bio-techne
TOCRIS

Print Date: Feb 28th 2024

Certificate of Analysis

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Product Name: **Melanotan II** **Catalog No.: 2566** **Batch No.: 8**

CAS Number: 121062-08-6

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{50}H_{69}N_{15}O_9$

Batch Molecular Weight: 1024.19

Physical Appearance: White lyophilised solid

Counter Ion: TFA

Solubility: Soluble to 0.70 mg/ml in water

Storage: Store at -20°C

Peptide Sequence: Ac-Nle-cyclo-(β-Asp-His-D-Phe-Arg-Trp-ε-Lys)-NH_2

2. ANALYTICAL DATA

HPLC: Shows 99.2 % purity

Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala			Lys	1.00	0.98
Arg	1.00	1.00	Met		
Asx	1.00	1.02	Phe	1.00	1.99
Cys			Pro		
Glx			Ser		
Gly			Thr		
His	1.00	1.01	Trp	1.00	0.72
Ile			Tyr		
Leu			Val		

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Product Name: **Melanotan II** **Catalog No.: 2566** **8**

CAS Number: 121062-08-6

Description:

Melanotan II is a high affinity melanocortin receptor agonist (K_i values are 0.67, 6.6, 34 and 46 nM for MC_1, MC_4, MC_3 and MC_5 receptors respectively). Stimulates erectile activity, inhibits food intake and displays neuroprotective properties in vivo.

Physical and Chemical Properties:

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Physical Appearance: White lyophilised solid

Peptide Sequence:

Ac-Nle-cyclo-(β-Asp-His-D-Phe-Arg-Trp-ε-Lys)-NH_2

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 0.70 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 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:

Ter Laak *et al* (2003) The potent melanocortin receptor agonist melanotan-II promotes peripheral nerve regeneration and has neuroprotective properties in the rat. Eur.J.Pharmacol. ***462*** 179. PMID: 12591111.

Martin *et al* (2002) Activation of melanocortin MC4 receptors increases erectile activity in rats ex copula. Eur.J.Pharmacol. ***454*** 71. PMID: 12409007.

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