ITPR3 siRNA – Inositol 1,4,5-Trisphosphate Receptor Type 3 (Human)

PRODUCT OVERVIEW

Product Name	ITPR3, siRNA
Full Product Name	ITPR3 siRNA (Human)
Product Gene Name	ITPR3 sirna
Product Synonym Names	Inositol 1.4.5-trisphosphate receptor type 3; IP3 receptor isoform 3; IP3R 3; InsP3R3; Type 3 inositol 1.4.5-trisphosphate receptor; Type 3 InsP3 receptor
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	ITPR3 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	304,106 Da
OMIM	147267
3D Structure	ModBase 3D Structure for Q14573
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 ITPR3 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 ITPR3 sirna	RNA Interference (RNAi)
Related Product Information for ITPR3 sirna	MBS8203001 is an siRNA targeting ITPR3. Also known as ITPR3 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit ITPR3 expression using RNA interference
Other Notes	Small volumes of ITPR3 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 ITPR3. It may not necessarily be applicable to this product.

NCBI GI #	153945846
NCBI GeneID	3710
NCBI Accession #	NP_002215.2
UniProt Primary Accession #	Q14573
UniProt Secondary Accession #	Q14649; Q5TAQ2
UniProt Related Accession #	Q14573
GenBank Nucleotide #	NM_002224.3
NCBI Official Full Name	inositol 1,4,5-trisphosphate receptor type 3
NCBI Official Synonym Full Names	inositol 1,4,5-trisphosphate receptor, type 3
NCBI Official Symbol	ITPR3
NCBI Official Synonym Symbols	IP3R; IP3R3
UniProt Protein Name	Inositol 1,4,5-trisphosphate receptor type 3
UniProt Synonym Protein Names	IP3 receptor isoform 3; IP3R 3; InsP3R3; Type 3 inositol 1,4,5-trisphosphate receptor; Type 3 InsP3 receptor
Protein Family	Inositol 1,4,5-trisphosphate receptor
UniProt Gene Name	ITPR3
UniProt Synonym Gene Names	IP3R 3; InsP3R3; Type 3 InsP3 receptor
UniProt Entry Name	ITPR3_HUMAN
NCBI Protein Information	inositol 1,4,5-trisphosphate receptor type 3
NCBI Summary for ITPR3	This gene encodes a receptor for inositol 1,4,5-trisphosphate, a second messenger that mediates the release of intracellular calcium. The receptor contains a calcium channel at the C-terminus and the ligand-binding site at the N-terminus. Knockout studies in mice suggest that type 2 and type 3 inositol 1,4,5-trisphosphate receptors play a key role in exocrine secretion underlying energy metabolism and growth. [provided by RefSeq, Aug 2010]

UniProt Comments for ITPR3	IP3R3: a multi-pass endoplasmic reticulum membrane receptor for inositol 1,4,5-trisphosphate, a second messenger that mediates the release of intracellular calcium. Expressed in intestinal crypt and villus epithelial cells. The receptor contains a calcium channel in its C-terminal extremity. Its large N-terminal cytoplasmic region has the ligand-binding site in the N-terminus and modulatory sites in the middle portion immediately upstream of the channel region. Phosphorylated on tyrosine residues. Phosphorylated by AKT1 on serine and/or threonine residues. Belongs to the InsP3 receptor family. Protein type: Channel, ligand-gated; Membrane protein, multi-pass; Membrane protein, integral; Channel, calcium Chromosomal Location of Human Ortholog: 6p21 Cellular Component: nuclear outer membrane; endoplasmic reticulum membrane; endoplasmic reticulum; integral to plasma membrane; nucleoplasm; membrane; cell soma; apical part of cell; cytoplasm; nucleolus; plasma membrane; myelin sheath; receptor complex; brush border Molecular Function: protein binding; inositol 1,3,4,5 tetrakisphosphate binding; inositol hexakisphosphate binding; intracellular ligand-gated calcium channel activity; phosphoinositide binding; inositol 1,4,5-triphosphate-sensitive calcium-release channel activity Biological Process: epidermal growth factor receptor signaling pathway; platelet activation; sensory perception of umami taste; inositol phosphate-mediated signaling; fibroblast growth factor receptor signaling pathway; sensory perception of sweet taste; nerve growth factor receptor signaling pathway; protein heterooligomerization; signal transduction; memory; G-protein coupled receptor protein signaling pathway; elevation of cytosolic calcium ion concentration; phospholipase C activation; energy reserve metabolic process; innate immune response; sensory perception of bitter taste; vascular endothelial growth factor receptor signaling pathway; response to calcium ion; blood coagulation; regulation of insulin secretion; protein homooligomerization Disease: Diabetes Mellitus, Insulin-dependent
Research Articles on ITPR3	**1.** miR-506 is a regulator of InsP3R3 expression and InsP3R3-mediated Ca2+ signaling and secretion.
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