

Certificate of Analysis

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Product Name: Amyloid β -peptide (1-42) (rat)

Catalog No.: 2425

Batch No.: 10

CAS Number: 166090-74-0

1. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---------------------------------|---|
| Batch Molecular Formula: | C ₁₉₉ H ₃₀₇ N ₅₃ O ₅₉ S |
| Batch Molecular Weight: | 4417.99 |
| Physical Appearance: | White lyophilised solid |
| Counter Ion: | TFA |
| Solubility: | Soluble to 1 mg/ml in 0.1% Ammonia |
| Storage: | Store at -20°C |
| Peptide Sequence: | Asp-Ala-Glu-Phe-Gly-His-Asp-Ser-Gly-Phe- Glu-Val-Arg-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 95.1% purity |
| Mass Spectrum: | Consistent with structure |

3. AMINO ACID ANALYSIS DATA

| Amino Acid Theoretical Actual | | | Amino Acid Theoretical Actual | | |
|-------------------------------|------|------|-------------------------------|------|------|
| Ala | 4.00 | 3.83 | Lys | 2.00 | 1.97 |
| Arg | 1.00 | 0.99 | Met | 1.00 | 1.00 |
| Asx | 4.00 | 4.06 | Phe | 4.00 | 3.98 |
| Cys | | | Pro | | |
| Glx | 4.00 | 4.03 | Ser | 2.00 | 1.41 |
| Gly | 7.00 | 7.18 | Thr | | |
| His | 2.00 | 1.96 | Trp | | |
| Ile | 3.00 | 2.74 | Tyr | | |
| Leu | 2.00 | 1.99 | Val | 6.00 | 5.47 |

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

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Product Name: Amyloid β -peptide (1-42) (rat)

Catalog No.: 2425

10

CAS Number: 166090-74-0

Description:

Amyloid β -peptide (1-42) (rat) is a rat form of the predominant amyloid β -peptide found in plaques associated with Alzheimer's disease. Leads to a large shift in the bax/bcl-2 ratio in favour of pro-apoptotic bax. Neurotoxic.

Physical and Chemical Properties:

Batch Molecular Formula: C₁₉₉H₃₀₇N₅₃O₅₉S

Batch Molecular Weight: 4417.99

Physical Appearance: White lyophilised solid

Peptide Sequence:

Asp-Ala-Glu-Phe-Gly-His-Asp-Ser-Gly-Phe-
Glu-Val-Arg-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 0.1% Ammonia

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.

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:

Clementi *et al* (2006) Alzheimer's amyloid β -peptide (1-42) induces cell death in human neuroblastoma via bax/bcl-2 ratio increase: An intriguing role for methionine 35. *Biochem.Biophys.Res.Comm.* **342** 206.

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.

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

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