TRPS1 siRNA – Zinc Finger Transcription Factor Trps1 Isoform 2 (Human)

PRODUCT OVERVIEW

Product Name	TRPS1, siRNA
Full Product Name	TRPS1 siRNA (Human)
Product Gene Name	TRPS1 sirna
Product Synonym Names	Zinc finger transcription factor Trps1; Tricho-rhino-phalangeal syndrome type I protein; Zinc finger protein GC79
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	TRPS1 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	141,981 Da
OMIM	150230
3D Structure	ModBase 3D Structure for Q9UHF7
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 TRPS1 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 TRPS1 sirna	RNA Interference (RNAi)
Related Product Information for TRPS1 sirna	MBS8226183 is an siRNA targeting TRPS1. Also known as TRPS1 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit TRPS1 expression using RNA interference
Other Notes	Small volumes of TRPS1 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 TRPS1. It may not necessarily be applicable to this product.

NCBI GI #	544710995
NCBI GeneID	7227
NCBI Accession #	NP_001269831.1
UniProt Primary Accession #	Q9UHF7
UniProt Secondary Accession #	Q08AU2; Q9NWE1; Q9UHH6; B4E1Z5
UniProt Related Accession #	Q9UHF7
GenBank Nucleotide #	NM_001282902.2
NCBI Official Full Name	zinc finger transcription factor Trps1 isoform 2
NCBI Official Synonym Full Names	trichorhinophalangeal syndrome I
NCBI Official Symbol	TRPS1
NCBI Official Synonym Symbols	GC79; LGCR
UniProt Protein Name	Zinc finger transcription factor Trps1
UniProt Synonym Protein Names	Tricho-rhino-phalangeal syndrome type I protein; Zinc finger protein GC79
Protein Family	Tryptophan--tRNA ligase
UniProt Gene Name	TRPS1
UniProt Entry Name	TRPS1_HUMAN
NCBI Protein Information	zinc finger transcription factor Trps1
NCBI Summary for TRPS1	This gene encodes a transcription factor that represses GATA-regulated genes and binds to a dynein light chain protein. Binding of the encoded protein to the dynein light chain protein affects binding to GATA consensus sequences and suppresses its transcriptional activity. Defects in this gene are a cause of tricho-rhino-phalangeal syndrome (TRPS) types I-III. [provided by RefSeq, Jul 2008]

UniProt Comments for TRPS1	TRPS1: Transcriptional repressor. Binds specifically to GATA sequences and represses expression of GATA-regulated genes at selected sites and stages in vertebrate development. Regulates chondrocyte proliferation and differentiation. Executes multiple functions in proliferating chondrocytes, expanding the region of distal chondrocytes, activating proliferation in columnar cells and supporting the differentiation of columnar into hypertrophic chondrocytes. Defects in TRPS1 are the cause of tricho-rhino-phalangeal syndrome type 1 (TRPS1). TRPS1 is an autosomal dominant disorder characterized by craniofacial and skeletal abnormalities. It is allelic with tricho-rhino-phalangeal type 3. Typical features include sparse scalp hair, a bulbous tip of the nose, protruding ears, a long flat philtrum and a thin upper vermilion border. Skeletal defects include cone-shaped epiphyses at the phalanges, hip malformations and short stature. Defects in TRPS1 are a cause of tricho-rhino-phalangeal syndrome type 2 (TRPS2). A syndrome that combines the clinical features of trichorhinophalangeal syndrome type 1 and multiple exostoses type 1. Affected individuals manifest multiple dysmorphic facial features including large, laterally protruding ears, a bulbous nose, an elongated upper lip, as well as sparse scalp hair, winged scapulae, multiple cartilaginous exostoses, redundant skin, and mental retardation. A chromosomal aberration resulting in the loss of functional copies of TRPS1 and EXT1 has been found in TRPS2 patients. Defects in TRPS1 are the cause of tricho-rhino-phalangeal syndrome type 3 (TRPS3). TRPS3 is an autosomal dominant disorder characterized by craniofacial and skeletal abnormalities. It is allelic with tricho-rhino-phalangeal type 1. In TRPS3 a more severe brachydactyly and growth retardation are observed. 3 isoforms of the human protein are produced by alternative splicing. Protein type: C2H2-type zinc finger protein; Transcription factor Chromosomal Location of Human Ortholog: 8q24.12 Cellular Component: nucleoplasm; nucleus Molecular Function: protein binding; zinc ion binding; sequence-specific DNA binding; transcription factor activity Biological Process: transcription from RNA polymerase II promoter; regulation of histone deacetylation; transmembrane receptor protein serine/threonine kinase signaling pathway; chondrocyte differentiation; NLS-bearing substrate import into nucleus; negative regulation of transcription from RNA polymerase II promoter; regulation of chondrocyte differentiation; skeletal development Disease: Trichorhinophalangeal Syndrome, Type I; Trichorhinophalangeal Syndrome, Type Iii
Research Articles on TRPS1	**1.** our study proposes that TRPS1 acts as a central hub in the control of cell cycle and proliferation during cancer development
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