Amyloid β Protein Fragment 1-40

Product Number A 1075
Storage Temperature -0 °C

Product Description
Molecular Formula: C₁₉₄H₂₉₅N₅₃O₅₈S
Molecular Weight: 4,329.8 Da
CAS Number: 131438-79-4
Structure:

Amyloid β-protein is neurotrophic and neurotoxic. Amyloid peptides (amino acids 1-42 and 1-43) are the major constituents of senile plaques and neurofibrillary tangles that occur in the hippocampus, neocortex, and amygdala of patients with Alzheimer’s disease.

Fragments of β-amyloid peptide, including residues 1-28, (Gln11)-1-28, and 12-28, have been shown to form fibrils in vitro that have the same structure and antigenicity as those found in Alzheimer’s patients.

Soluble β-amyloid protein fragment 1-40 is secreted from cells and is a normal constituent of plasma and cerebrospinal fluid. It contributes to the amyloid plaque deposits characteristic of Alzheimer’s disease.

In vitro and in vivo neurotoxicity has been reported for fragments 25-35, 1-28, and 1-40.

Mutation of Glu22 to Gln22 and Ala21 to Gly21 on the 1-40 fragment have been found to increase β-amyloid aggregation. Aggregation increases the toxicity of the fragment.

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions
The lyophilized peptide can be dissolved initially in water (approximately 6 mg/ml). Do not dissolve the lyophilized peptide directly into saline or buffer as the peptide will not be soluble. For maximal biological activity, it should be further diluted with PBS that does not contain calcium to 1 mg/ml and incubated at 37 °C for 4 days before adding to culture media at the final desired concentration.

References
