PKP1 siRNA – Plakophilin-1 Isoform 1b (Human)

PRODUCT OVERVIEW

Product Name	PKP1, siRNA
Full Product Name	PKP1 siRNA (Human)
Product Gene Name	PKP1 sirna
Product Synonym Names	Plakophilin-1; Band 6 protein; B6P
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	PKP1 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	80,497 Da
OMIM	601975
3D Structure	ModBase 3D Structure for Q13835
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 PKP1 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 PKP1 sirna	RNA Interference (RNAi)
Related Product Information for PKP1 sirna	MBS828457 is an siRNA targeting PKP1. Also known as PKP1 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit PKP1 expression using RNA interference
Other Notes	Small volumes of PKP1 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 PKP1. It may not necessarily be applicable to this product.

NCBI GI #	53729346
NCBI GeneID	5317
NCBI Accession #	NP_000290.2
UniProt Primary Accession #	Q13835
UniProt Secondary Accession #	O00645; Q14CA0; Q15152
UniProt Related Accession #	Q13835
GenBank Nucleotide #	NM_000299.3
NCBI Official Full Name	plakophilin-1 isoform 1b
NCBI Official Synonym Full Names	plakophilin 1
NCBI Official Symbol	PKP1
NCBI Official Synonym Symbols	B6P
UniProt Protein Name	Plakophilin-1
UniProt Synonym Protein Names	Band 6 protein; B6P
Protein Family	Plakophilin
UniProt Gene Name	PKP1
UniProt Synonym Gene Names	B6P
UniProt Entry Name	PKP1_HUMAN
NCBI Protein Information	plakophilin-1
NCBI Summary for PKP1	This gene encodes a member of the arm-repeat (armadillo) and plakophilin gene families. Plakophilin proteins contain numerous armadillo repeats, localize to cell desmosomes and nuclei, and participate in linking cadherins to intermediate filaments in the cytoskeleton. This protein may be involved in molecular recruitment and stabilization during desmosome formation. Mutations in this gene have been associated with the ectodermal dysplasia/skin fragility syndrome. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2010]
UniProt Comments for PKP1	plakophilin 1: Seems to play a role in junctional plaques. Contributes to epidermal morphogenesis. Defects in PKP1 are the cause of ectodermal dysplasia- skin fragility syndrome (EDSFS); also known as McGrath syndrome. Ectodermal dysplasia defines a heterogeneous group of disorders due to abnormal development of two or more ectodermal structures. EDSFS is characterized by features of both cutaneous fragility and congenital ectodermal dysplasia affecting abnormalities in other epithelia or tissues. Desmosomes in the skin are small and poorly formed with widening of keratinocyte intercellular spaces and perturbed desmosome/keratin intermediate filament interactions. Belongs to the beta-catenin family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Cell adhesion; Motility/polarity/chemotaxis Chromosomal Location of Human Ortholog: 1q32 Cellular Component: nucleoplasm; desmosome; intracellular membrane-bound organelle; plasma membrane; intermediate filament; nucleus Molecular Function: protein binding; signal transducer activity; intermediate filament binding; structural constituent of epidermis; lamin binding Biological Process: cell-cell adhesion; apoptosis; multicellular organismal development; intermediate filament bundle assembly; cell adhesion; signal transduction; cell structure disassembly during apoptosis Disease: Ectodermal Dysplasia/skin Fragility Syndrome

Research Articles on PKP1	**1.** cytoplasmic PKP1/3 are components of mRNA ribonucleoprotein particles and act as posttranscriptional regulators of gene expression.
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