LGR5 siRNA – Leucine-Rich Repeat-Containing G-Protein Coupled Receptor 5 (Mouse)

PRODUCT OVERVIEW

Product Name	LGR5, siRNA
Full Product Name	LGR5 siRNA (Mouse)
Product Gene Name	LGR5 sirna
Product Synonym Names	FEX; GPR49; Leucine-rich repeat-containing G-protein coupled receptor 5; G-protein coupled receptor 49; Orphan G-protein coupled receptor FEX
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	LGR5 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	99,666 Da
3D Structure	ModBase 3D Structure for Q9Z1P4
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 LGR5 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 LGR5 sirna	RNA Interference (RNAi)
Related Product Information for LGR5 sirna	MBS829900 is an siRNA targeting LGR5. Also known as LGR5 siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit LGR5 expression using RNA interference
Other Notes	Small volumes of LGR5 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 LGR5. It may not necessarily be applicable to this product.

NCBI GI #	110624772

NCBI GeneID	14160
NCBI Accession #	NP_034325.2
UniProt Primary Accession #	Q9Z1P4
UniProt Secondary Accession #	Q3V1L2
UniProt Related Accession #	Q9Z1P4
GenBank Nucleotide #	NM_010195.2
NCBI Official Full Name	leucine-rich repeat-containing G-protein coupled receptor 5
NCBI Official Synonym Full Names	leucine rich repeat containing G protein coupled receptor 5
NCBI Official Symbol	Lgr5
NCBI Official Synonym Symbols	FEX; Gpr49
UniProt Protein Name	Leucine-rich repeat-containing G-protein coupled receptor 5
UniProt Synonym Protein Names	G-protein coupled receptor 49; Orphan G-protein coupled receptor FEX
Protein Family	Leucine-rich repeat-containing G-protein coupled receptor
UniProt Gene Name	Lgr5
UniProt Synonym Gene Names	Fex; Gpr49
UniProt Entry Name	LGR5_MOUSE
NCBI Protein Information	leucine-rich repeat-containing G-protein coupled receptor 5
NCBI Summary for LGR5	The protein encoded by this gene is a leucine-rich repeat-containing receptor (LGR) and member of the G protein-coupled, 7-transmembrane receptor (GPCR) superfamily. The encoded protein is a receptor for R-spondins and is involved in the canonical Wnt signaling pathway. This protein plays a role in the formation and maintenance of adult intestinal stem cells during postembryonic development. [provided by RefSeq, Sep 2015]
UniProt Comments for LGR5	LGR5: a leucine-rich repeat-containing G-protein-coupled receptor. Receptor for R-spondins, potent stimulators of adult stem cell proliferation. A marker of cycling, long-lived and multipotent adult stem cell populations. Target gene of Wnt signaling. A Wnt receptor component that enhances Wnt signaling by soluble R-spondin proteins. Intestinal Lgr5+ stem cells give rise throughout life to proliferation of cells in crypts, which migrate along the crypt-villus axis, differentiating into five main cell types. Wnt signaling plays a crucial role in the proliferation and differentiation of these crypt epithelial cells. Two isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, multi-pass; Membrane protein, integral; Receptor, GPCR; GPCR, family 1 Cellular Component: Golgi apparatus; membrane; integral to plasma membrane; plasma membrane; integral to membrane; trans-Golgi network membrane Molecular Function: G-protein coupled receptor activity; signal transducer activity; transmembrane receptor activity; protein-hormone receptor activity Biological Process: G-protein coupled receptor protein signaling pathway; hair follicle development; oocyte differentiation; signal transduction; inner ear development
Research Articles on LGR5	**1.** H pylori colonize and manipulate the progenitor and Lgr5(+)stem cell compartments, which alters turnover kinetics and glandular hyperplasia.
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