

Certificate of Analysis

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Product Name: Metastin (human)

Catalog No.: 1443

Batch No.: 10

CAS Number: 374683-24-6

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₅₈H₄₀₁N₇₉O₇₈
Batch Molecular Weight: 5857.49
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Gly-Thr-Ser-Leu-Ser-Pro-Pro-Pro-Glu-Ser-Ser-Gly-Ser-Arg-Gln-Gln-Pro-Gly-Leu-Ser-Ala-Pro-His-Ser-Arg-Gln-Ile-Pro-Ala-Pro-Gln-Gly-Ala-Val-Leu-Val-Gln-Arg-Glu-Lys-Asp-Leu-Pro-Asn-Tyr-Asn-Trp-Asn-Ser-Phe-Gly-Leu-Arg-Phe-NH₂

2. ANALYTICAL DATA

HPLC: Shows 96.8% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

| Amino Acid Theoretical Actual | | | Amino Acid Theoretical Actual | | |
|-------------------------------|------|------|-------------------------------|------|--------------|
| Ala | 3.00 | 2.90 | Lys | 1.00 | 1.01 |
| Arg | 4.00 | 4.00 | Met | | |
| Asx | 4.00 | 3.60 | Phe | 2.00 | 1.99 |
| Cys | | | Pro | 8.00 | 7.97 |
| Glx | 7.00 | 6.95 | Ser | 8.00 | 7.79 |
| Gly | 5.00 | 4.99 | Thr | 1.00 | 0.95 |
| His | 1.00 | 0.97 | Trp | 1.00 | Not Detected |
| Ile | 1.00 | 0.95 | Tyr | 1.00 | 1.11 |
| Leu | 5.00 | 5.04 | Val | 2.00 | 2.08 |

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

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Product Name: Metastin (human)

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Description:

Metastin (human) is a potent endogenous ligand of the kisspeptin receptor (KISS1, GPR54). Binds with high affinity to rat and human KISS1 receptors with K_i values of 1.80 and 1.45 nM respectively. Inhibits chemotaxis, invasion and metastasis of human melanomas and breast carcinomas. Stimulates gonadotropin secretion following i.c.v. administration.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{258}H_{401}N_{79}O_{78}$

Batch Molecular Weight: 5857.49

Physical Appearance: White lyophilised solid

Peptide Sequence:

Gly-Thr-Ser-Leu-Ser-Pro-Pro-Pro-Glu-Ser-
Ser-Gly-Ser-Arg-Gln-Gln-Pro-Gly-Leu-Ser-
Ala-Pro-His-Ser-Arg-Gln-Ile-Pro-Ala-Pro-
Gln-Gly-Ala-Val-Leu-Val-Gln-Arg-Glu-Lys-
Asp-Leu-Pro-Asn-Tyr-Asn-Trp-Asn-Ser-Phe-
Gly-Leu-Arg-Phe-NH₂

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:

Gottsch *et al* (2004) A role for kisspeptins in the regulation of g.tropin secretion in the mouse. *Endocrinology* **145** 4073. PMID: 15217982.

Kotani *et al* (2001) The metastasis suppressor gene KiSS-1 encodes kisspeptins, the natural ligands of the orphan G protein-coupled receptor GPR54. *J.Biol.Chem.* **276** 34631. PMID: 11457843.

Ohtaki *et al* (2001) Metastasis suppressor gene *KiSS-1* encodes peptide ligand of a G-protein-coupled receptor. *Nature* **411** 613. PMID: 11385580.

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