concentrations of intracellular Ca(2+), and inhibited by higher concentrations. It is also a highly temperature-sensitive, heat activated channel showing a steep increase of inward currents at temperatures between 15 and 35 degrees Celsius. This gene is located within the Beckwith-Wiedemann syndrome critical region-1 on chromosome 11p15.5, and has been shown to be imprinted, with exclusive expression from the paternal allele. [provided by RefSeq, Oct 2010]

UniProt Comments for TRPM5	TRPM5: Voltage-modulated Ca(2+)-activated, monovalent cation channel (VCAM) that mediates a transient membrane depolarization and plays a central role in taste transduction. Monovalent- specific, non-selective cation channel that mediates the transport of Na(+), K(+) and Cs(+) ions equally well. Activated directly by increases in intracellular Ca(2+), but is impermeable to it. Gating is voltage-dependent and displays rapid activation and deactivation kinetics upon channel stimulation even during sustained elevations in Ca(2+). Also activated by a fast intracellular Ca(2+) increase in response to inositol 1,4,5- triphosphate-producing receptor agonists. The channel is blocked by extracellular acidification. External acidification has 2 effects, a fast reversible block of the current and a slower irreversible enhancement of current inactivation. Is a highly temperature-sensitive, heat activated channel showing a steep increase of inward currents at temperatures between 15 and 35 degrees Celsius. Heat activation is due to a shift of the voltage- dependent activation curve to negative potentials. Activated by arachidonic acid in vitro. May be involved in perception of bitter, sweet and umami tastes. May also be involved in sensing semiochemicals. Belongs to the transient receptor (TC 1.A.4) family. LTrpC subfamily. TRPM5 sub-subfamily. 3 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, multi-pass; Membrane protein, integral Chromosomal Location of Human Ortholog: 11p15.5 Cellular Component: plasma membrane; integral to membrane Molecular Function: potassium channel activity; ion channel activity; voltage-gated ion channel activity; sodium channel activity; calcium activated cation channel activity Biological Process: sensory perception of taste; transmembrane transport
Research Articles on TRPM5	**1.** TRPM5-mediated Na(+) entry to promote Ca(2+) uptake via an NCX to trigger MUC5AC secretion
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