Certificate of Analysis

Product Name: **Amyloid β-peptide (42-1) (human)** **Catalog No.: 3391** **Batch No.: 7**

CAS Number: 317366-82-8

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	$C_{203}H_{311}N_{55}O_{60}S$
Batch Molecular Weight:	4514.08
Physical Appearance:	White lyophilised solid
Net Peptide Content:	90%
Counter Ion:	96.63%
Solubility:	Soluble to 0.50 mg/ml in water
Storage:	Store at -20°C
Peptide Sequence:	Ala-Ile-Val-Val-Gly-Gly-Val-Met-Leu-Gly-Ile-Ile-Ala-Gly-Lys-Asn-Ser-Gly-Val-Asp-Glu-Ala-Phe-Phe-Val-Leu-Lys-Gln-His-His-Val-Glu-Tyr-Gly-Ser-Asp-His-Arg-Phe-Glu-Ala-Asp

2. ANALYTICAL DATA

HPLC:	Shows 96.63% purity

Product Name: **Amyloid β-peptide (42-1) (human)** **Catalog No.: 3391** **Batch No.: 7**

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Description:

Inactive control peptide for amyloid β-peptide (1-42), the predominant form of amyloid β-peptide found in the brains of patients with Alzheimer's disease. Active Analog also available.

Physical and Chemical Properties:

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Batch Molecular Weight: 4514.08

Physical Appearance: White lyophilised solid

Peptide Sequence:

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

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 0.50 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: 90% (Remaining weight made up of counterions and residual water).

Counter Ion: 96.63%

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:

Xiong *et al* (2007) Mitochondrial respiratory inhibition and oxidative stress elevate β-secretase (BACE1) proteins and activity in vivo in the rat retina. Exp.Brain Res. ***181*** 435. PMID: 17429617.

Boyd-Kimball *et al* (2005) Proteomic identification of proteins oxidized by Aβ(1-42) in synaptosomes: Implications for Alzheimer's disease. Brain Res. ***1004*** 206. PMID: 15885219.

Walsh *et al* (2002) Amyloid-beta peotide is toxic to neurons *in vivo* via indirect mechanisms. Neurobiol.Dis. ***10*** 20. PMID: 12079400.