

Certificate of Analysis

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Product Name: Lys- γ 3-MSH

Catalog No.: 3611

Batch No.: 2

CAS Number: 156159-18-1

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₂₈ H ₁₉₃ N ₄₅ O ₃₉ S
Batch Molecular Weight:	3018.27
Physical Appearance:	White lyophilised solid
Net Peptide Content:	74%
Counter Ion:	TFA
Solubility:	Soluble to 1 mg/ml in 10% acetonitrile / water
Storage:	Store at -20°C
Peptide Sequence:	Lys-Tyr-Val-Met-Gly-His-Phe-Arg-Trp-Asp-Arg-Phe-Gly-Arg-Arg-Asn-Ser-Ser-Ser-Ser-Gly-Ser-Ser-Gly-Ala-Gly-Gln

2. ANALYTICAL DATA

HPLC:	Shows 99% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual	Amino Acid Theoretical		Actual
Ala	1.00	1.04	Lys	1.00	1.00
Arg	4.00	4.26	Met	1.00	0.91
Asx	2.00	2.00	Phe	2.00	1.98
Cys			Pro		
Glx	1.00	1.03	Ser	6.00	6.14
Gly	5.00	5.17	Thr		
His	1.00	0.93	Trp		
Ile			Tyr	1.00	0.93
Leu			Val	1.00	0.96

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

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Description:

Pro-opiomelanocortin (POMC) derived peptide. Potentiates the steroidogenic action of corticotrophin on the adrenal cortex, possibly via the MC₃ receptor. Potently stimulates lipolysis via activation of hormone-sensitive lipase (HSL).

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Peptide Sequence:

Lys-Tyr-Val-Met-Gly-His-Phe-Arg-Trp-Asp-Arg-Phe-Gly-Arg-Arg-Asn-Ser-Ser-Ser-Ser-Gly-Ser-Ser-Gly-Ala-Gly-Gln

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

Soluble to 1 mg/ml in 10% acetonitrile / 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: 74% (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:

Harmer and Bicknell (2004) The role of the melanocortin 3 receptor in mediating the effects of gamma-MSH peptides on the adrenal. *Endocrine Res.* **30** 629.

Harmer et al (2008) Evidence of a possible role for Lys- γ 3-MSH in the regulation of adipocyte function. *J.Endocrinol.* **196** 149. PMID: 18180326.

Bicknell et al (2009) Lys-gamma₃-MSH: a global regulator of hormone-sensitive lipase activity? *Mol.Cell.Endocrinol.* **300** 71. PMID: 18977407.

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