



Product Data Sheet

□ Cat # RP-588

Recombinant Human Glucagon Like Peptide-1 (7-36)

Size: □ 10 ug

□ 20 ug

Synonyms:

GLP1, GLP2, GRPP.

Introduction:

Glucagon-like peptide-1 (GLP-1) is derived from the transcription product of the proglucagongene. 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)NH₂.

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. The known physiological functions of GLP-1 include: Increases insulin secretion from the pancreas in a glucose-dependent manner, decreases glucagon secretion from the pancreas, increases beta cell mass and insulin gene expression, inhibits acid secretion and gastric emptying in the stomach, decreases food intake by increasing satiety.

Description:

Glucagon Like Peptide-1 Human Recombinant produced in E. Coli 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.

Source:

Escherichia Coli.

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 & 1.6 mg sodium phosphate dibasic.

Solubility:

It is recommended to reconstitute the lyophilized Glucagon Like Peptide-1 in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

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 prevent freeze-thaw cycles.

Purity:

Greater than 95.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

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:

1. Regulates Glucose levels rapidly
2. Reduces Insulin resistance
3. Reduces Glucagon
4. Reduces HbA1c
5. Stimulates beta cell growth which stimulates insulin production

Usage:

This item is for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals. If supplied in powder then reconstitute it in 100 µl water for 1 mg/ml stock and store in liquid at 4°C for ~1 week or aliquots in suitable size and store at -20°C for long term storage.

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