

Certificate of Analysis

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Product Name: Amyloid β -Peptide (12-28) (human)

Catalog No.: 1894

Batch No.: 2

CAS Number: 107015-83-8

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₈₉ H ₁₃₅ N ₂₅ O ₂₅
Batch Molecular Weight:	1955.2
Physical Appearance:	White lyophilised solid
Net Peptide Content:	73%
Counter Ion:	TFA
Solubility:	Soluble to 0.70 mg/ml in water
Storage:	Desiccate at -20°C
Peptide Sequence:	Val-His-His-Gln-Lys-Leu-Val-Phe-Phe-Ala-Glu-Asp-Val-Gly-Ser-Asn-Lys

2. ANALYTICAL DATA

HPLC:	Shows 97.1% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala	1.00	1.01	Lys	2.00	1.96
Arg			Met		
Asx	2.00	2.02	Phe	2.00	2.09
Cys			Pro		
Glx	2.00	2.01	Ser	1.00	0.89
Gly	1.00	1.01	Thr		
His	2.00	1.96	Trp		
Ile			Tyr		
Leu	1.00	1.00	Val	3.00	2.95

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

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CAS Number: 107015-83-8

Description:

Amyloid β -peptide fragment; minimum section required to bind to brain proteins. Binds with high affinity to $\alpha 7$ -nicotinic ACh receptors, and impairs memory retention following central administration in mice *in vivo*.

Physical and Chemical Properties:Batch Molecular Formula: C₈₉H₁₃₅N₂₅O₂₅

Batch Molecular Weight: 1955.2

Physical Appearance: White lyophilised solid

Peptide Sequence:

Val-His-His-Gln-Lys-Leu-Val-Phe-Phe-Ala-
Glu-Asp-Val-Gly-Ser-Asn-Lys

Storage: Desiccate at -20°C**Solubility & Usage Info:**

Soluble to 0.70 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: 73% (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 μ m filter to remove potential bacterial contamination whenever possible.

References:

Flood *et al* (1994) An amyloid β -protein fragment, A b[12-28], equipotent impairs post-training memory processing when injected into different limbic system structures. *Brain Res.* **663** 271. PMID: 7874511.

Ray *et al* (1998) Binding of amyloid b-protein to intracellular brain proteins in rat and human. *Neurochem.Res.* **23** 1277. PMID: 9804283.

Freir and Herron (2003) Nicotine enhances the depressive actions of A β 1-40 on long-term potentiation in the rat hippocampal CA1 region *in vivo*. *J.Neurophysiol.* **89** 2917. PMID: 12611941.

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