

# Certificate of Analysis

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**Product Name:** Melittin  
CAS Number: 20449-79-0

**Catalog No.:** 1193 **Batch No.:** 13

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>131</sub>H<sub>229</sub>N<sub>39</sub>O<sub>31</sub>  
**Batch Molecular Weight:** 2847  
**Physical Appearance:** White lyophilised solid  
**Counter Ion:** TFA  
**Solubility:** Soluble to 1 mg/ml in water  
**Storage:** Store at -20°C  
**Peptide Sequence:** Gly-Ile-Gly-Ala-Val-Leu-Lys-Val-Leu-Thr-Thr-Gly-Leu-Pro-Ala-Leu-Ile-Ser-Trp-Ile-Lys-Arg-Lys-Arg-Gln-Gln-NH<sub>2</sub>

## 2. ANALYTICAL DATA

**HPLC:** Shows 98.9% 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	3.00	3.03		
Arg	2.00	1.91	Met				
Asx			Phe				
Cys			Pro	1.00	0.97		
Glx	2.00	2.09	Ser	1.00	0.77		
Gly	3.00	3.07	Thr	2.00	1.73		
His			Trp	1.00	0.05		
Ile	3.00	2.99	Tyr				
Leu	4.00	4.01	Val	2.00	1.99		

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

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**Product Name:** Melittin**Catalog No.:** 1193**13**

CAS Number: 20449-79-0

**Description:**

Melittin is a inhibitor of  $G_s$  and stimulates  $G_i$  activity. Inhibits protein kinase C and cAMP-dependent protein kinases.  $Na^+/K^+$  ATPase inhibitor.

**Physical and Chemical Properties:**Batch Molecular Formula:  $C_{131}H_{229}N_{39}O_{31}$ 

Batch Molecular Weight: 2847

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

Gly-Ile-Gly-Ala-Val-Leu-Lys-Val-Leu-  
Thr-Thr-Gly-Leu-Pro-Ala-Leu-Ile-Ser-  
Trp-Ile-Lys-Arg-Lys-Arg-Gln-Gln-NH<sub>2</sub>

**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:**

**Fukushima *et al*** (1998) Melittin, a metabostatic peptide inhibiting  $G_s$  activity. *Peptides* **5** 811. PMID: 9663445.

**Raynor *et al*** (1991) Membrane interactions of amphiphilic polypeptides mastoparan, melittin, plymixin B and cardiotoxin. *J.Biol.Chem.* **266** 2753. PMID: 1847132.

**Mousli *et al*** (1990) G protein activation: a receptor-independent mode of action for cationic amphiphilic neuropeptides and venom peptides. *TIPS* **11** 358. PMID: 2122563.

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