

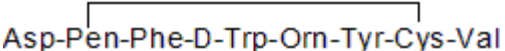
Certificate of Analysis

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Product Name: Urantide
CAS Number: 669089-53-6

Catalog No.: 5296 **Batch No.:** 1

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₅₁H₆₆N₁₀O₁₂S₂
Batch Molecular Weight: 1075.26
Physical Appearance: White lyophilised solid
Net Peptide Content: 72%
Counter Ion: TFA
Solubility: Soluble to 2 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: 

2. ANALYTICAL DATA

HPLC: Shows 98% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid		Theoretical	Actual	Amino Acid		Theoretical	Actual
Ala				Lys			
Arg				Met			
Asx	1.00	0.96	Phe	1.00	0.82		
Cys			Pro				
Glx			Ser				
Gly			Thr				
His			Trp				
Ile			Tyr	1.00	1.01		
Leu			Val	1.00	1.02		

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

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Description:

Selective and competitive urotensin-II (UT) receptor antagonist ($pK_B = 8.3$). Blocks hU-II induced contractions in thoracic aorta ex vivo. Exhibits no effect on noradrenaline or endothelin 1-induced contraction or on acetylcholine-induced relaxation. Behaves as a partial agonist in a calcium mobilization assay (in CHO cells expressing hUT receptors).

Physical and Chemical Properties:

Batch Molecular Formula: $C_{51}H_{66}N_{10}O_{12}S_2$
Batch Molecular Weight: 1075.26
Physical Appearance: White lyophilised solid

Peptide Sequence:

Asp-Pen-Phe-D-Trp-Orn-Tyr-Cys-Val

Storage: Store at $-20^{\circ}C$

Solubility & Usage Info:

Soluble to 2 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: 72% (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 $45-60^{\circ}C$ 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 $-20^{\circ}C$. 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 $0.2 \mu m$ filter to remove potential bacterial contamination whenever possible.

References:

Patacchini et al (2003) Urantide: an ultrapotent urotensin II antagonist peptide in the rat aorta. *Br.J.Pharmacol.* **140** 1155. PMID: 14645137.

Carotenuto et al (2014) Lead optimization of P5U and urantide: discovery of novel potent ligands at the urotensin-II receptor. *J.Med.Chem.* **57** 5965. PMID: 24992374.

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