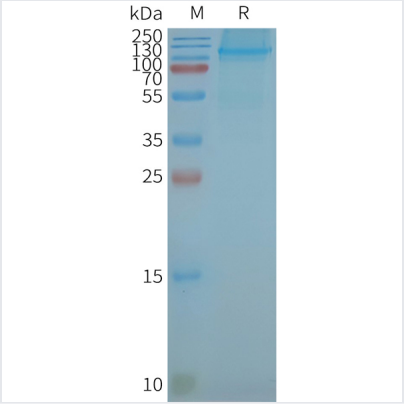
# LGR5 Human Protein

## PRODUCT OVERVIEW

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| **Product Name** | LGR5, Protein |
| **Full Product Name** | Human LGR5 full length protein-synthetic nanodisc |
| **Product Gene Name** | LGR5 protein |
| **Product Synonym Names** | FEX; GPR49; GPR67; GRP49; HG38 |
| **Host** | HEK293 |
| **Form/Format** | Lyophilized from nanodisc solubilization buffer (20 mM Tris-HCl, 150 mM NaCl, pH 8.0). Normally 5% - 8% trehalose is added as protectants before lyophilization. Please see Certificate of Analysis for specific instructions. |
| **Preparation and Storage** | Store at -20 degree C to -80 degree C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80 degree C (Avoid repeated freezing and thawing). |
| **Molecular Weight** | 99998 MW |
| **OMIM** | AF062006 mRNA |
| **3D Structure** | ModBase 3D Structure for O75473 |
| **Product Categories/Family for LGR5 protein** | FLP 489; Full Length Transmembrane Proteins |
| **Related Product Information for LGR5 protein** | The protein 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. Several transcript variants encoding different isoforms have been found for this gene. |
| **Other Notes** | Small volumes of LGR5 protein 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. |
| **Searchable Terms for LGR5 purchase** | MBS189830 is a protein targeting LGR5. Also known as Human LGR5 full length protein-synthetic nanodisc. Host: HEK293. |




**Western Blot (WB) of LGR5 protein**
Figure 1. Elisa plates were pre-coated with DYKDDDDK Tag LGR5-Nanodisc (0.2ug/per well). Serial diluted anti-DYKDDDDK monoclonal antibody solutions were added, washed, and incubated with secondary antibody before Elisa reading. From above data, the EC50 for anti-DYKDDDDK monoclonal antibody binding with LGR5-Nanodisc is 5.199ng/ml.

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for LGR5. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 469608414 |
| **NCBI GeneID** | 8549 |
| **NCBI Accession #** | NP_001264155.1 |
| **UniProt Primary Accession #** | O75473 |
| **UniProt Secondary Accession #** | Q4VAM0; Q4VAM2; Q9UP75; D8MCT0 |
| **UniProt Related Accession #** | O75473 |
| **GenBank Nucleotide #** | NM_001277226.1 |
| **NCBI Official Full Name** | leucine-rich repeat-containing G-protein coupled receptor 5 isoform 2 |
| **NCBI Official Synonym Full Names** | leucine rich repeat containing G protein-coupled receptor 5 |
| **NCBI Official Symbol** | LGR5 |
| **NCBI Official Synonym Symbols** | FEX; HG38; GPR49; GPR67; GRP49 |
| **UniProt Protein Name** | Leucine-rich repeat-containing G-protein coupled receptor 5 |
| **UniProt Synonym Protein Names** | G-protein coupled receptor 49; G-protein coupled receptor 67; G-protein coupled receptor HG38 |
| **Protein Family** | Leucine-rich repeat-containing G-protein coupled receptor |
| **UniProt Gene Name** | LGR5 |
| **UniProt Synonym Gene Names** | GPR49; GPR67 |
| **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. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Sep 2015] |
| **UniProt Comments for LGR5** | Receptor for R-spondins that potentiates the canonical Wnt signaling pathway and acts as a stem cell marker of the intestinal epithelium and the hair follicle. Upon binding to R-spondins (RSPO1, RSPO2, RSPO3 or RSPO4), associates with phosphorylated LRP6 and frizzled receptors that are activated by extracellular Wnt receptors, triggering the canonical Wnt signaling pathway to increase expression of target genes. In contrast to classical G-protein coupled receptors, does not activate heterotrimeric G-proteins to transduce the signal. Involved in the development and/or maintenance of the adult intestinal stem cells during postembryonic development. |
| **Research Articles on LGR5** | **1.** This study uncovers a novel cross-talk between LGR5 and TGFbeta signaling in colon cancer and identifies LGR5 as a new modulator of TGFbeta signaling able to suppress colon cancer metastasis. |
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