# Recombinant LGR4 protein (His tag)

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| **Catalog Number** | 548145 |
| **Synonyms** | G-protein coupled receptor 48 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q9BXB1 |
| **Molecular Weight** | Predictes a molecular mass of 51.24 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 51 kDa band. |

## Product Information

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| **Sequence Region** | 25-474 |
| **Form** | Lyophilized powder |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **Purity** | >85%, by SDS-PAGE with Coomassie Brilliant Blue staining. |
| **Endotoxin** | Not tested. |
| **Activity** | Not tested. |
| **Stability** | Samples are stable for up to twelve months from date of receipt at -70℃ |
| **Protein Construction** | DNA encoding 25-474 aa (Q9BXB1) were fused with 6His tag. |

## Storage & Handling

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| **Reconstitution** | Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. |
| **Storage** | Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |
| **Shipping** | In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature.<br>Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise. |

## Description

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| **Description** | Recombinant Human LGR4 (Leucine-rich repeat-containing G-protein coupled receptor 4) fragment (aa 25-474) is a high-purity protein designed for studying the LRRNT domain. This fragment serves as a key tool for investigating R-spondin-mediated Wnt signaling activation and its roles in organ development, stem cell maintenance, and immune regulation.<br>LGR4 is a G-protein coupled receptor that functions as a receptor for R-spondins, potentiating the canonical Wnt signaling pathway essential for the development of multiple organs including liver, kidney, intestine, bone, and reproductive tract. Unlike classical GPCRs, it does not activate heterotrimeric G-proteins but instead associates with phosphorylated LRP6 and frizzled receptors upon R-spondin binding. The protein plays critical roles in maintaining intestinal stem cells, regulating bone formation and remodeling, kidney development, spermatogenesis, and erythropoiesis. Additionally, LGR4 acts as a negative regulator of innate immunity by inhibiting TLR2/TLR4-mediated inflammatory responses. The full-length protein is localized to the cell membrane as a multi-pass membrane protein, and may also function as a receptor for norrin, though this requires further confirmation in vivo. |