

# Certificate of Analysis

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**Product Name:** Ghrelin (rat)

**Catalog No.:** 1465

**Batch No.:** 32

CAS Number: 258338-12-4

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>147</sub>H<sub>245</sub>N<sub>45</sub>O<sub>42</sub>  
**Batch Molecular Weight:** 3314.83  
**Physical Appearance:** White lyophilised solid  
**Counter Ion:** TFA  
**Solubility:** Soluble to 1 mg/ml in water  
**Storage:** Store at -20°C  
**Peptide Sequence:**  

$$\begin{array}{c} \text{}^n\text{Octanoyl} \\ | \\ \text{Gly-Ser-Ser-Phe-Leu-Ser-Pro-Glu-His-Gln-} \\ \text{Lys-Ala-Gln-Gln-Arg-Lys-Glu-Ser-Lys-Lys-} \\ \text{Pro-Pro-Ala-Lys-Leu-Gln-Pro-Arg} \end{array}$$

## 2. ANALYTICAL DATA

**HPLC:** Shows 96.8% purity  
**Mass Spectrum:** Consistent with structure

## 3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala	2.00	1.94	Lys	5.00	5.04
Arg	2.00	2.09	Met		
Asx			Phe	1.00	1.00
Cys			Pro	4.00	3.96
Glx	6.00	6.00	Ser	4.00	2.56
Gly	1.00	1.00	Thr		
His	1.00	1.01	Trp		
Ile			Tyr		
Leu	2.00	1.97	Val		

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

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**Description:**

Ghrelin (rat) is an endogenous agonist peptide for the ghrelin receptor (GHS-R1a). Produced mainly by the stomach, Ghrelin stimulates release of growth hormone from the pituitary gland in vitro and in vivo, and regulates feeding, growth and energy production.

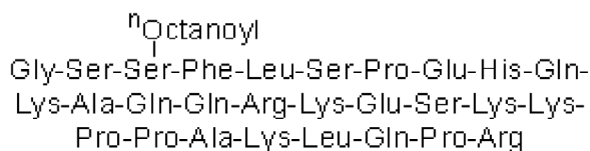
**Physical and Chemical Properties:**

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Physical Appearance: White lyophilised solid

**Peptide Sequence:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

Soluble to 1 mg/ml in water

This product may benefit from the use of a drop of 1.0M acetic acid in order to assist in its solubilization, however literature on this product suggests that the <sup>n</sup>Octanoyl group may rapidly be removed from the rest of the peptide under acidic conditions if solutions are stored at room temperature for prolonged periods of time. We therefore recommend that solutions, once obtained, are either aliquoted and stored at -20°C until required or promptly used. 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.

**Licensing Information:**

This peptide is distributed under license from Dr. Kangawa

**References:**

**Inu** (2001) Ghrelin: an orexigenic and somatotrophic signal from the stomach. *Nat.Rev.Neurosci.* **2** 551. PMID: 11483998.

**Tolle et al** (2001) In vivo and in vitro effects of ghrelin/motilin-related peptide on GH secretion in the rat. *Neuroendocrinology* **73** 54. PMID: 11174017.

**Kojima et al** (1999) Ghrelin is growth-hormone-releasing acylated peptide from stomach. *Nature* **402** 656. PMID: 10604470.

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