

PRODUCT INFORMATION



Amyloid- β (1-40) Peptide (human) (trifluoroacetate salt)

Item No. 21617

Formal Name:	L- α -aspartyl-L-alanyl-L- α -glutamyl-L-phenylalanyl-L-arginyl-L-histidyl-L- α -aspartyl-L-serylglycyl-L-tyrosyl-L- α -glutamyl-L-valyl-L-histidyl-L-histidyl-L-glutamyl-L-lysyl-L-leucyl-L-valyl-L-phenylalanyl-L-phenylalanyl-L-alanyl-L- α -glutamyl-L- α -aspartyl-L-valylglycyl-L-seryl-L-asparaginy-L-lysylglycyl-L-alanyl-L-isoleucyl-L-isoleucylglycyl-L-leucyl-L-methionyl-L-valylglycylglycyl-L-valyl-L-valine, trifluoroacetate salt	H—Asp—Ala—Glu—Phe—Arg—His—Asp—Ser—Gly—Tyr—Glu—Val—His—His—Gln—Lys—Leu—Val—Phe—Phe—Ala—Glu—Asp—Val—Gly—Ser—Asn—Lys—Gly—Ala—Ile—Ile—Gly—Leu—Met—Val—Gly—Gly—Val—Val—OH
Synonym:	A β (1-40)	
MF:	C ₁₉₄ H ₂₉₅ N ₅₃ O ₅₈ S • XCF ₃ COOH	• XCF ₃ COOH
FW:	4,329.8	
Purity:	≥95%	
Supplied as:	A crystalline solid	
Storage:	-20°C	
Stability:	≥2 years	

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Amyloid- β (1-40) peptide (A β (1-40)) (human) (trifluoroacetate salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the A β (1-40) (human) (trifluoroacetate salt) in the solvent of choice. A β (1-40) (human) (trifluoroacetate salt) is soluble in the organic solvent DMSO, which should be purged with an inert gas, at a concentration of approximately 2 mg/ml.

A β (1-40) (human) (trifluoroacetate salt) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, A β (1-40) (human) (trifluoroacetate salt) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. A β (1-40) (human) (trifluoroacetate salt) has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

A β 40 peptide is a 40-residue protein fragment of A β 42 (Item No. 20574), a neurotoxic peptide found in amyloid plaques in postmortem cerebral cortex from patients with Alzheimer's disease.^{1,2} A β 40 is more abundant, less neurotoxic, and does not form oligomers as easily as A β 42.^{3,4} A β 40 inhibits *in vitro* fibrillization of A β 42 in a concentration-dependent manner.⁵ It also inhibits A β 42-induced cell death in cultured rat embryonic cortical neurons in a concentration-dependent manner. A β 40 prevents A β 42-induced increases in the number of GFAP-positive astrocytes in rat entorhinal cortex.

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. *Neuron* **13**(1), 45-53 (1994).
3. Bitan, G., Kirkitadze, M.D., Lomakin, A., et al. *Proc. Natl. Acad. Sci. USA* **100**(1), 330-335 (2003).
4. Murphy, M.P. and LeVine, H., III. *J. Alzheim. Dis.* **19**(1), 311 (2010).
5. Zou, K., Kim, D., Kakio, A., et al. *J. Neurochem.* **87**(3), 609-619 (2003).

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/10/2020

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM