

Certificate of Analysis

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Product Name: Glucagon (Human, Porcine)

Catalog No.: 6927

Batch No.: 7

CAS Number: 16941-32-5

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₅₃H₂₂₅N₄₃O₄₉S
Batch Molecular Weight: 3482.78
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: 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

2. ANALYTICAL DATA

HPLC: Shows 96.4% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

| Amino Acid Theoretical Actual | | | Amino Acid Theoretical Actual | | |
|-------------------------------|------|------|-------------------------------|------|------|
| Ala | 1.00 | 1.02 | Lys | 1.00 | 1.01 |
| Arg | 2.00 | 1.98 | Met | 1.00 | 0.98 |
| Asx | 4.00 | 4.09 | Phe | 2.00 | 1.99 |
| Cys | | | Pro | | |
| Glx | 3.00 | 3.04 | Ser | 4.00 | 2.78 |
| Gly | 1.00 | 1.02 | Thr | 3.00 | 2.50 |
| His | 1.00 | 0.98 | Trp | 1.00 | 0.04 |
| Ile | | | Tyr | 2.00 | 1.84 |
| Leu | 2.00 | 2.05 | Val | 1.00 | 0.99 |

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

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Product Name: Glucagon (Human, Porcine)

Catalog No.: 6927

Batch No.: 7

CAS Number: 16941-32-5

Description:

Glucagon (Human, Porcine) is an endogenous glucagon receptor agonist; regulates blood glucose.

Physical and Chemical Properties:

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Batch Molecular Weight: 3482.78

Physical Appearance: White lyophilised solid

Peptide Sequence:

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

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in water

This product is supplied in lyophilized form. It may appear as a solid, gel or film and 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.

Counter Ion: TFA

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 µm filter to remove potential bacterial contamination whenever possible.

References:

Zhou *et al* (2017) A novel glucagon-like peptide-1/glucagon receptor dual agonist exhibits weight-lowering and diabetes-protective effects. *Eur.J.Med.Chem.* **138** 1158. PMID: 28772236.

Mayo *et al* (2003) International Union of Pharmacology. XXXV. The glucagon receptor family. *Pharmacol Rev.* **55** 167. PMID: 12615957.

Thomsen *et al* (1972) The amino acid sequence of human glucagon. *FEBS Lett.* **21** 315. PMID: 11946536 .

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