

# PRODUCT INFORMATION



## Amyloid- $\beta$ (1-38) Peptide (trifluoroacetate salt)

Item No. 27418

**Formal Name:** L- $\alpha$ -aspartyl-L-alanyl-L- $\alpha$ -glutamyl-L-phenylalanyl-L-arginyl-L-histidyl-L- $\alpha$ -aspartyl-L-serylglycyl-L-tyrosyl-L- $\alpha$ -glutamyl-L-valyl-L-histidyl-L-histidyl-L-glutamyl-L-lysyl-L-leucyl-L-valyl-L-phenylalanyl-L-phenylalanyl-L-alanyl-L- $\alpha$ -glutamyl-L- $\alpha$ -aspartyl-L-valylglycyl-L-seryl-L-asparaginyl-L-lysylglycyl-L-alanyl-L-isoleucyl-L-isoleucylglycyl-L-leucyl-L-methionyl-L-valylglycyl-glycine, trifluoroacetate salt



**Synonyms:**  $\beta$ -Amyloid (1-38), A $\beta$ 38, A $\beta$  (1-38)

**MF:** C<sub>184</sub>H<sub>277</sub>N<sub>51</sub>O<sub>56</sub>S • XCF<sub>3</sub>COOH

**FW:** 4,131.6

**Purity:**  $\geq$ 95%

**Supplied as:** A solid

**Storage:** -20°C

**Stability:**  $\geq$ 4 years

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

### Laboratory Procedures

Amyloid- $\beta$  (1-38) (A $\beta$ 38) peptide (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the A $\beta$ 38 peptide (trifluoroacetate salt) in the solvent of choice. A $\beta$ 38 peptide (trifluoroacetate salt) is soluble in the organic solvent formic acid, which should be purged with an inert gas, at a concentration of approximately 1 mg/ml.

### Description

A $\beta$ 38 peptide is a fragment of the A $\beta$ 42 peptide (Item No. 20574). It has been found in isolated human cerebrospinal fluid from a patient with Alzheimer's disease.<sup>1</sup> A $\beta$ 38 (20-80  $\mu$ M) enhances glutamate-induced neurotoxicity in cultured fetal human cerebral cortical neurons but does not affect neuronal survival when used alone or astrocyte survival when used alone or in combination with glutamate.<sup>2</sup> It increases intracellular calcium levels in cultured fetal human cerebral cortical neurons when used in combination with glutamate. A $\beta$ 38 also enhances neurotoxicity of neurons cultured in calcium-containing medium but not calcium-deficient medium.

### References

1. Rogeberg, M., Wettergreen, M., Nilsson, L.N.G., *et al.* Identification of amyloid beta mid-domain fragments in human cerebrospinal fluid. *Biochimie* **113**, 86-92 (2015).
2. Mattson, M.P., Cheng, B., Davis, D., *et al.*  $\beta$ -Amyloid peptides destabilize calcium homeostasis and render human cortical neurons vulnerable to excitotoxicity. *J. Neurosci.* **12**(2), 376-389 (1992).

#### 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.

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