

# PRODUCT INFORMATION



## Amylin (human) (trifluoroacetate salt)

Item No. 24274

**Formal Name:** L-lysyl-L-cysteinyl-L-asparaginyl-L-threonyl-L-alanyl-L-threonyl-L-cysteinyl-L-alanyl-L-threonyl-L-glutaminy-L-arginyl-L-leucyl-L-alanyl-L-asparaginyl-L-phenylalanyl-L-leucyl-L-valyl-L-histidyl-L-seryl-L-seryl-L-asparaginyl-L-asparaginyl-L-phenylalanylglycyl-L-alanyl-L-isoleucyl-L-leucyl-L-seryl-L-seryl-L-threonyl-L-asparaginyl-L-valylglycyl-L-seryl-L-asparaginyl-L-threonyl-L-tyrosine, cyclic (2→7)-disulfide, trifluoroacetate

**Synonyms:** IAPP (human), Islet Amyloid Polypeptide (human)

**MF:** C<sub>165</sub>H<sub>260</sub>N<sub>50</sub>O<sub>56</sub>S<sub>2</sub> • XCF<sub>3</sub>COOH

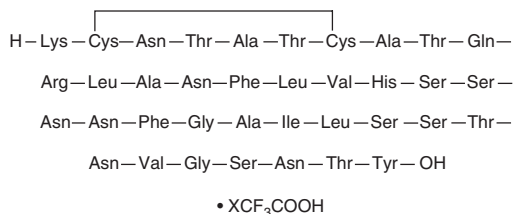
**FW:** 3,904.3

**Purity:** ≥95%

**Supplied as:** A lyophilized powder

**Storage:** -20°C

**Stability:** ≥4 years



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

### Laboratory Procedures

Amylin (human) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the amylin (human) (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Amylin (human) (trifluoroacetate salt) is soluble in formic acid at a concentration of approximately 1 mg/ml.

### Description

Amylin is a 37-residue peptide hormone secreted from pancreatic  $\beta$ -cells that reduces food intake, decreases glucagon secretion, slows gastric emptying, and increases satiety.<sup>1</sup> It binds to amylin receptors with IC<sub>50</sub> values of 2 and 0.2 nM for porcine and guinea pig nucleus accumbens membrane preparations, respectively.<sup>2</sup> Amylin is present in amyloid aggregates derived from the pancreatic islets of humans with type 2 diabetes.<sup>3</sup> Amylin forms fibrils that react to thioflavin T and are organized in a cross- $\beta$  arrangement of  $\beta$ -strands similar to amyloid- $\beta$  (1-40) (A $\beta$ 40; Item No. 21617) and amyloid- $\beta$  (1-42) (A $\beta$ 42; Item No. 20574) fibrils.<sup>4,5</sup> Aggregated amylin (60  $\mu$ M) decreases the viability of primary pancreatic islet cell cultures by 60%. It also inhibits electrically-stimulated contractions of guinea pig vas deferens (EC<sub>50</sub> = 213 nM).<sup>6</sup>

### References

1. Lutz, T.A. *Int. J. Obes.* **33(Suppl. 1)**, S24-S27 (2009).
2. Aiyar, N., Baker, E., Martin, J., et al. *J. Neurochem.* **65(3)**, 1131-1138 (1995).
3. Cooper, G.J.S., Willis, A.C., Clark, A., et al. *Proc. Nat. Acad. Sci. USA* **84(23)**, 8628-8632 (1987).
4. Lopes, D.H.J., Colin, C., Degaki, T.L., et al. *J. Biol. Chem.* **279(41)**, 42803-42810 (2004).
5. Cao, P., Abedini, A., and Raleigh, D.P. *Curr. Opin. Struct. Biol.* **23(1)**, 82-89 (2013).
6. Tomlinson, A.E. and Poyner, D.R. *Br. J. Pharmacol.* **117(6)** (1996).

#### 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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#### 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