

Recombinant Human Glucagon (7-36)

Cat. No. GCG-89H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human Glucagon Like Peptide-1 produced in <i>E. Coli</i> is a single, non-glycosylated, polypeptide chain containing 30 amino acids and having a molecular mass of 3298.7 Dalton. The GLP-1 is purified by proprietary chromatographic techniques.
Species	Human
Source	E.coli
Description	Glucagon-like peptide-1 (GLP-1) is derived from the transcription product of the proglucagon gene. The major source of GLP-1 in the body is the intestinal L cell that secretes GLP-1 as a gut hormone. The biologically active forms of GLP-1 are: GLP-1-(7-37) and GLP-1-(7-36)NH ₂ . GLP-1 secretion by L cells is dependent on the presence of nutrients in the lumen of the small intestine. The secretagogues (agents that causes or stimulates secretion) of this hormone include major nutrients like carbohydrate, protein and lipid. Once in the circulation, GLP-1 has a half life of less than 2 minutes, due to rapid degradation by the enzyme dipeptidyl peptidase-4. GLP-1 possesses several physiological properties that make it a subject of intensive investigation as a potential treatment of diabetes mellitus.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	The protein (1 mg/ml) was lyophilized after extensive dialyses against 0.1 mg sodium phosphate monobasic & 1.6mg sodium phosphate dibasic.

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Solubility	It is recommended to reconstitute the lyophilized Glucagon Like Peptide-1 in sterile 18MO-cm H ₂ O not less than 100g/ml, which can then be further diluted to other aqueous solutions.
Amino Acid Sequence	The sequence of the first five N-terminal amino acids was determined and was found to be His-Ala-Glu-Gly-Thr.
Biological Activity	Regulates Glucose levels rapidly; Reduces Insulin resistance; Reduces Glucagon; Reduces HbA1c; Stimulates beta cell growth which stimulates insulin production
Purity	Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Stability	Lyophilized Glucagon Like Peptide-1 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution GLP-1 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid freeze-thaw cycles.

GENE INFORMATION

Gene Name	GCG glucagon [Homo sapiens]
Synonyms	GCG; glucagon; GLP1; GLP2; GRPP; glucagon-like peptide 1; glucagon-like peptide 2; glicentin-related polypeptide
Gene ID	2641
mRNA Refseq	NM_002054
Protein Refseq	NP_002045

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MIM	138030
UniProt ID	P01275
Chromosome Location	2q36-q37
Pathway	Neuroactive ligand-receptor interaction; Diabetes pathways; Integration of energy metabolism; Signaling by GPCR
Function	hormone activity
PDB rendering based on 1d0r.	