

Certificate of Analysis

www.tocris.com

Product Name: [Nphe¹]Nociceptin(1-13)NH₂

Catalog No.: 1308

Batch No.: 10

CAS Number: 267234-08-2

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₆₁ H ₁₀₀ N ₂₂ O ₁₅
Batch Molecular Weight:	1381.6
Physical Appearance:	White lyophilised solid
Net Peptide Content:	66%
Counter Ion:	Trifluoroacetate
Solubility:	Soluble to 1 mg/ml in 10% acetonitrile
Storage:	Desiccate at -20°C
Peptide Sequence:	N-(Bn)Gly-Gly-Gly-Phe-Thr-Gly-Ala-Arg-Lys-Ser-Ala-Arg-Lys-NH ₂

2. ANALYTICAL DATA

HPLC:	Shows >96% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual	Amino Acid Theoretical		Actual
Ala	2.00	1.96	Lys	2.00	2.04
Arg	2.00	1.96	Met		
Asx			Phe	1.00	0.98
Cys			Pro		
Glx			Ser	1.00	1.00
Gly	3.00	3.09	Thr	1.00	1.00
His			Trp		
Ile			Tyr		
Leu			Val		

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

Product Name: [Nphe¹]Nociceptin(1-13)NH₂

Catalog No.: 1308

Batch No.: 10

CAS Number: 267234-08-2

Description:

Selective and competitive nociceptin receptor antagonist, devoid of any agonist activity. Binds selectively to recombinant nociceptin receptors (pK_i = 8.4), and competitively antagonizes the actions of nociceptin in vitro and in vivo.

Physical and Chemical Properties:

Batch Molecular Formula: C₆₁H₁₀₀N₂₂O₁₅

Batch Molecular Weight: 1381.6

Physical Appearance: White lyophilised solid

Peptide Sequence:

N-(Bn)Gly-Gly-Gly-Phe-Thr-Gly-Ala-Arg-Lys-
Ser-Ala-Arg-Lys-NH₂

Storage: Desiccate at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in 10% acetonitrile

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: 66% (Remaining weight made up of counterions and residual water).

Counter Ion: Trifluoroacetate

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:

Calo et al (2000) Characterization of [Nphe¹]nociceptin(1-13)NH₂, a new selective nociceptin receptor antagonist. *Br.J.Pharmacol.* **129** 1183. PMID: 10725267.

Hashimoto et al (2000) Antagonistic effects of [Nphe¹]nociceptin(1-13)NH₂ on nociceptin receptor mediated inhibition of cAMP formation in Chinese hamster ovary cells stably expressing the recombinant human nociceptin receptor. *Neurosci.Lett.* **278** 109. PMID: 10643813.

Pheng et al (2000) [Nphe¹]nociceptin-(1-13)NH₂ selectively antagonizes nociceptin effects in the rabbit isolated ileum. *Eur.J.Pharmacol.* **397** 383. PMID: 10844138.

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

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel: +1 612 379 2956