

Product Name: Spantide I

Catalog No.: 1784

Batch No.: 7

CAS Number: 91224-37-2

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₇₅H₁₀₈N₂₀O₁₃
Batch Molecular Weight: 1497.8
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: D-Arg-Pro-Lys-Pro-Gln-Gln-D-Trp-Phe-D-Trp-Leu-Leu-NH₂

2. ANALYTICAL DATA

HPLC: Shows 96.7% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala			Lys	1.00	0.98
Arg	1.00	1.03	Met		
Asx			Phe	1.00	0.81
Cys			Pro	2.00	2.03
Glx	2.00	1.95	Ser		
Gly			Thr		
His			Trp		
Ile			Tyr		
Leu	2.00	2.01	Val		

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Description:

Selective NK₁ receptor antagonist (K_i values are 230, 8150 and > 10000 nM for rat NK₁, NK₂ and NK₃ receptors respectively). Active in vivo.

Physical and Chemical Properties:

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Physical Appearance: White lyophilised solid

Peptide Sequence:

D-Arg-Pro-Lys-Pro-Gln-Gln-D-Trp-
Phe-D-Trp-Leu-Leu-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: 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 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:

Zubrzycka et al (2000) Comparison of antagonistic properties of substance P analogs, spantide I, II and III, on evoked tongue jerks in rats. *Endocr.Regul.* **34** 13. PMID: 10808247.

Beaujouan et al (1993) Higher potency of RP 67580, in the mouse and the rat compared with other nonpeptide and peptide tachykinin NK₁ antagonists. *Br.J.Pharmacol.* **108** 793. PMID: 7682138.

Folkers et al (1984) Biological evaluation of substance P antagonists. *Br.J.Pharmacol.* **83** 449. PMID: 6207886.

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