TSPAN12 siRNA – Tetraspanin-12 (Human)

PRODUCT OVERVIEW

Product Name	TSPAN12, siRNA
Full Product Name	TSPAN12 siRNA (Human)
Product Gene Name	TSPAN12 sirna
Product Synonym Names	NET2; TM4SF12; Tetraspanin-12; Tspan-12; Tetraspan NET-2; Transmembrane 4 superfamily member 12
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	TSPAN12 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	22,511 Da
OMIM	613138
3D Structure	ModBase 3D Structure for O95859
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 TSPAN12 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 TSPAN12 sirna	RNA Interference (RNAi)
Related Product Information for TSPAN12 sirna	MBS8204158 is an siRNA targeting TSPAN12. Also known as TSPAN12 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit TSPAN12 expression using RNA interference
Other Notes	Small volumes of TSPAN12 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 TSPAN12. It may not necessarily be applicable to this product.

NCBI GI #	6912528
NCBI GeneID	23554
NCBI Accession #	NP_036470.1
UniProt Primary Accession #	O95859
UniProt Secondary Accession #	Q549U9; Q8N5Y0; A4D0V8; B4DRG6
UniProt Related Accession #	O95859
GenBank Nucleotide #	NM_012338.3
NCBI Official Full Name	tetraspanin-12
NCBI Official Synonym Full Names	tetraspanin 12
NCBI Official Symbol	TSPAN12
NCBI Official Synonym Symbols	EVR5; NET2; NET-2; TM4SF12
UniProt Protein Name	Tetraspanin-12
UniProt Synonym Protein Names	Tetraspan NET-2; Transmembrane 4 superfamily member 12
UniProt Gene Name	TSPAN12
UniProt Synonym Gene Names	NET2; TM4SF12; Tspan-12
UniProt Entry Name	TSN12_HUMAN
NCBI Protein Information	tetraspanin-12
NCBI Summary for TSPAN12	The protein encoded by this gene is a member of the transmembrane 4 superfamily, also known as the tetraspanin family. Most of these members are cell-surface proteins that are characterized by the presence of four hydrophobic domains. The proteins mediate signal transduction events that play a role in the regulation of cell development, activation, growth and motility. [provided by RefSeq, Jul 2008]
UniProt Comments for TSPAN12	TSPAN12: a multi-pass membrane protein. Member of the transmembrane 4 superfamily, also known as the tetraspanin family. Plays a central role in retinal vascularization by regulating norrin (NDP) signal transduction. Acts in concert with norrin (NDP) to promote FZD4 multimerization and subsequent activation of FZD4, leading to promote accumulation of beta-catenin (CTNNB1) and stimulate LEF/TCF-mediated transcriptional programs. Suprisingly, it only activate the norrin (NDP)-dependent activation of FZD4, while it does not activate the Wnt-dependent activation of FZD4, suggesting the existence of a Wnt-independent signaling that also promote accumulation the beta-catenin (CTNNB1). Acts as a regulator of membrane proteinases such as ADAM10 and MMP14/MT1-MMP. Activates ADAM10-dependent cleavage activity of amyloid precursor protein (APP). Activates MMP14/MT1-MMP-dependent cleavage activity. Defects in TSPAN12 are the cause of vitreoretinopathy exudative type 5 (EVR5). It is a disorder of the retinal vasculature characterized by an abrupt cessation of growth of peripheral capillaries, leading to an avascular peripheral retina. Twp isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, integral; Membrane protein, multi-pass; Receptor, misc. Chromosomal Location of Human Ortholog: 7q31.31 Cellular Component: membrane; integral to plasma membrane; integral to membrane Molecular Function: Wnt receptor activity Biological Process: cell surface receptor linked signal transduction; angiogenesis; regulation of angiogenesis Disease: Exudative Vitreoretinopathy 5
Research Articles on TSPAN12	**1.** Here we describe a case of a female infant affected by cystic fibrosis and by a severe form of exudative vitreoretinopathy. In particular, we have detected the homozygous missense mutation c.668 T > C in TSPAN12.

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