

Certificate of Analysis

Product Name: Amyloid β -peptide (1-40) (rat)

Catalog No.: 2424

Batch No.: 3

CAS Number: 144409-98-3

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₉₀ H ₂₉₁ N ₅₁ O ₅₇ S
Batch Molecular Weight:	4233.76
Physical Appearance:	White lyophilised solid
Net Peptide Content:	100%
Counter Ion:	TFA
Solubility:	Soluble to 1 mg/ml in 1% Ammonia
Storage:	Desiccate 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

2. ANALYTICAL DATA

HPLC:	Shows >95% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala	3.00	3.10	Lys	2.00	2.00
Arg	1.00	0.90	Met	1.00	1.00
Asx	4.00	4.20	Phe	4.00	4.00
Cys			Pro		
Glx	4.00	4.30	Ser	2.00	2.00
Gly	7.00	7.50	Thr		
His	2.00	2.10	Trp		
Ile	2.00	1.30	Tyr		
Leu	2.00	2.10	Val	6.00	5.70

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

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Description:

Rat form of the amyloid β -peptide found in plaques associated with Alzheimer's disease. Shown to have both neurotrophic and neurotoxic effects.

Physical and Chemical Properties:

Batch Molecular Formula: C₁₉₀H₂₉₁N₅₁O₅₇S

Batch Molecular Weight: 4233.76

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

Storage: Desiccate at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in 1% Ammonia

Net Peptide Content: 100% (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:

Miguel-Hidalgo and Cacabelos (1998) Beta-amyloid(1-40)-induced neurodegeneration in the rat hippocampal neurons of the CA1 subfield. *Acta Neuropathol.* **95** 455. PMID: 9600591.

Cleary et al (1995) Beta-amyloid(1-40) effects on behavior and memory. *Brain Res.* **682** 69. PMID: 7552329.

Kowalska and Badellino (1994) β -Amyloid protein induces platelet aggregation and supports platelet adhesion. *Biochem. Biophys. Res. Comm.* **205** 1829.

Yankner et al (1990) Neurotrophic and neurotoxic effects of amyloid beta protein: reversal by tachykinin neuropeptides. *Science* **250** 279. PMID: 2218531.

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