

Certificate of Analysis

Product Name: Neuropeptide W-23 (human)

Catalog No.: 3009

Batch No.: 4

CAS Number: 383415-79-0

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₁₉ H ₁₈₃ N ₃₅ O ₂₈ S
Batch Molecular Weight:	2584.03
Physical Appearance:	White lyophilised solid
Net Peptide Content:	73%
Counter Ion:	TFA
Solubility:	Soluble to 1 mg/ml in water
Storage:	Desiccate at -20°C
Peptide Sequence:	Trp-Tyr-Lys-His-Val-Ala-Ser-Pro-Arg-Tyr-His-Thr-Val-Gly-Arg-Ala-Ala-Gly-Leu-Leu-Met-Gly-Leu

2. ANALYTICAL DATA

HPLC:	Shows 95.2% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala	3.00	2.89	Lys	1.00	1.00
Arg	2.00	2.00	Met	1.00	0.98
Asx			Phe		
Cys			Pro	1.00	1.02
Glx			Ser	1.00	0.75
Gly	3.00	2.99	Thr	1.00	0.86
His	2.00	1.98	Trp		
Ile			Tyr	2.00	1.96
Leu	3.00	3.02	Val	2.00	2.17

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

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CAS Number: 383415-79-0

Description:

Endogenous peptide agonist of Neuropeptide B/Neuropeptide W receptors NPBW1 and NPBW2 (previously known as GPR7 and GPR8 respectively). Increases food intake following injection into the paraventricular nucleus.

Physical and Chemical Properties:Batch Molecular Formula: C₁₁₉H₁₈₃N₃₅O₂₈S

Batch Molecular Weight: 2584.03

Physical Appearance: White lyophilised solid

Peptide Sequence:

Trp-Tyr-Lys-His-Val-Ala-Ser-Pro-Arg-Tyr-
His-Thr-Val-Gly-Arg-Ala-Ala-Gly-Leu-Leu-
Met-Gly-Leu

Storage: Desiccate at -20°C**Solubility & Usage Info:**

Soluble to 1 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: 73% (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:

Hondo et al (2008) The NPB/NPW neuropeptide system and its role in regulating energy homeostasis, pain, and emotion. *Results Probl. Cell Differ.* **46** 239. PMID: 18204824.

Levine et al (2005) Injection of neuropeptide W into paraventricular nucleus of hypothalamus increases food intake. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* **288** R1727. PMID: 15886360.

Brezillon et al (2003) Identification of natural ligands for the orphan G protein-coupled receptors GPR7 and GPR8. *J. Biol. Chem.* **278** 776. PMID: 12401809.

Shimomura et al (2002) Identification of neuropeptide W as the endogenous ligand for orphan G-protein-coupled receptors GPR7 and GPR8. *J. Biol. Chem.* **277** 35826. PMID: 12130646.

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