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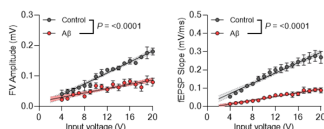
# DATASHEET

## $\beta$ -Amyloid Peptide (1-42) (human)

### Product overview

<b>Name</b>	$\beta$ -Amyloid Peptide (1-42) (human)
<b>Cat No</b>	HB9805
<b>Biological description</b>	The $\beta$ -amyloid (A $\beta$ ) 1-42 peptide has been proposed to affect neuronal degeneration and has been implicated in the pathology of Alzheimer's disease.
<b>Biological action</b>	Peptide
<b>Purity</b>	>95%
<b>Net peptide content</b>	$\geq$ 60%
<b>Description</b>	$\beta$ -Amyloid (1-42) protein fragment. Implicated in Alzheimer's disease.

### Images



### Solubility & Handling

<b>Storage instructions</b>	-20 °C
<b>Solubility overview</b>	Soluble in 1.0% NH <sub>4</sub> OH
<b>Handling</b>	Please note that this product is supplied as a lyophilized solid and may be very hard to visualize.

Amyloid beta peptides are prone to aggregation and as such, there are a variety of published methods for handling amyloid beta peptides.

We recommend using NH<sub>4</sub>OH with this product - you should use **1.0% NH<sub>4</sub>OH** as the solvent followed by buffer (for example 1X PBS).

1. Add 1.0% NH<sub>4</sub>OH directly to the lyophilized peptide (~70-80  $\mu$ l for 1 mg of peptide). Do not store the peptide in 1.0% NH<sub>4</sub>OH.
2. Immediately dilute your solution to a concentration of ~1 mg/mL or less your buffer (e.g 1X PBS, water or an alternative buffer).
3. Vortex gently to mix (less than 1 minute).

Note: This method may not completely remove pre-aggregates. Vortexing may encourage seeding and further aggregation of the peptide.

#### Important

This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

### Chemical Data

<b>UniProt ID</b>	P05067
<b>Chemical name</b>	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA
<b>Molecular Weight</b>	4514.08
<b>Chemical structure</b>	
<b>Molecular Formula</b>	C <sub>203</sub> H <sub>311</sub> N <sub>55</sub> O <sub>60</sub> S

<b>Sequence (one letter)</b>	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA
<b>CAS Number</b>	107761-42-2
<b>PubChem identifier</b>	71773143
<b>SMILES</b>	CC[C@H](C)[C@@H](C(=O)N[C@@H]([C@@H](C)CC)C(=O)NCC(=O)N[C@@H](CC(C)C)C(=O)N[C@@H](CCSC)C(=O)N[C@@H](C(C)C)C(=O)NCC(=O)NCC(=O)N[C@@H](C(C)C)C(=O)N[C@@H](C(C)C)C(=O)N[C@@H]([C@@H](C)CC)C(=O)N[C@@H](C)C(=O)O)NC(=O)[C@H](C)NC(=O)CNC(=O)[C@H](CCCCN)NC(=O)[C@H](CC(=O)N)NC(=O)[C@H](CO)NC(=O)CNC(=O)[C@H](C(C)C)NC(=O)[C@H](CC(=O)O)NC(=O)[C@H](CCC(=O)O)NC(=O)[C@H](C)NC(=O)[C@H](CC1=CC=CC=C1)NC(=O)[C@H](CC2=CC=CC=C2)NC(=O)[C@H](C(C)C)NC(=O)[C@H](CC(C)C)NC(=O)[C@H](CCCCN)NC(=O)[C@H](CCC(=O)N)NC(=O)[C@H](CC3C=NC=N3)NC(=O)[C@H](CC4C=NC=N4)NC(=O)[C@H](C(C)C)NC(=O)[C@H](CCC(=O)O)NC(=O)[C@H](CC5=CC=C(C=C5)O)NC(=O)CNC(=O)[C@H](CO)NC(=O)[C@H](CC(=O)O)NC(=O)[C@H](CC6C=NC=N6)NC(=O)[C@H](CCCNC(=N)N)NC(=O)[C@H](CC7=CC=CC=C7)NC(=O)[C@H](CCC(=O)O)NC(=O)[C@H](C)NC(=O)[C@H](CC(=O)O)N
<b>InChiKey</b>	XPESWQNHKICWDY-QYFPAAMGSA-N
<b>MDL number</b>	MFCD00163049
<b>Appearance</b>	Lyophilized White solid
<b>Protein length</b>	42

## References

### **[β-Amyloid: the key peptide in the pathogenesis of Alzheimer's disease](#)**

Sun X *et al* (2015) Front Pharmacol 6

**PubMedID** [26483691](#)

### **[Amyloid-peptide β 42 Enhances the Oligomerization and Neurotoxicity of apoE4: The C-terminal Residues Leu279, Lys282 and Gln284 Modulate the Structural and Functional Properties of apoE4](#)**

Dafnis I *et al* (2018) Neuroscience 394

**PubMedID** [30367942](#)