RBP3 siRNA – Retinol-Binding Protein 3 (Human)

PRODUCT OVERVIEW

Product Name	RBP3, siRNA
Full Product Name	RBP3 siRNA (Human)
Product Gene Name	RBP3 sirna
Product Synonym Names	Retinol-binding protein 3; Interphotoreceptor retinoid-binding protein; IRBP; Interstitial retinol-binding protein
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	RBP3 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	135,363 Da
OMIM	180290
3D Structure	ModBase 3D Structure for P10745
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 RBP3 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 RBP3 sirna	RNA Interference (RNAi)
Related Product Information for RBP3 sirna	MBS8229796 is an siRNA targeting RBP3. Also known as RBP3 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit RBP3 expression using RNA interference
Other Notes	Small volumes of RBP3 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 RBP3. It may not necessarily be applicable to this product.

NCBI GI #	4506453
NCBI GeneID	5949
NCBI Accession #	NP_002891.1
UniProt Primary Accession #	P10745
UniProt Secondary Accession #	Q0QD34; Q5VSR0; Q8IXN0
UniProt Related Accession #	P10745
GenBank Nucleotide #	NM_002900.2
NCBI Official Full Name	retinol-binding protein 3
NCBI Official Synonym Full Names	retinol binding protein 3, interstitial
NCBI Official Symbol	RBP3
NCBI Official Synonym Symbols	IRBP; RBPI; RP66; D10S64; D10S65; D10S66
UniProt Protein Name	Retinol-binding protein 3
UniProt Synonym Protein Names	Interphotoreceptor retinoid-binding protein; IRBP; Interstitial retinol-binding protein
Protein Family	Retinol-binding protein
UniProt Gene Name	RBP3
UniProt Synonym Gene Names	IRBP
UniProt Entry Name	RET3_HUMAN
NCBI Protein Information	retinol-binding protein 3
NCBI Summary for RBP3	Interphotoreceptor retinol-binding protein is a large glycoprotein known to bind retinoids and found primarily in the interphotoreceptor matrix of the retina between the retinal pigment epithelium and the photoreceptor cells. It is thought to transport retinoids between the retinal pigment epithelium and the photoreceptors, a critical role in the visual process.The human IRBP gene is approximately 9.5 kbp in length and consists of four exons separated by three introns. The introns are 1.6-1.9 kbp long. The gene is transcribed by photoreceptor and retinoblastoma cells into an approximately 4.3-kilobase mRNA that is translated and processed into a glycosylated protein of 135,000 Da. The amino acid sequence of human IRBP can be divided into four contiguous homology domains with 33-38% identity, suggesting a series of gene duplication events. In the gene, the boundaries of these domains are not defined by exon-intron junctions, as might have been expected. The first three homology domains and part of the fourth are all encoded by the first large exon, which is 3,180 base pairs long. The remainder of the fourth domain is encoded in the last three exons, which are 191, 143, and approximately 740 base pairs long, respectively. [provided by RefSeq, Jul 2008]
UniProt Comments for RBP3	RBP3: IRBP shuttles 11-cis and all trans retinoids between the retinol isomerase in the pigment epithelium and the visual pigments in the photoreceptor cells of the retina. Belongs to the peptidase S41A family. Protein type: Secreted, signal peptide; Secreted Chromosomal Location of Human Ortholog: 10q11.2 Cellular Component: extracellular space; extracellular region; vesicle Molecular Function: retinoid binding; serine-type peptidase activity; retinol binding; retinal binding Biological Process: phototransduction, visible light; visual perception; transport; lipid metabolic process; proteolysis; retinoid metabolic process Disease: Retinitis Pigmentosa 66; Retinitis Pigmentosa
Research Articles on RBP3	**1.** CMPK1 and RBP3 are associated with corneal curvature in Asian populations.

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