NR1H2 siRNA – Oxysterols Receptor LXR-Beta Isoform 2 (Human)

PRODUCT OVERVIEW

Product Name	NR1H2, siRNA
Full Product Name	NR1H2 siRNA (Human)
Product Gene Name	NR1H2 sirna
Product Synonym Names	LXRB; NER; UNR; Oxysterols receptor LXR-beta; Liver X receptor beta; Nuclear receptor NER; Nuclear receptor subfamily 1 group H member 2; Ubiquitously-expressed nuclear receptor
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	NR1H2 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	39,920 Da
OMIM	600380
3D Structure	ModBase 3D Structure for P55055
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 NR1H2 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 NR1H2 sirna	RNA Interference (RNAi)
Related Product Information for NR1H2 sirna	MBS827311 is an siRNA targeting NR1H2. Also known as NR1H2 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit NR1H2 expression using RNA interference
Other Notes	Small volumes of NR1H2 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 NR1H2. It may not necessarily be applicable to this product.

NCBI GI #	375331888
NCBI GeneID	7376
NCBI Accession #	NP_001243576.1
UniProt Primary Accession #	P55055
UniProt Secondary Accession #	Q12970; Q5I0Y1; A8K490; B4DNM6; E7EWA6
UniProt Related Accession #	P55055
GenBank Nucleotide #	NM_001256647.1
NCBI Official Full Name	oxysterols receptor LXR-beta isoform 2
NCBI Official Synonym Full Names	nuclear receptor subfamily 1, group H, member 2
NCBI Official Symbol	NR1H2
NCBI Official Synonym Symbols	NER; UNR; LXRB; LXR-b; NER-I; RIP15
UniProt Protein Name	Oxysterols receptor LXR-beta
UniProt Synonym Protein Names	Liver X receptor beta; Nuclear receptor NER; Nuclear receptor subfamily 1 group H member 2; Ubiquitously-expressed nuclear receptor
Protein Family	Oxysterols receptor
UniProt Gene Name	NR1H2
UniProt Synonym Gene Names	LXRB; NER; UNR
UniProt Entry Name	NR1H2_HUMAN
NCBI Protein Information	oxysterols receptor LXR-beta
NCBI Summary for NR1H2	The liver X receptors, LXRA (NR1H3; MIM 602423) and LXRB, form a subfamily of the nuclear receptor superfamily and are key regulators of macrophage function, controlling transcriptional programs involved in lipid homeostasis and inflammation. The inducible LXRA is highly expressed in liver, adrenal gland, intestine, adipose tissue, macrophages, lung, and kidney, whereas LXRB is ubiquitously expressed. Ligand-activated LXRs form obligate heterodimers with retinoid X receptors (RXRs; see MIM 180245) and regulate expression of target genes containing LXR response elements (summary by Korf et al., 2009 [PubMed 19436111]).[supplied by OMIM, Jan 2010]
UniProt Comments for NR1H2	LXR-beta: Orphan receptor. Binds preferentially to double-stranded oligonucleotide direct repeats having the consensus half-site sequence 5'-AGGTCA-3' and 4-nt spacing (DR-4). Regulates cholesterol uptake through MYLIP-dependent ubiquitination of LDLR, VLDLR and LRP8. Forms a heterodimer with RXR. Ubiquitous. Belongs to the nuclear hormone receptor family. NR1 subfamily. Protein type: Nuclear receptor Chromosomal Location of Human Ortholog: 19q13.3 Cellular Component: nucleoplasm; cytoplasm; nucleus Molecular Function: retinoid X receptor binding; ligand-dependent nuclear receptor activity; protein binding; DNA binding; zinc ion binding; steroid hormone receptor activity; apolipoprotein A-I receptor binding; ATPase binding Biological Process: negative regulation of proteolysis; retinoic acid receptor signaling pathway; negative regulation of lipid transport; positive regulation of fatty acid biosynthetic process; transcription initiation from RNA polymerase II promoter; positive regulation of cellular protein metabolic process; cellular lipid metabolic process; negative regulation of pinocytosis; negative regulation of transcription from RNA polymerase II promoter; positive regulation of cholesterol transport; cholesterol homeostasis; positive regulation of lipoprotein lipase activity; gene expression; steroid hormone mediated signaling; positive regulation of transcription from RNA polymerase II promoter; negative regulation of transcription, DNA-dependent
Research Articles on NR1H2	**1.** This study provides the first evidence to show LXR activation reduces cadmium-induced apoptotic cell death of human renal proximal tubular cells by inhibition of reactive oxygen species production and JNK activation.

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