TOCRIS bioscience

Print Date: Oct 9th 2014

Certificate of Analysis

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Product Name: **AC 187** **Catalog No.: 3419** **Batch No.: 5**

CAS Number: 151804-77-2

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{127}H_{205}N_{37}O_{40}$

Batch Molecular Weight: 2890.25

Physical Appearance: White lyophilised solid

Net Peptide Content: 79%

Counter Ion: TFA

Solubility: Soluble to 1 mg/ml in water

Storage: Desiccate at -20°C

Peptide Sequence: Ac-Val-Leu-Gly-Lys-Leu-Ser-Gln-Glu-Leu-His-Lys-Leu-Gln-Thr-Tyr-Pro-Arg-Thr-Asn-Thr-Gly-Ser-Asn-Thr-Tyr-NH_2

2. ANALYTICAL DATA

HPLC: Shows 96% purity

Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala			Lys	2.00	1.96
Arg	1.00	1.01	Met		
Asx	2.00	2.02	Phe		
Cys			Pro	1.00	1.02
Glx	3.00	3.06	Ser	2.00	1.95
Gly	2.00	1.99	Thr	4.00	3.74
His	1.00	0.97	Trp		
Ile			Tyr	2.00	1.95
Leu	4.00	3.70	Val	1.00	0.99

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Description:

Orally active, potent amylin receptor antagonist (IC_{50} = 0.48 nM) that displays 38-fold and 400-fold selectivity over calcitonin and CGRP receptors respectively. Blocks amyloid β-induced neurotoxicity by attenuating the activation of initiator and effector caspases in vitro. Increases glucagon secretion, accelerates gastric emptying, alters plasma glucose levels and increases food intake in vivo.

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Storage: Desiccate at -20°C

Solubility & Usage Info:

Soluble to 1 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: 79% (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 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:

Jhamandas and MacTavish (2004) Antagonist of the amylin receptor blocks β-amyloid toxicity in rat cholinergic basal forebrain neurons. J.Neurosci. ***24*** 5579. PMID: 15201330.

Reidelberger *et al* (2004) Amylin receptor blockade stimulates food intake in rats. Am.J.Physiol.Inter.Comp.Physiol. ***287*** R568.

Gedulin *et al* (2006) Role of endogenous amylin in glucagon secretion and gastric emptying in rats demonstrated with the selective antagonist, AC187. Regul.Pept. ***137*** 121. PMID: 16914214.