

Product Specification Sheet

**Human Beta-Amyloid 25-35 peptide**

**Cat #** BAM2535-1

Human Beta-Amyloid 25-35 peptide

**Size:** 1 mg

**Form:** Liquid Powder

Alzheimer's Disease (AD) is a neurodegenerative disorder characterized by progressive loss of memory and cognition in the elderly. One of the most important and initial step involves proteolytic cleavage of amyloid precursor protein (APP, chromosome 21) releasing short 40, 42 & 43 aa peptides (beta amyloid1-40, 1-42, and 1-43). Polymerization of b-amyloid (Ab) and subsequent neuronal deposit (amyloid) leads to the degeneration of neurons involved in memory and cognition. Ab deposits have also been found to contain 2 additional proteins termed  $\alpha$ -synuclein and  $\beta$ -synuclein. The 140 aa  $\alpha$ -synucleins is identical with non- Ab component (NACP) of AD. The 134 aa human  $\beta$ -synuclein is homologous to 14 kDa bovine phosphoneuroprotein 14. Mutations in  $\alpha$ -synuclein gene causing a replacement of alanine with a threonine may cause the protein to misfold. Synucleins are primarily expressed in the brain. At least 3 forms: two large (140 aa SYN-1 & 149 aa SYN-2) and a small form (SYN-3, 42 aa) are produced by alternative splicing.

**Source of Antigen**

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**Sequence:**

Gly-Ser-Asn-Lys-Gly-Ala-Ile-Ile-Gly-Leu-Met

**Mol Wt:** 1060.45  
**Formula:** C<sub>45</sub>H<sub>81</sub>N<sub>13</sub>O<sub>14</sub>S<sub>1</sub>  
**Form:** Powder, TFA salt.  
**Solubility:** Water

**Storage:** Store powder at -20oC for up to 6 months in a dry place..

**Reconstitution**

The peptide should be brought to room temperature in a desiccator prior to opening the peptide. Peptides may absorb water if opened in cold, possibly decreasing stability and functionality. Peptides which contain Try (W), Cys (C), and Met (M) are particularly sensitive to oxidation. Peptide buffer or solution should be degassed prior to peptide solubilization. We recommend using HPLC grade or better water for peptides.

After reconstitution in water, store solution in small aliquots at -20oC for 3-6 months. Do not freeze and thaw or store diluted solutions.

**Storage**

**Short-term:** unopened, undiluted powder vials for 1-2 weeks at 4oC and -20oC or below.

**Long-term:** at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20oC or below.

**Shipping:** 4oC for solutions and room temp for powder.

**Recommended Usage**

For use in neurotoxicity studies and substrate cleavage assay. BAM25-35 is supplied in a form that is not neurotoxic prior to a preincubation step. The appearance to toxicity has recently been shown to correlate to the extent of beta sheet structure (1). Recommended preincubation: Dissolve peptide in water at 6 mg/ml and then dilute to 1 mg/ml with calcium, magnesium free PBS and incubate at 37oC for 24-48 hrs. The peptide treated this way has been shown to be neurotoxic at 30-100 ig/ml.

**References** (1) Watt JA (1994) Brain Res. 661, 147-156; Seubert P (1992) Nature 359, 325-327; Haas C (1992) Nature 359, 322-325; Seubert P (1993) Nature 361, 260-263

\*This product is for In vitro research use only.

**Related material available from ADI**

Ant-Beta amyloid 1-40, 1-42, APP, Parkin, Synucleins ( $\alpha$ ,  $\beta$ ,  $\gamma$ ), Presenilins 1, 2

Beta Amyloid 1-40, 1-42 and other peptides.

BAM2535-1

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