

Synthetic Human Glucagon

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

SPECIFICATION

Product Overview	Synthetic Human Glucagon is a single, non-glycosylated, polypeptide chain containing 29 amino acids and having a MW 3.483 kDa.
Species	Human
Source	Synthetic
Description	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.
Form	Lyophilized with no additives.
Purity	Greater than 98.0% as determined by analysis by RP-HPLC and SDS-PAGE gel.
Amino Acid Sequence	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
Reconstitution	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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EndotoxinLevel	Less than 0.1 ng/ug (1 EU/ug) of the protein.
Storage	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.
OfficialSymbol	GCG
GENE INFORMATION	
Gene Name	GCG glucagon [Homo sapiens]
Synonyms	GCG; glucagon; GLP1; GLP2; GRPP; OTTHUMP00000204570; glucagon-like peptide 1; glucagon-like peptide 2; glicentin-related polypeptide; Glicentin; Oxyntomodulin
Gene ID	2641
mRNA Refseq	NM_002054
Protein Refseq	NP_002045
MIM	138030
UniProt ID	P01275
Chromosome Location	2q36-q37
Pathway	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; Incretin Synthesis, Secretion, and Inactivation; Integration of energy metabolism; Metabolism; Regulation of Insulin Secretion; Signal Transduction; Signaling by GPCR; Synthesis, Secretion, and Deacylation of Ghrelin; Synthesis, Secretion, and Inactivation of Glucagon-like Peptide-1 (GLP-1)

Function	hormone activity; receptor binding; glucagon receptor binding
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