LBR siRNA – Lamin-B Receptor (Rat)

PRODUCT OVERVIEW

Product Name	LBR, siRNA
Full Product Name	LBR siRNA (Rat)
Product Gene Name	LBR sirna
Product Synonym Names	Lamin-B receptor; Integral nuclear envelope inner membrane protein; NBP60
Host	Synthetic
Species Reactivity	Rat
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	LBR siRNA (Rat) 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	70,724 Da
3D Structure	ModBase 3D Structure for O08984
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 rat LBR 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 LBR sirna	RNA Interference (RNAi)
Related Product Information for LBR sirna	MBS8202633 is an siRNA targeting LBR. Also known as LBR siRNA (Rat). Reactive in Rat. Host: Synthetic. siRNA to inhibit LBR expression using RNA interference
Other Notes	Small volumes of LBR 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 LBR. It may not necessarily be applicable to this product.

NCBI GI #	19745168
NCBI GeneID	89789

NCBI Accession #	NP_604448.1
UniProt Primary Accession #	O08984
UniProt Related Accession #	O08984
GenBank Nucleotide #	NM_134453.1
NCBI Official Full Name	lamin-B receptor
NCBI Official Synonym Full Names	lamin B receptor
NCBI Official Symbol	Lbr
NCBI Official Synonym Symbols	Nbp60
UniProt Protein Name	Lamin-B receptor
UniProt Synonym Protein Names	Integral nuclear envelope inner membrane protein; NBP60
Protein Family	Lamin-B receptor
UniProt Gene Name	Lbr
UniProt Entry Name	LBR_RAT
NCBI Protein Information	lamin-B receptor
NCBI Summary for LBR	nuclear localization signal (NLS) binding protein [RGD, Feb 2006]
UniProt Comments for LBR	LBR: Anchors the lamina and the heterochromatin to the inner nuclear membrane. Defects in LBR are a cause of Pelger-Huet anomaly (PHA). PHA is an autosomal dominant inherited abnormality of neutrophils, characterized by reduced nuclear segmentation and an apparently looser chromatin structure. Heterozygotes show hypolobulated neutrophil nuclei with coarse chromatin. Presumed homozygous individuals have ovoid neutrophil nuclei, as well as varying degrees of developmental delay, epilepsy, and skeletal abnormalities. Defects in LBR are the cause of hydrops-ectopic calcification-moth-eaten skeletal dysplasia (HEM); also known as Greenberg skeletal dysplasia. HEM is a rare autosomal recessive chondrodystrophy characterized by early in utero lethality and, therefore, considered to be nonviable. Affected fetuses typically present with fetal hydrops, short- limbed dwarfism, and a marked disorganization of chondro-osseous calcification and may present with polydactyly and additional nonskeletal malformations. Defects in LBR may be a cause of Reynolds syndrome (REYNS). It is a syndrome specifically associating limited cutaneous systemic sclerosis and primary biliray cirrhosis. It is characterized by liver disease, telangiectasia, abrupt onset of digital paleness or cyanosis in response to cold exposure or stress (Raynaud phenomenon), and variable features of scleroderma. The liver disease is characterized by pruritis, jaundice, hepatomegaly, increased serum alkaline phosphatase and positive serum mitochondrial autoantibodies, all consistent with primary biliary cirrhosis. Belongs to the ERG4/ERG24 family. Protein type: DNA-binding; Membrane protein, integral; Membrane protein, multi-pass
Research Articles on LBR	**1.** BEMAD was used on a purified nuclear pore complex preparation to map novel sites of O-GlcNAc modification on Lbr.
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