

Certificate of Analysis

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Product Name: Glucagon-like peptide 1 (7-36) amide (human, rat)

Catalog No.: 2082

Batch No.: 14

CAS Number: 107444-51-9

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₄₉ H ₂₂₆ N ₄₀ O ₄₅
Batch Molecular Weight:	3297.67
Physical Appearance:	White lyophilised solid
Net Peptide Content:	92.6%
Counter Ion:	Acetate
Solubility:	Soluble to 1 mg/ml in water
Storage:	Store at -20°C
Peptide Sequence:	His-Ala-Glu-Gly-Thr-Phe-Thr-Ser-Asp-Val- Ser-Ser-Tyr-Leu-Glu-Gly-Gln-Ala-Ala-Lys- Glu-Phe-Ile-Ala-Trp-Leu-Val-Lys-Gly-Arg-NH ₂

2. ANALYTICAL DATA

HPLC:	Shows 97.6% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala	4.00	3.92	Lys	2.00	2.03
Arg	1.00	1.02	Met		
Asx	1.00	1.04	Phe	2.00	2.03
Cys			Pro		
Glx	4.00	4.12	Ser	3.00	2.40
Gly	3.00	2.97	Thr	2.00	1.82
His	1.00	1.02	Trp	1.00	0.44
Ile	1.00	0.99	Tyr	1.00	1.03
Leu	2.00	1.92	Val	2.00	1.95

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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CAS Number: 107444-51-9

Description:

Glucagon-like peptide 1 (7-36) amide (human, rat) is a potent glucose-dependent insulinotropic peptide produced by post-translational processing of proglucagon in intestinal L-cells. Displays high affinity for GLP-1 receptors expressed in rat insulinoma-derived RINm5F cells ($K_d = 204$ pM). Stimulates insulin gene transcription and secretion in pancreatic β -cells. Displays antiapoptotic effects in hippocampal neurons and reduces food intake in fasted rats following central administration.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{149}H_{226}N_{40}O_{45}$

Batch Molecular Weight: 3297.67

Physical Appearance: White lyophilised solid

Peptide Sequence:

His-Ala-Glu-Gly-Thr-Phe-Thr-Ser-Asp-Val-
Ser-Ser-Tyr-Leu-Glu-Gly-Gln-Ala-Ala-Lys-
Glu-Phe-Ile-Ala-Trp-Leu-Val-Lys-Gly-Arg-NH₂

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in water

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Net Peptide Content: 92.6% (Remaining weight made up of counterions and residual water).

Counter Ion: Acetate

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such as Cys, Met, Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 μ m filter to remove potential bacterial contamination whenever possible.

References:

Perry et al (2002) Protection and reversal of excitotoxic neuronal damage by glucagon-like peptide-1 and exendin-4. *J.Pharmacol.Exp.Ther.* **302** 881. PMID: 12183643.

Perfetti and Merkel (2000) Glucagon-like peptide-1: a major regulator of pancreatic β -cell function. *Eur.J.Endocrinol.* **143** 717. PMID: 11124853.

Turton et al (1996) A role for glucagon-like peptide-1 in the central regulation of feeding. *Nature* **379** 69. PMID: 8538742.

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