

# PRODUCT INFORMATION



## TAMRA-Amyloid- $\beta$ (1-40) Peptide (human) (trifluoroacetate salt)

Item No. 27413

<b>Formal Name:</b>	9-(2,4-dicarboxyphenyl)-3,6-bis(dimethylamino)-xanthylium-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-asparaginyll-lysylglycyl-L-alanyl-L-isoleucyl-L-isoleucylglycyl-L-leucyl-L-methionyl-L-valylglycylglycyl-L-valyl-L-valine, trifluoroacetate salt	TAMRA — 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
<b>Synonyms:</b>	TAMRA-A $\beta$ (1-40), TAMRA-A $\beta$ 40	• XCF <sub>3</sub> COOH
<b>MF:</b>	C <sub>219</sub> H <sub>315</sub> N <sub>55</sub> O <sub>62</sub> S • XCF <sub>3</sub> COOH	
<b>FW:</b>	4,742.3	
<b>Purity:</b>	≥95%	
<b>Ex./Em. Max:</b>	543/572 nm	
<b>Supplied as:</b>	A solid	
<b>Storage:</b>	-20°C	
<b>Stability:</b>	≥4 years	

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

### Laboratory Procedures

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

### Description

TAMRA-Amyloid- $\beta$  (1-40) peptide is a fluorescently labeled peptide. Amyloid- $\beta$  (1-40) (A $\beta$ 40) peptide (Item No. 21617) is a 40-residue protein fragment of A $\beta$ 42 (Item No. 20574), a neurotoxic peptide found in amyloid plaques in postmortem cerebral cortex from patients with Alzheimer's disease.<sup>1,2</sup> A $\beta$ 40 is more abundant, less neurotoxic, and does not form oligomers as easily as A $\beta$ 42.<sup>3,4</sup> TAMRA-Amyloid- $\beta$  (1-40) peptide is a labeled form of A $\beta$ 40 containing carboxytetramethyl rhodamine (TAMRA), which displays excitation/emission maxima of 543/572 nm, respectively.

### 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 $\beta$ 42(43) and A $\beta$ 40 in senile plaques with end-specific A $\beta$  monoclonals: Evidence that an initially deposited species is A $\beta$ 42(43). *Neuron* **13(1)**, 45-53 (1994).
3. Bitan, G., Kirkitadze, M.D., Lomakin, A., *et al.* Amyloid  $\beta$ -protein (A $\beta$ ) assembly: A $\beta$ 40 and A $\beta$ 42 oligomerize through distinct pathways. *Proc. Natl. Acad. Sci. USA* **100(1)**, 330-335 (2003).
4. Murphy, M.P. and LeVine, H., III. Alzheimer's disease and the  $\beta$ -amyloid peptide. *J. Alzheim. Dis.* **19(1)**, 311 (2010).

#### 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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