

## Certificate of Analysis

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**Product Name:** [Ac-Tyr<sup>1</sup>,D-Phe<sup>2</sup>]GRF 1-29, amide (human)

**Catalog No.:** 1172

**Batch No.:** 5

**CAS Number:** 93965-89-0

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>157</sub>H<sub>252</sub>N<sub>44</sub>O<sub>43</sub>S  
**Batch Molecular Weight:** 3475  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 90%  
**Solubility:** Soluble to 2 mg/ml in water  
**Storage:** Desiccate at -20°C  
**Peptide Sequence:** Ac-Tyr-D-Phe-Asp-Ala-Ile-Phe-Thr-Asn-Ser-  
 Tyr-Arg-Lys-Val-Leu-Gly-Gln-Leu-Ser-Ala-  
 Arg-Lys-Leu-Leu-Gln-Asp-Ile-Met-Ser-Arg-NH<sub>2</sub>

### 2. ANALYTICAL DATA

**HPLC:** Shows >95% purity  
**Mass Spectrum:** Consistent with structure

### 3. AMINO ACID ANALYSIS DATA

Amino Acid		Theoretical	Actual	Amino Acid		Theoretical	Actual
Ala	2.00	1.85	Lys	2.00	2.04		
Arg	3.00	3.03	Met	1.00	1.01		
Asx	3.00	2.87	Phe	2.00	2.16		
Cys			Pro				
Glx	2.00	1.83	Ser	3.00	3.00		
Gly	1.00	0.98	Thr	1.00	0.97		
His			Trp				
Ile	2.00	2.20	Tyr	2.00	2.20		
Leu	4.00	3.85	Val	1.00	1.20		

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

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**Description:**

VIP receptor antagonist; inhibits [<sup>125</sup>I]iodo-VIP binding and selectively inhibits VIP- and GRF-induced effects on adenylyl cyclase.

**Physical and Chemical Properties:**Batch Molecular Formula: C<sub>157</sub>H<sub>252</sub>N<sub>44</sub>O<sub>43</sub>S

Batch Molecular Weight: 3475

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

Ac-Tyr-D-Phe-Asp-Ala-Ile-Phe-Thr-Asn-Ser-  
Tyr-Arg-Lys-Val-Leu-Gly-Gln-Leu-Ser-Ala-  
Arg-Lys-Leu-Leu-Gln-Asp-Ile-Met-Ser-Arg-NH<sub>2</sub>

**Storage:** Desiccate at -20°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:** 90% (Remaining weight made up of counterions and residual water).**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:**

**Waelbroeck et al** (1985) Interaction of growth hormone-releasing factor (GRF) and 14 GRF analogs with vasoactive intestinal peptide (VIP) receptors of rat pancreas. Discovery of (N-Ac-Tyr<sup>1</sup>,D-Phe<sup>2</sup>)-GRF(1-29)-NH<sub>2</sub> as a VIP antagonist. *Endocrinology* **116** 2643. PMID: 2859987.

**Nowak et al** (1994) Evidence that endogenous vasoactive intestinal peptide (VIP) is involved in the regulation of rat pituitary-adrenocortical function: in vivo studies with a VIP antagonist. *Neuropeptides* **27** 297. PMID: 7862261.

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