# Recombinant GP107 protein (His tag)

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| **Catalog Number** | 547463 |
| **Synonyms** | Lung seven transmembrane receptor 1 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q5VW38 |
| **Molecular Weight** | Predictes a molecular mass of 13.72 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 14 kDa band. |

## Product Information

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| **Sequence Region** | 42-148 |
| **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 42-148 aa (Q5VW38) 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** | This product is a recombinant fragment of the human GPR107 protein (Lung seven transmembrane receptor 1), encompassing amino acids 42-148. This 107-amino acid fragment has been computationally designed for stability and solubility, making it an ideal tool for structural studies, biochemical assays, and functional investigations of GPR107's roles in glucose regulation and cellular transport mechanisms. GPR107 is a multi-pass transmembrane protein primarily located in the cell membrane and trans-Golgi network. It has been proposed to function as a receptor for neuronostatin, a peptide derived from the somatostatin precursor, and is involved in blood sugar regulation by inducing glucagon secretion in response to low glucose levels. Additionally, GPR107 plays a critical role in microbial infection pathways, as it is required for intoxication by Pseudomonas aeruginosa exotoxin A and Campylobacter jejuni CDT, and may facilitate the retrograde transport of bacterial toxins, such as cholera toxin, from the trans-Golgi network to the endoplasmic reticulum. |