

Certificate of Analysis

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Product Name: Amyloid β -Peptide (1-42) (human)

Catalog No.: 1428

Batch No.: 36

CAS Number: 107761-42-2

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₀₃H₃₁₁N₅₅O₆₀S
Batch Molecular Weight: 4514.08
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in 50mM Tris buffer
Storage: Store at -20°C
Peptide Sequence: Asp-Ala-Glu-Phe-Arg-His-Asp-Ser-Gly-Tyr-
 Glu-Val-His-His-Gln-Lys-Leu-Val-Phe-Phe-
 Ala-Glu-Asp-Val-Gly-Ser-Asn-Lys-Gly-Ala-
 Ile-Ile-Gly-Leu-Met-Val-Gly-Gly-Val-Val-
 Ile-Ala

2. ANALYTICAL DATA

HPLC: Shows 98.1 % purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala	4.00	3.87	Lys	2.00	2.01
Arg	1.00	1.01	Met	1.00	1.01
Asx	4.00	3.99	Phe	3.00	3.02
Cys			Pro		
Glx	4.00	4.03	Ser	2.00	1.22
Gly	6.00	6.05	Thr		
His	3.00	2.98	Trp		
Ile	3.00	2.93	Tyr	1.00	1.03
Leu	2.00	2.01	Val	6.00	5.66

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

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Product Name: Amyloid β -Peptide (1-42) (human)

Catalog No.: 1428

36

CAS Number: 107761-42-2

Description:

Amyloid β -Peptide (1-42) (human) is a human form of the predominant amyloid β -peptide found in the brains of patients with Alzheimer's disease. Downregulates bcl-2 and increases the levels of bax. Neurotoxic. Control Peptide also available.

Physical and Chemical Properties:

Batch Molecular Formula: C₂₀₃H₃₁₁N₅₅O₆₀S

Batch Molecular Weight: 4514.08

Physical Appearance: White lyophilised solid

Peptide Sequence:

Asp-Ala-Glu-Phe-Arg-His-Asp-Ser-Gly-Tyr-
Glu-Val-His-His-Gln-Lys-Leu-Val-Phe-Phe-
Ala-Glu-Asp-Val-Gly-Ser-Asn-Lys-Gly-Ala-
Ile-Ile-Gly-Leu-Met-Val-Gly-Gly-Val-Val-
Ile-Ala

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in 50mM Tris buffer

CAUTION - This product, once dissolved, may aggregate on standing. This product is supplied in lyophilized form. It may appear as a solid, gel or film and 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.

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:

Paradis *et al* (1996) Amyloid beta peptide of Alzheimer's disease downregulates bcl-2 and upregulates bax expression in human neurons. *J. Neurosci.* **16** 7533. PMID: 8922409.

Van Nostrand *et al* (1996) Amyloid β -protein induces the cerebrovascular cellular pathology of Alzheimer's disease and related disorders. *Ann. N.Y. Acad. Sci.* **777** 297. PMID: 8624102.

Glennier and Wong (1984) Alzheimer's disease: initial report of the purification and characterization of a novel cerebrovascular amyloid protein. *Biochem. Biophys. Res. Commun.* **120** 885. PMID: 6375662.

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