

Certificate of Analysis

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Product Name: Exendin-3 (9-39) amide

Catalog No.: 2081

Batch No.: 10

CAS Number: 133514-43-9

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₄₉ H ₂₃₄ N ₄₀ O ₄₇ S
Batch Molecular Weight:	3369.79
Physical Appearance:	White lyophilised solid
Net Peptide Content:	90.2%
Counter Ion:	TFA
Solubility:	Soluble to 1 mg/ml in water
Storage:	Store at -20°C
Peptide Sequence:	Asp-Leu-Ser-Lys-Gln-Met-Glu-Glu-Glu-Ala-Val-Arg-Leu-Phe-Ile-Glu-Trp-Leu-Lys-Asn-Gly-Gly-Pro-Ser-Ser-Gly-Ala-Pro-Pro-Pro-Ser-NH ₂

2. ANALYTICAL DATA

HPLC:	Shows 96.7% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual		Amino Acid Theoretical		Actual	
Ala	2.00	1.96	Lys	2.00	2.02		
Arg	1.00	0.99	Met	1.00	0.85		
Asx	2.00	2.07	Phe	1.00	1.01		
Cys			Pro	4.00	4.08		
Glx	5.00	5.06	Ser	4.00	3.18		
Gly	3.00	2.99	Thr				
His			Trp	1.00	0.31		
Ile	1.00	0.98	Tyr				
Leu	3.00	2.88	Val	1.00	0.97		

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

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Product Name: Exendin-3 (9-39) amide

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Description:

Exendin-3 (9-39) amide is a potent and selective GLP-1 receptor antagonist ($K_d = 1.7$ nM at cloned human GLP-1 receptors). Inhibits cAMP production and insulin release induced by GLP-1 (7-36), exendin-3 ($IC_{50} = 20$ nM) and exendin-4. Blocks the inhibitory effect of GLP-1 on food intake in rats.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{149}H_{234}N_{40}O_{47}S$

Batch Molecular Weight: 3369.79

Physical Appearance: White lyophilised solid

Peptide Sequence:

Asp-Leu-Ser-Lys-Gln-Met-Glu-Glu-Glu-
Ala-Val-Arg-Leu-Phe-Ile-Glu-Trp-Leu-
Lys-Asn-Gly-Gly-Pro-Ser-Ser-Gly-Ala-
Pro-Pro-Pro-Ser-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: 90.2% (Remaining weight made up of counterions and residual water).

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:

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

Goke *et al* (1993) Exendin-4 is a high potency agonist and truncated exendin-(9-39)-amide an antagonist at the glucagon-like peptide 1-(7-36)-amide receptor of Ins-Secr.g β-cells. *J.Biol.Chem.* **268** 19650. PMID: 8396143.

Thorens *et al* (1993) Cloning and functional expression of the human islet GLP-1 receptor. Demonstration that exendin-4 is an agonist and exendin-(9-39) an antagonist of the receptor. *Diabetes* **42** 1678. PMID: 8405712.

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