

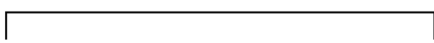
Certificate of Analysis

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Product Name: HS 014
CAS Number: 207678-81-7

Catalog No.: 1831 **Batch No.:** 7

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₇₁H₉₄N₂₀O₁₇S₂
Batch Molecular Weight: 1563.77
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: 
 Ac-Cys-Glu-His-D-2-Nal-Arg-Trp-Gly-Cys-Pro-
 Pro-Lys-Asp-NH₂

2. ANALYTICAL DATA

HPLC: Shows 98.7% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala			Lys	1.00	1.01
Arg	1.00	0.99	Met		
Asx	1.00	0.99	Phe		
Cys	2.00	Not Detected	Pro	2.00	2.02
Glx	1.00	0.98	Ser		
Gly	1.00	1.01	Thr		
His	1.00	0.95	Trp	1.00	Not Detected
Ile			Tyr		
Leu			Val		

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

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Description:

HS 014 is a potent and selective melanocortin MC₄ receptor antagonist (K_i values are 3.16, 108, 54.4 and 694 nM for cloned human MC₄, MC₁, MC₃ and MC₅ receptors respectively). Increases food intake in rats and nociception in mice following central administration in vivo. Also inhibits IL-1β-induced Fos expression in the paraventricular hypothalamus.

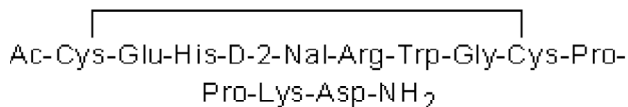
Physical and Chemical Properties:

Batch Molecular Formula: C₇₁H₉₄N₂₀O₁₇S₂

Batch Molecular Weight: 1563.77

Physical Appearance: White lyophilised solid

Peptide Sequence:



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:

Whitaker and Reye (2008) Central blockade of melanocortin receptors attenuates the metabolic and locomotor responses to peripheral interleukin-1β administration. *Neuropharmacology* **54** 509. PMID: 18082228.

Bellasio et al (2003) Melanocortin receptor agonists and antagonists modulate nociceptive sensitivity in the mouse formalin test. *Eur.J.Pharmacol.* **482** 127. PMID: 14660013.

Schioth et al (1998) Discovery of novel melanocortin₄ receptor selective MSH analogues. *Br.J.Pharmacol.* **124** 75. PMID: 9630346.

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