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Certificate of Analysis

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Product Name: **Neuromedin N (rat, mouse, porcine, canine)** **Catalog No.: 1907** **Batch No.: 2**
CAS Number: 92169-45-4

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	$C_{38}H_{63}N_7O_8$
Batch Molecular Weight:	745.96
Physical Appearance:	White lyophilised solid
Net Peptide Content:	69.7%
Counter Ion:	TFA Salt
Solubility:	Soluble to 0.50 mg/ml in water
Storage:	Desiccate at -20°C
Peptide Sequence:	Lys-Ile-Pro-Tyr-Ile-Leu

2. ANALYTICAL DATA

HPLC:	Shows 99.7% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala			Lys	1.00	1.05
Arg			Met		
Asx			Phe		
Cys			Pro	1.00	0.97
Glx			Ser		
Gly			Thr		
His			Trp		
Ile	2.00	1.91	Tyr	1.00	1.01
Leu	1.00	1.04	Val		

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CAS Number: 92169-45-4

Description:

Endogenous neurotensin-like neuropeptide, originally isolated from porcine spinal cord. Binds to neurotensin receptors (IC_{50} = 16.7 nM for inhibition of [Trp^{11}]-NT binding to rat brain receptors). Regulates guinea pig intestinal smooth muscle contraction and produces hypotension in rats. Also induces hypothermia following central administration in rats in vivo.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{38}H_{63}N_7O_8$

Batch Molecular Weight: 745.96

Physical Appearance: White lyophilised solid

Peptide Sequence:

Lys-Ile-Pro-Tyr-Ile-Leu

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: 69.7% (Remaining weight made up of counterions and residual water).

Counter Ion: TFA Salt

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:

Minamino *et al* (1984) Neuromedin N: a novel neurotensin-like peptide identified in porcine spinal cord. Biochem.Biophys.Res.Commun. ***122*** 542. PMID: 6547840.

Checler *et al* (1986) Neuromedin N: high affinity interaction with neurotensin receptors and rapid inactivation by brain synaptic peptidases. Eur.J.Pharmacol. ***126*** 239. PMID: 3019713.

Dubuc *et al* (1988) Hypothermic effect of neuromedin N in mice and its potentiation by peptidase inhibitors. Eur.J.Pharmacol. ***151*** 117. PMID: 3416919.