

## LGR-5 Protein, Human, Recombinant (hFc)

### General Information

Synonyms:	G-protein coupled receptor HG38;G-protein coupled receptor 49;GPR67;G-protein coupled receptor 67;LGR5;GPR49;HG38
Protein Construction:	Gly22-Pro543
Species:	Human
Expression Host:	HEK293 Cells
Accession:	O75473-1
Molecular Weight:	85 kDa (predicted). Due to glycosylation, the protein migrates to 110-120 kDa based on Tris-Bis PAGE result.

### QC Testing

Biological Activity:	Human LGR-5, hFc Tag captured on CM5 Chip via Protein A can bind Human R-Spondin 3, His Tag with an affinity constant of 0.59 nM as determined in SPR assay.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, 5 mM DTT (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

G protein-coupled receptor 5 (LGR5), known as a stem cell marker for colon cancer and gastric cancer, can serve as a novel GSC marker involved in EMT and a therapeutic target in glioma. LGR5 is a new functional GSC marker and prognostic indicator that can promote EMT by activating the Wnt/β-catenin pathway and would thus be a novel therapeutic target for glioma.

Reference

Zhang J, et al. LGR5, a novel functional glioma stem cell marker, promotes EMT by activating the Wnt/ $\beta$ -catenin pathway and predicts poor survival of glioma patients. J Exp Clin Cancer Res. 2018 Sep 12;37(1):225. doi: 10.1186/s13046-018-0864-6. PMID: 30208924; PMCID: PMC6136228.

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