

# Certificate of Analysis

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**Product Name:** Astressin  
CAS Number: 170809-51-5

**Catalog No.:** 1606 **Batch No.:** 8

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>161</sub>H<sub>269</sub>N<sub>49</sub>O<sub>42</sub>  
**Batch Molecular Weight:** 3563.2  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 83%  
**Counter Ion:** TFA  
**Solubility:** Soluble to 1 mg/ml in 10% Acetic acid / water  
**Storage:** Store at -20°C  
**Peptide Sequence:** D-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Nle-Ala-Arg-Ala-Glu-Gln-Leu-Ala-Gln-cyclo-(-γ-Glu-Ala-His-ε-Lys)-Asn-Arg-Lys-Leu-Nle-Glu-Ile-Ile-NH<sub>2</sub>

## 2. ANALYTICAL DATA

**HPLC:** Shows 97.3% purity  
**Mass Spectrum:** Consistent with structure

## 3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual		Amino Acid Theoretical		Actual	
Ala	4.00	3.87	Lys	2.00	1.98		
Arg	3.00	3.01	Met				
Asx	1.00	1.02	Phe	1.00	0.98		
Cys			Pro				
Glx	7.00	7.16	Ser				
Gly			Thr				
His	2.00	2.03	Trp				
Ile	2.00	1.76	Tyr				
Leu	5.00	4.87	Val	1.00	1.06		

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

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**Product Name:** Astressin  
CAS Number: 170809-51-5

**Catalog No.:** 1606 **Batch No.:** 8

**Description:**

Potent corticotropin-releasing factor (CRF) receptor antagonist ( $K_i$  values are 2, 1.5 and 1 nM at CRF<sub>1</sub>, CRF<sub>2α</sub> and CRF<sub>2β</sub>). Reduces ACTH secretion, blocks delayed gastric emptying and is neuroprotective in vivo.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>161</sub>H<sub>269</sub>N<sub>49</sub>O<sub>42</sub>  
Batch Molecular Weight: 3563.2  
Physical Appearance: White lyophilised solid

**Peptide Sequence:**

D-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Nle-  
Ala-Arg-Ala-Glu-Gln-Leu-Ala-Gln-cyclo-( $\gamma$ -Glu-Ala-  
His- $\epsilon$ -Lys)-Asn-Arg-Lys-Leu-Nle-Glu-Ile-Ile-NH<sub>2</sub>

**Storage:** Store at -20°C

**Solubility & Usage Info:**

Soluble to 1 mg/ml in 10% Acetic acid / 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:** 83% (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  $\mu$ m filter to remove potential bacterial contamination whenever possible.

**Licensing Information:**

Sold with the permission of the SALK Institute

**References:**

- Martinez et al** (1999) Peripheral injection of a new corticotropin-releasing factor (CRF) antagonist, astressin, blocks peripheral CRF- and abdominal surgery-induced delayed gastric emptying in rats. *J.Pharmacol.Exp.Ther.* **290** 629. PMID: 10411571.  
**Perrin and Vale** (1999) Corticotropin releasing factor receptors and their ligand family. *Ann.N.Y.Acad.Sci.* **885** 312. PMID: 10816663.  
**Maecker et al** (1997) Astressin, a novel and potent CRF antagonist, is neuroprotective in the hippocampus when administered after a seizure. *Brain Res.* **744** 166. PMID: 9030428.  
**Gulyas et al** (1995) Potent, structurally constrained agonists and competitive antagonists of corticotropin-releasing factor. *Proc.Natl.Acad.Sci.U.S.A.* **92** 10575. PMID: 7479843.

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