

Certificate of Analysis

Product Name: Enterostatin

Catalog No.: 3612

Batch No.: 2

CAS Number: 117830-79-2

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₂₁ H ₃₆ N ₈ O ₆
Batch Molecular Weight:	496.57
Physical Appearance:	White lyophilised solid
Net Peptide Content:	65.6%
Counter Ion:	TFA
Solubility:	Soluble to 0.70 mg/ml in water
Storage:	Store at -20°C
Peptide Sequence:	Ala-Pro-Gly-Pro-Arg

2. ANALYTICAL DATA

HPLC:	Shows 98.8% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual	Amino Acid Theoretical		Actual
Ala	1.00	0.99	Lys		
Arg	1.00	1.06	Met		
Asx			Phe		
Cys			Pro	2.00	2.01
Glx			Ser		
Gly	1.00	0.95	Thr		
His			Trp		
Ile			Tyr		
Leu			Val		

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

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Description:

N' terminal peptide fragment of procolipase that binds to the β -subunit of F1-ATPase. Activates the ERK and cAMP signaling pathways, and downregulates expression of Krüppel-like factor 4 (KLF4) and agouti-related peptide (AgRP) in vitro. Inhibits insulin secretion from pancreatic β -cells by downregulating expression of dynamin2 and altering protein trafficking. Reduces dietary fat intake via activation of CCK₁, induces satiety, enhances memory-consolidation and exhibits hypocholesterolemic activity in vivo. Orally active.

Physical and Chemical Properties:Batch Molecular Formula: C₂₁H₃₆N₈O₆

Batch Molecular Weight: 496.57

Physical Appearance: White lyophilised solid

Peptide Sequence:

Ala-Pro-Gly-Pro-Arg

Storage: Store at -20°C**Solubility & Usage Info:**

Soluble to 0.70 mg/ml in water

Net Peptide Content: 65.6% (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 μ m filter to remove potential bacterial contamination whenever possible.

References:

Takenaka et al (2008) Enterostatin reduces serum cholesterol levels by way of a CCK(1) receptor-dependent mechanism. *Peptides* **29** 2175. PMID: 18824202.

Park et al (2009) Enterostatin affects cyclic AMP and ERK signaling pathways to regulate Agouti-related Protein (AgRP) expression. *Peptides* **30** 181. PMID: 19059445.

Park et al (2009) Enterostatin alters protein trafficking to inhibit insulin secretion in Beta-TC6 cells. *Peptides* **30** 1866. PMID: 19563849.

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