

Product Name: AC 253
CAS Number: 151804-79-4

Catalog No.: 6550 **Batch No.:** 1

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₂₂H₁₉₆N₄₀O₃₉
Batch Molecular Weight: 2847.11
Physical Appearance: White lyophilised solid
Net Peptide Content: 78%
Counter Ion: TFA
Solubility: Soluble to 2 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Ac-Leu-Gly-Arg-Leu-Ser-Gln-Glu-Leu-His-Arg-Leu-Gln-Thr-Tyr-Pro-Arg-Thr-Asn-Thr-Gly-Ser-Asn-Thr-Tyr-NH₂

2. ANALYTICAL DATA

HPLC: Shows 98.3% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala			Lys		
Arg	3.00	2.83	Met		
Asx	2.00	1.98	Phe		
Cys			Pro	1.00	1.01
Glx	3.00	2.99	Ser	2.00	2.02
Gly	2.00	1.99	Thr	4.00	3.88
His	1.00	0.99	Trp		
Ile			Tyr	2.00	1.98
Leu	4.00	4.05	Val		

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

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Description:

AC 253 is an amylin (AMY₃) receptor antagonist. Inhibits adrenomedulin-stimulated cAMP production in vitro. Protects against oligomeric Aβ-induced increase in intracellular Ca²⁺, activation of PKA, MAPK, Akt and cFOS and cell death in neuronal cell culture. Blocks electrophysiological effects of Aβ in vitro. Cyclic AC 253 (Cat.No. 6550) also available.

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Ac-Leu-Gly-Arg-Leu-Ser-Gln-Glu-Leu-His-Arg-Leu-Gln-Thr-Tyr-Pro-Arg-Thr-Asn-Thr-Gly-Ser-Asn-Thr-Tyr-NH₂

Storage: Store 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: 78% (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:

Fu et al (2012) Amyloid β (Aβ) peptide directly activates amylin-3 receptor subtype by triggering multiple intracellular signaling pathways. *J.Biol.Chem.* **287** 18820. PMID: 22500019.

Jhamandas et al (2011) Actions of β-amyloid protein on human neurons are expressed through the amylin receptor. *Am.J.Pathol.* **178** 140. PMID: 21224052.

Coppock et al (1999) Rat-2 fibroblasts express specific adrenomedullin receptors, but not calcitonin-gene-related-peptide receptors, which mediate increased intracellular cAMP and inhibit mitogen-activated protein kinase activity. *Biochem.J.* **338** 15. PMID: 9931292.

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