

**Product Name:** Exendin-4  
CAS Number: 141758-74-9

**Catalog No.:** 1933      **Batch No.:** 12

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>184</sub>H<sub>282</sub>N<sub>50</sub>O<sub>60</sub>S  
**Batch Molecular Weight:** 4186.61  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 89.4%  
**Counter Ion:** TFA  
**Solubility:** Soluble to 1 mg/ml in water  
**Storage:** Desiccate at -20°C  
**Peptide Sequence:** His-Gly-Glu-Gly-Thr-Phe-Thr-Ser-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<sub>2</sub>

**2. ANALYTICAL DATA**

**HPLC:** Shows 98.4% purity  
**Mass Spectrum:** Consistent with structure

**3. AMINO ACID ANALYSIS DATA**

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala	2.00	1.97	Lys	2.00	2.06
Arg	1.00	0.95	Met	1.00	1.02
Asx	2.00	2.00	Phe	2.00	2.00
Cys			Pro	4.00	4.09
Glx	6.00	6.03	Ser	5.00	4.12
Gly	5.00	4.96	Thr	2.00	1.84
His	1.00	1.06	Trp	1.00	0.25
Ile	1.00	0.96	Tyr		
Leu	3.00	2.91	Val	1.00	1.03

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**bio-techne.com**  
info@bio-techne.com  
techsupport@bio-techne.com

**North America**  
Tel: (800) 343 7475

**China**  
info.cn@bio-techne.com  
Tel: +86 (21) 52380373

**Europe Middle East Africa**  
Tel: +44 (0)1235 529449

**Rest of World**  
www.tocris.com/distributors  
Tel:+1 612 379 2956

**Product Name:** Exendin-4  
CAS Number: 141758-74-9**Catalog No.:** 1933 **Batch No.:** 12**Description:**

High affinity glucagon-like peptide 1 (GLP-1) receptor agonist ( $K_d$  = 136 pM); originally isolated from *Heloderma suspectum* venom. Potently induces cAMP formation without stimulating amylase release in pancreatic acini. Potentiates glucose-induced insulin secretion in isolated rat islets. Protects against glutamate-induced neurotoxicity.

**Physical and Chemical Properties:**Batch Molecular Formula:  $C_{184}H_{282}N_{50}O_{60}S$ 

Batch Molecular Weight: 4186.61

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

His-Gly-Glu-Gly-Thr-Phe-Thr-Ser-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<sub>2</sub>

**Storage:** Desiccate 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:** 89.4% (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:**

**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.

**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.

**Eng et al** (1992) Isolation and characterization of exendin-4, an exendin-3 analogue, from *Heloderma suspectum* venom. *J.Biol.Chem.* **267** 7402. PMID: 1313797.

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