

Certificate of Analysis

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Product Name: [Lys⁵,MeLeu⁹,Nle¹⁰]-NKA(4-10)

Catalog No.: 3228

Batch No.: 2

CAS Number: 137565-28-7

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₃₉ H ₆₅ N ₉ O ₉
Batch Molecular Weight:	804
Physical Appearance:	White lyophilised solid
Net Peptide Content:	68%
Counter Ion:	TFA
Solubility:	Soluble to 1 mg/ml in water
Storage:	Desiccate at -20°C
Peptide Sequence:	Asp-Lys-Phe-Val-Gly-Leu(N-Me)-Nle-NH ₂

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				Lys	1.00	0.96
Arg				Met		
Asx	1.00	0.99		Phe	1.00	0.93
Cys				Pro		
Glx				Ser		
Gly	1.00	1.00		Thr		
His				Trp		
Ile				Tyr		
Leu				Val	1.00	1.00

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

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Catalog No.: 3228

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CAS Number: 137565-28-7

Description:

Highly selective and potent NK₂ receptor agonist (IC₅₀ = 6.1 nM). Induces contraction of the rat fundus and bladder (EC₅₀ values are 117 and 10 nM respectively).

Physical and Chemical Properties:

Batch Molecular Formula: C₃₉H₆₅N₉O₉

Batch Molecular Weight: 804

Physical Appearance: White lyophilised solid

Peptide Sequence:

Asp-Lys-Phe-Val-Gly-Leu(N-Me)-Nle-NH₂

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: 68% (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:

Burcher *et al* (2008) Tachykinin NK₂ receptor and functional mechanisms in human colon: changes with indomethacin and in diverticular disease and ulcerative colitis. *J.Pharmacol.Exp.Ther.* **324** 170. PMID: 17959748.

Matuszek *et al* (1998) An investigation of tachykinin NK₂ receptor subtypes in the rat. *Eur.J.Pharmacol.* **352** 103. PMID: 9718274.

Chassaing *et al* (1991) Selective agonists of NK-2 binding sites highly active on rat portal vein (NK-3 bioassay). *Neuropeptides* **19** 91. PMID: 1658676.

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