

PRODUCT INFORMATION



Citrullinated Amyloid- β (1-42) Peptide (human)

Item No. 30986

Overview and Properties

Contents:	This vial contains 1 mg of lyophilized peptide.
Synonyms:	Citrullinated A β (1-42), Citrullinated A β 42, R5C ₁₋₄₂
Peptide Sequence:	DAEFXHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA (X=Citrulline)
Uniprot No.:	P05067
Molecular Weight:	4,514
Form:	Solid
Storage:	-20°C (as supplied)
Stability:	≥3 years

Description

Amyloid- β (1-42) (A β 42) is a neurotoxic 42-amino acid protein fragment found in amyloid plaques in postmortem cerebral cortex from patients with Alzheimer's disease.¹⁻³ Aggregation of A β 42 results in the formation of neurotoxic fibrils or globular oligomers.¹ A β 42 is less abundant but has a faster rate of fibril formation and enhanced neurotoxicity compared with A β 40 (Item No. 21617).^{4,5} Citrullinated A β 42 Peptide (human) is a modified form of A β 42 (Item No. 20574) that is citrullinated at arginine 5. It exhibits increased transient formation of soluble oligomers and decreased rate of fibril formation compared with unmodified A β 42 and, like unmodified A β 42, forms fibrils composed of parallel β -sheets.⁶

References

1. Wolfe, M.S. Therapeutic strategies for Alzheimer's disease. *Nat. Rev. Drug Discov.* **1(11)**, 859-866 (2002).
2. Iwatsubo, T., Odaka, A., Suzuki, N., *et al.* Visualization of A β 42(43) and A β 40 in senile plaques with end-specific A β monoclonals: Evidence that an initially deposited species is A β 42(43). *Neuron* **13(1)**, 45-53 (1994).
3. Hardy, J.A. and Higgins, G.A. Alzheimer's disease: The amyloid cascade hypothesis. *Science* **256(5054)**, 184-185 (1992).
4. Bitan, G., Kirkitadze, M.D., Lomakin, A., *et al.* Amyloid β -protein (A β) assembly: A β 40 and A β 42 oligomerize through distinct pathways. *Proc. Natl. Acad. Sci. USA* **100(1)**, 330-335 (2003).
5. Murphy, M.P. and LeVine, H., III Alzheimer's disease and the β -amyloid peptide. *J. Alzheim. Dis.* **19(1)**, 311 (2010).
6. Osaki, D. and Hiramatsu, H. Citrullination and deamidation affect aggregation properties of amyloid β -proteins. *Amyloid* **23(4)**, 234-241 (2016).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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