

# Synthetic Human Glucagon

**Cat. No.** GCG-370H    **Lot. No.** (See product label)

## SPECIFICATION

|                            |   |
|----------------------------|---|
| <b>Product Overview</b>    | Synthetic Human Glucagon is a single, non-glycosylated, polypeptide chain containing 29 amino acids and having a MW 3.483 kDa.  |
| <b>Species</b>             | Human   |
| <b>Source</b>              | Synthetic   |
| <b>Description</b>         | The protein encoded by this gene is actually a preproprotein that is cleaved into four distinct mature peptides. One of these, GCG, is a pancreatic hormone that counteracts the glucose-lowering action of insulin by stimulating glycogenolysis and gluconeogenesis. GCG is a ligand for a specific G-protein linked receptor whose signaling pathway controls cell proliferation. Two of the other peptides are secreted from gut endocrine cells and promote nutrient absorption through distinct mechanisms. Finally, the fourth peptide is similar to glicentin, an active enter GCG. |
| <b>Form</b>                | Lyophilized with no additives.  |
| <b>Purity</b>              | Greater than 98.0% as determined by analysis by RP-HPLC and SDS-PAGE gel.   |
| <b>Amino Acid Sequence</b> | H-His-Ser-Gln-Gly-Thr-Phe-Thr-Ser-Asp-Tyr-Ser-Lys-Tyr-Leu-Asp-Ser-Arg-Arg-Ala-Gln-Asp-Phe-Val-Gln-Trp-Leu-Met-Asn-Thr-OH  |
| <b>Reconstitution</b>      | Centrifuge vial prior to opening. First add sterile water to the vial to fully solubilize the protein to a concentration not less than 100 ug/ml. After complete solubilization of the protein, it can be further diluted to other aqueous solutions.   |

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| <b>EndotoxinLevel</b>      | Less than 0.1 ng/ug (1 EU/ug) of the protein.   |
| <b>Storage</b>             | Lyophilized samples are stable at room temperature for 3 weeks, but it is recommended to store them desiccated at -20°C to -80°C. Upon reconstitution, protein should be stored at 2-4°C for one week and for six months at -20°C to -80°C. Add a carrier protein (0.1% HSA or BSA) as a stabilizer for long term storage. Avoid repeated freeze-thaw cycles. |
| <b>OfficialSymbol</b>      | GCG   |
| <b>GENE INFORMATION</b>    |   |
| <b>Gene Name</b>           | GCG glucagon [ Homo sapiens ]   |
| <b>Synonyms</b>            | GCG; glucagon; GLP1; GLP2; GRPP; OTTHUMP00000204570; glucagon-like peptide 1; glucagon-like peptide 2; glicentin-related polypeptide; Glicentin; Oxyntomodulin  |
| <b>Gene ID</b>             | 2641  |
| <b>mRNA Refseq</b>         | NM_002054   |
| <b>Protein Refseq</b>      | NP_002045   |
| <b>MIM</b>                 | 138030  |
| <b>UniProt ID</b>          | P01275  |
| <b>Chromosome Location</b> | 2q36-q37  |
| <b>Pathway</b>             | Class B/2 (Secreting family receptors); Diabetes pathways; FOXA1 transcription factor   |

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network; G alpha (q) signaling events; GPCRdownstream signaling; Glucagon signaling in metabolic regulation; Glucagon-type ligand receptors; Incretion Synthesis, Secretion, and Inactivation; Integrationof energy metabolism; Metabolism; Regulation of Insulin Secretion; SignalTransduction; Signaling by GPCR; Synthesis, Secretion, and Deacylation ofGhrelin; Synthesis, Secretion, and Inactivation of Glucagon-like Peptide-1(GLP-1)

**Function**

hormone activity; receptorbinding;glucagon receptor binding

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