TLR2 siRNA – Toll-Like Receptor 2 (Mouse)

PRODUCT OVERVIEW

Product Name	TLR2, siRNA
Full Product Name	TLR2 siRNA (Mouse)
Product Gene Name	TLR2 sirna
Product Synonym Names	Toll-like receptor 2; CD antigen CD282
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	TLR2 siRNA (Mouse) 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	89,449 Da
3D Structure	ModBase 3D Structure for Q9QUN7
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 mouse TLR2 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 TLR2 sirna	RNA Interference (RNAi)
Related Product Information for TLR2 sirna	MBS8202396 is an siRNA targeting TLR2. Also known as TLR2 siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit TLR2 expression using RNA interference
Other Notes	Small volumes of TLR2 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 TLR2. It may not necessarily be applicable to this product.

NCBI GI #	158749638

NCBI GeneID	24088
NCBI Accession #	NP_036035.3
UniProt Primary Accession #	Q9QUN7
UniProt Secondary Accession #	Q3U400; Q9DBC4
UniProt Related Accession #	Q9QUN7
GenBank Nucleotide #	NM_011905.3
NCBI Official Full Name	toll-like receptor 2
NCBI Official Synonym Full Names	toll-like receptor 2
NCBI Official Symbol	Tlr2
NCBI Official Synonym Symbols	Ly105
UniProt Protein Name	Toll-like receptor 2
UniProt Synonym Protein Names	CD_antigen: CD282
Protein Family	Toll-like receptor
UniProt Gene Name	Tlr2
UniProt Entry Name	TLR2_MOUSE
NCBI Protein Information	toll-like receptor 2

UniProt Comments for TLR2	TLR2: Cooperates with LY96 to mediate the innate immune response to bacterial lipoproteins and other microbial cell wall components. Cooperates with TLR1 to mediate the innate immune response to bacterial lipoproteins or lipopeptides. Acts via MYD88 and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response. May also promote apoptosis in response to lipoproteins. Recognizes mycoplasmal macrophage- activating lipopeptide-2kD (MALP-2), soluble tuberculosis factor (STF), phenol-soluble modulin (PSM) and B.burgdorferi outer surface protein A lipoprotein (OspA-L) cooperatively with TLR6. Interacts with LY96, TLR1 and TLR6 (via extracellular domain). Binds MYD88 (via TIR domain). Interacts with TICAM1. Ligand binding induces the formation of a heterodimer with TLR1. Interacts with CNPY3. Highly expressed in peripheral blood leukocytes, in particular in monocytes, in bone marrow, lymph node and in spleen. Also detected in lung and in fetal liver. Levels are low in other tissues. Belongs to the Toll-like receptor family. Protein type: Apoptosis; Cell surface; Receptor, misc.; Motility/polarity/chemotaxis; Membrane protein, integral Cellular Component: cell surface; cell projection; membrane; cytoplasm; plasma membrane; integral to membrane; cytoplasmic vesicle; external side of plasma membrane Molecular Function: protein binding; peptidoglycan binding; transmembrane receptor activity; protein heterodimerization activity; triacylated lipoprotein binding; receptor activity; pattern recognition receptor activity; diacylated lipoprotein binding Biological Process: regulation of cytokine secretion; positive regulation of nitric oxide biosynthetic process; positive regulation of interleukin-12 production; positive regulation of leukocyte migration; microglial cell activation; positive regulation of NF-kappaB import into nucleus; leukotriene metabolic process; detection of triacylated bacterial lipoprotein; response to molecule of fungal origin; signal transduction; positive regulation of interleukin-18 production; nitric oxide metabolic process; positive regulation of interleukin-10 production; activation of NF-kappaB transcription factor; positive regulation of interleukin-8 production; negative regulation of cell proliferation; response to molecule of bacterial origin; response to peptidoglycan; positive regulation of interferon-beta production; response to bacterial lipoprotein; positive regulation of oligodendrocyte differentiation; inflammatory response; positive regulation of Wnt receptor signaling pathway; positive regulation of tumor necrosis factor biosynthetic process; negative regulation of interleukin-12 production; immune system process; detection of diacylated bacterial lipoprotein; cell surface pattern recognition receptor signaling pathway; positive regulation of interleukin-6 production; positive regulation of tumor necrosis factor production; positive regulation of toll-like receptor signaling pathway; positive regulation of chemokine production; toll-like receptor 2 signaling pathway; induction by symbiont of defense-related host nitric oxide production; MyD88-dependent toll-like receptor signaling pathway; defense response to Gram-positive bacterium; negative regulation of interleukin-17 production; response to bacterium; myelin formation in the central nervous system; toll-like receptor signaling pathway; innate immune response; positive regulation of transcription from RNA polymerase II promoter; immune response; I-kappaB phosphorylation; chloramphenicol transport; positive regulation of inflammatory response; positive regulation of cytokine secretion; positive regulation of nitric-oxide synthase biosynthetic process
Research Articles on TLR2	**1.** TLR9 modulates TLR2 expression in Leishmania major-infected macrophages.
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