

**Product Name:** [D-Trp<sup>8</sup>]-γ-MSH

**Catalog No.:** 4272

**Batch No.:** 2

**CAS Number:** 321351-81-9

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>74</sub>H<sub>99</sub>N<sub>21</sub>O<sub>16</sub>S  
**Batch Molecular Weight:** 1570.79  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 84.3%  
**Counter Ion:** TFA  
**Solubility:** Soluble to 1 mg/ml in water  
**Storage:** Store at -20°C  
**Peptide Sequence:** Tyr-Val-Met-Gly-His-Phe-Arg-D-Trp-Asp-Arg-Phe-Gly

**2. ANALYTICAL DATA**

**HPLC:** Shows 95.9% purity  
**Mass Spectrum:** Consistent with structure

**3. AMINO ACID ANALYSIS DATA**

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala			Lys		
Arg	2.00	2.23	Met	1.00	1.00
Asx	1.00	1.07	Phe	2.00	1.88
Cys			Pro		
Glx			Ser		
Gly	2.00	2.00	Thr		
His	1.00	0.99	Trp		
Ile			Tyr	1.00	0.91
Leu			Val	1.00	1.01

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

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**CAS Number:** 321351-81-9

**Description:**

Selective melanocortin 3 (MC<sub>3</sub>) receptor agonist (IC<sub>50</sub> values are 6.7, 340 and 600 nM for human MC<sub>3</sub>, MC<sub>5</sub> and MC<sub>4</sub> receptors respectively). Displays anti-inflammatory efficacy.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>74</sub>H<sub>99</sub>N<sub>21</sub>O<sub>16</sub>S

Batch Molecular Weight: 1570.79

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

Tyr-Val-Met-Gly-His-Phe-Arg-D-Trp-Asp-Arg-  
Phe-Gly

**Storage:** Store at -20°C

**Solubility & Usage Info:**

Soluble to 1 mg/ml in water

**Net Peptide Content:** 84.3% (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).

**References:**

**Grieco *et al*** (2000) D-amino acid scan of  $\gamma$ -melanocyte-stimulating hormone: importance of Trp<sup>8</sup> on human MC3 receptor selectivity. *J.Med.Chem.* **43** 4998. PMID: 11150170.

**Getting *et al*** (2006) [D-Trp<sup>8</sup>]- $\gamma$ -Melanocyte-stimulating-hormone exhibits anti-inflammatory efficacy in mice bearing a nonfunctional MC1R (recessive yellow *e/e* mouse). *Mol.Pharmacol.* **70** 1850. PMID: 16959942.

**Patel *et al*** (2010) Anti-inflammatory and antiosteoclastogenesis properties of endogenous melanocortin receptor type 3 in experimental arthritis. *FASEB J.* **24** 4835. PMID: 20702773.

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