

Certificate of Analysis

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Product Name: AF 12198
CAS Number: 185413-30-3

Catalog No.: 1793 **Batch No.:** 6

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₉₆H₁₂₃N₁₉O₂₂
Batch Molecular Weight: 1895.14
Physical Appearance: White lyophilised solid
Net Peptide Content: 93%
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in 10% ethanol/PBS
Storage: Desiccate at -20°C
Peptide Sequence: Ac-Phe-Glu-Trp-Thr-Pro-Gly-Trp-Tyr-Gln-Aze-Tyr-Ala-Leu-Pro-Leu-NH₂

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		1.00	0.98	Lys			
Arg				Met			
Asx				Phe	1.00	1.01	
Cys				Pro	2.00	1.85	
Glx	2.00	2.04		Ser			
Gly	1.00	1.00		Thr	1.00	1.00	
His				Trp	2.00	Detected	
Ile				Tyr	2.00	2.05	
Leu	2.00	2.07		Val			

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

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Description:

Potent and selective antagonist for the human type I interleukin-1 (IL-1) receptor (IC₅₀ values are 8 nM, > 6.7 mM and > 200 mM for human type I, human type II and murine type I IL-1 receptors respectively). Blocks IL-1-induced expression of ICAM-1 and E-selectin in HUVECs and IL-1β induction of IL-8 in human dermal fibroblasts. Reduces IL-1β-induced IL-6 production and exhibits anti-inflammatory activity *in vivo*.

Physical and Chemical Properties:

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Ac-Phe-Glu-Trp-Thr-Pro-Gly-Trp-Tyr-Gln-
Aze-Tyr-Ala-Leu-Pro-Leu-NH₂

Storage: Desiccate at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in 10% ethanol/PBS

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: 93% (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:

Aimbire *et al* (2008) Low level laser therapy (LLLT) decreases pulmonary microvascular leakage, neutrophil influx and IL-1β levels in airway and lung from rat subjected to LPS-induced inflammation. *Inflammation* **31** 189. PMID: 18421573.

Akeson *et al* (1996) AF12198, a novel low molecular weight antagonist, selectively binds the human type I interleukin (IL)-1 receptor and blocks *in vivo* responses to IL-1. *J.Biol.Chem.* **271** 30517. PMID: 8940020.

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