

Product Data Sheet

Product Name: Amyloid β -Protein (25-35) amide

Cat. No.: GA20745

Chemical Properties

Cas. No. 147490-49-1

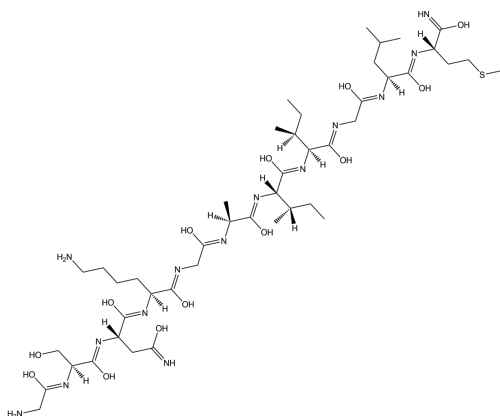
Formula $C_{45}H_{82}N_{14}O_{13}S$ M.Wt 1059.3

Solubility Soluble in DMSO Storage Store at $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Amyloid β -Protein (25-35) amide is a product of the amidation of amyloid- β ($A\beta$), in which the ability to generate $A\beta$ is strongly reduced^[1]. Amyloid β -Protein (25-35) amide is a modified fragment sequence of the $A\beta$ peptide, consisting of amino acids 25-35, with the C-terminus blocked by an amide bond^[2]. The amino acid sequence of $A\beta$ (25-35) peptide is NH_2 -Gly-Ser-Asn-Lys-Gly-Ala-Ile-Ile-Gly-Leu-Met-COOH, where the first Gly represents amino acid 25 and the last Met represents amino acid 35^[3]. $A\beta$ is neurotoxic, but the strength of the toxicity is not related to its aggregation state. $A\beta$ oligomers also show neurotoxicity and cause neuronal damage^[4, 5]. $A\beta$ is involved in the pathogenesis of Alzheimer's disease and is present in neurons of the subiculum and entorhinal cortex of Alzheimer's brain samples and inclusion body myositis (IBM) muscles. It binds to receptors present

Caution: Product has not been fully validated for medical applications. For research use only.

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in microglia and is able to insert into lipid membranes^[6].

References:

- [1] Li H, Rahimi F, Bitan G. Modulation of amyloid β -protein ($A\beta$) assembly by homologous C-terminal fragments as a strategy for inhibiting $A\beta$ toxicity[J]. ACS chemical neuroscience, 2016, 7(7): 845-856.
- [2] Ghosh N, Kundu L M. Breaker peptides against amyloid- β aggregation: a potential therapeutic strategy for Alzheimer's disease[J]. Future Medicinal Chemistry, 2021, 13(20): 1767-1794.
- [3] Cheung N S, Small D H, Livett B G. An Amyloid Peptide, $\beta A4$ 25–35, Mimics the Function of Substance P on Modulation of Nicotine-Evoked Secretion and Desensitization in Cultured Bovine Adrenal Chromaffin Cells[J]. Journal of neurochemistry, 1993, 60(3): 1163-1166.
- [4] Aleksis R, Oleskovs F, Jaudzems K, et al. Structural studies of amyloid- β peptides: Unlocking the mechanism of aggregation and the associated toxicity[J]. Biochimie, 2017, 140: 176-192.
- [5] Rahimi F, Li H, Sinha S, et al. Modulators of amyloid β -protein ($A\beta$) self-assembly[M]//Developing Therapeutics for Alzheimer's Disease. Academic Press, 2016: 97-191.
- [6] Millucci L, Ghezzi L, Bernardini G, et al. Conformations and biological activities of amyloid beta peptide 25-35[J]. Current Protein and Peptide Science, 2010, 11(1): 54-67.

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