

Certificate of Analysis

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Product Name: [Nle⁴,D-Phe⁷]- α -MSH

Catalog No.: 3013

Batch No.: 6

CAS Number: 75921-69-6

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₇₈H₁₁₁N₂₁O₁₉
Batch Molecular Weight: 1646.86
Physical Appearance: White lyophilised solid
Net Peptide Content: 79.5%
Counter Ion: TFA
Solubility: Soluble to 0.60 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Ac-Ser-Tyr-Ser-Nle-Glu-His-D-Phe-Arg-Trp-Gly-Lys-Pro-Val-NH₂

2. ANALYTICAL DATA

HPLC: Shows 97.9% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid		Theoretical	Actual	Amino Acid		Theoretical	Actual
Ala				Lys	1.00	0.99	
Arg	1.00	0.99	Met				
Asx			Phe	1.00	0.97		
Cys			Pro	1.00	1.00		
Glx	1.00	1.00	Ser	2.00	1.63		
Gly	1.00	0.98	Thr				
His	1.00	0.99	Trp	1.00	0.53		
Ile			Tyr	1.00	1.02		
Leu			Val	1.00	1.05		

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

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CAS Number: 75921-69-6

Description:

[Nle⁴,D-Phe⁷]- α -MSH is a synthetic analog of α -MSH that is an agonist at melanocortin receptors (K_i values are 0.085, 0.4, 3.8 and 5.1 nM for MC₁, MC₃, MC₄ and MC₅ receptors respectively).

Physical and Chemical Properties:

Batch Molecular Formula: C₇₈H₁₁₁N₂₁O₁₉

Batch Molecular Weight: 1646.86

Physical Appearance: White lyophilised solid

Peptide Sequence:

Ac-Ser-Tyr-Ser-Nle-Glu-His-D-Phe-Arg-Trp-
Gly-Lys-Pro-Val-NH₂

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 0.60 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: 79.5% (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:

Wikber (1999) Melanocortin receptors: perspectives for novel drugs. *Eur.J.Pharmacol.* **375** 295. PMID: 10443584.

Sawyer et al (1980) 4-Norleucine, 7-D-phenylalanine- α -melanocyte-stimulating hormone: a highly potent α -melanotropin with ultrapotent biological activity. *Proc.Natl.Acad.Sci.USA* **77** 5754.

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