Certificate of Analysis

Product Name: **Amyloid β-Peptide (1-42) (human)** **Catalog No.: 1428** **Batch No.: 22**

CAS Number: 107761-42-2

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:	84.6%
Counter Ion:	TFA
Solubility:	Soluble to 1 mg/ml in 50mM Tris buffer
Storage:	Desiccate 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 95.6% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala	4.00	4.00	Lys	2.00	1.95
Arg	1.00	1.12	Met	1.00	0.89
Asx	4.00	4.33	Phe	3.00	2.85
Cys			Pro		
Glx	4.00	4.16	Ser	2.00	1.86
Gly	6.00	6.15	Thr		
His	3.00	2.88	Trp		
Ile	3.00	2.49	Tyr	1.00	0.90
Leu	2.00	2.02	Val	6.00	5.42

Product Name: **Amyloid β-Peptide (1-42) (human)** **Catalog No.: 1428** **Batch No.: 22**

CAS Number: 107761-42-2

Description:

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 (Cat. No. 3391) also available.

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

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: Desiccate 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 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: 84.6% (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 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:

Glenner 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.

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.