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Certificate of Analysis

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Product Name: **Neuromedin U (rat)** **Catalog No.: 1917** **Batch No.: 5**
CAS Number: 117505-80-3

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	$C_{124}H_{180}N_{34}O_{31}$
Batch Molecular Weight:	2643
Physical Appearance:	White lyophilised solid
Net Peptide Content:	75%
Counter Ion:	TFA
Solubility:	Soluble to 1 mg/ml in water
Storage:	Desiccate at -20°C
Peptide Sequence:	Tyr-Lys-Val-Asn-Glu-Tyr-Gln-Gly-Pro-Val-Ala-Pro-Ser-Gly-Gly-Phe-Phe-Leu-Phe-Arg-Pro-Arg-Asn-NH_2

2. ANALYTICAL DATA

HPLC:	Shows 96.4% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala	1.00	1.06	Lys	1.00	0.95
Arg	2.00	2.04	Met		
Asx	2.00	1.94	Phe	3.00	3.10
Cys			Pro	3.00	3.01
Glx	2.00	1.92	Ser	1.00	1.00
Gly	3.00	3.06	Thr		
His			Trp		
Ile			Tyr	2.00	1.99
Leu	1.00	1.04	Val	2.00	1.95

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CAS Number: 117505-80-3

Description:

Endogenous peptide regulating blood pressure, ion transport in the gut, mesenteric blood flow and adrenocortical function. Also decreases food intake and body weight, increases body temperature and heat production, and inhibits gastric acid secretion via the CRH system following central administration in vivo.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{124}H_{180}N_{34}O_{31}$

Batch Molecular Weight: 2643

Physical Appearance: White lyophilised solid

Peptide Sequence:

Tyr-Lys-Val-Asn-Glu-Tyr-Gln-Gly-Pro-Val-Ala-Pro-Ser-Gly-Gly-Phe-Phe-Leu-Phe-Arg-Pro-Arg-Asn-NH_2

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: 75% (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 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:

Mondal *et al* (2003) Neuromedin U acts in the cental nervous system to inhibit gastric acid secretion via CRH system. Am.J.Physiol.Gastrointest.Liver Physiol. ***284*** G963. PMID: 12584108.

Szekeres *et al* (2000) Neuromedin U is a potent agonist at the orphan G protein-coupled receptor FM3. J.Biol.Chem. ***275*** 20247. PMID: 10811630.

Minamino *et al* (1985) Neuromedin U-8 and U-25: novel uterus stimulating and hypertensive peptides identified in porcine spinal cord. Biochem.Biophys.Res.Commun. ***130*** 1078. PMID: 3841690.

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