

Certificate of Analysis

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Product Name: HS 024
CAS Number: 212370-59-7

Catalog No.: 1832 **Batch No.:** 6

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₅₈H₇₉N₁₉O₁₀S₂
Batch Molecular Weight: 1266.5
Physical Appearance: White lyophilised solid
Net Peptide Content: 72%
Counter Ion: TFA
Solubility: Soluble to 0.50 mg/ml in water
Storage: Desiccate at -20°C
Peptide Sequence:

Ac-Cys-Nle-Arg-His-D-Nal-Arg-Trp-Gly-Cys-NH₂

2. ANALYTICAL DATA

HPLC: Shows 97.6% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala			Lys		
Arg	2.00	1.83	Met		
Asx			Phe		
Cys			Pro		
Glx			Ser		
Gly	1.00	1.00	Thr		
His	1.00	1.00	Trp		
Ile			Tyr		
Leu			Val		

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

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Description:

Highly potent melanocortin MC₄ receptor antagonist (K_i values are 0.29, 18.6, 5.45 and 3.29 nM for cloned human MC₄, MC₁, MC₃ and MC₅ receptors respectively). Increases food intake, and blocks α-MSH- and MTII-induced hypotension and bradycardia in rats, following central administration *in vivo*.

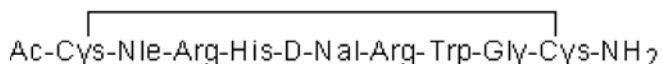
Physical and Chemical Properties:

Batch Molecular Formula: C₅₈H₇₉N₁₉O₁₀S₂

Batch Molecular Weight: 1266.5

Physical Appearance: White lyophilised solid

Peptide Sequence:



Storage: Desiccate at -20°C

Solubility & Usage Info:

Soluble to 0.50 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: 72% (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:

Jonsson *et al* (2002) Food conversion is transiently affected during 4-week chronic administration of melanocortin agonist and antagonist in rats. *J.Endocrinol.* **173** 517. PMID: 12065241.

Jonsson *et al* (2001) Melanocortin receptor agonist transiently increases oxygen consumption in rats. *Neuroreport* **12** 3703. PMID: 11726778.

Kask *et al* (1998) Discovery of a novel superpotent and selective melanocortin-4 receptor antagonist (HS024): evaluation *in vitro* and *in vivo*. *Endocrinology* **139** 5006. PMID: 9832440.

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