

PRODUCT INFORMATION



Endothelin-3 (human, rat) (trifluoroacetate salt)

Item No. 24413

Formal Name: L-cysteinyl-L-threonyl-L-cysteinyl-L-phenylalanyl-L-threonyl-L-tyrosyl-L-lysyl-L- α -aspartyl-L-lysyl-L- α -glutamyl-L-cysteinyl-L-valyl-L-tyrosyl-L-tyrosyl-L-cysteinyl-L-histidyl-L-leucyl-L- α -aspartyl-L-isoleucyl-L-isoleucyl-L-tryptophan cyclic (1 \rightarrow 15),(3 \rightarrow 11)-bis(disulfide), 2,2,2-trifluoroacetate

Synonym:

ET-3

MF: C₁₂₁H₁₆₈N₂₆O₃₃S₄ • XCF₃COOH

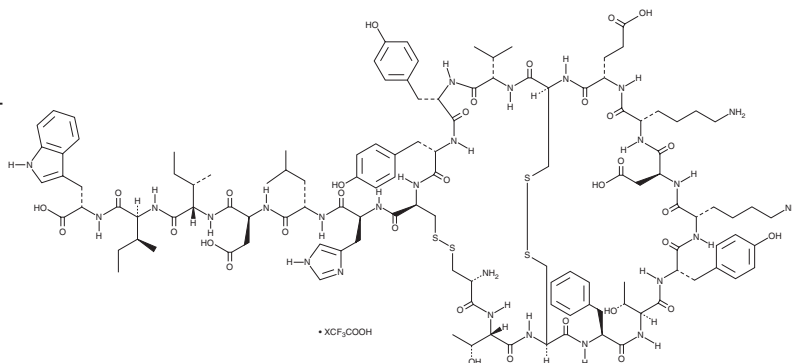
FW: 2,643.0

Purity: \geq 95%

Supplied as: A lyophilized powder

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

Endothelin-3 (human, rat) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the endothelin-3 (human, rat) (trifluoroacetate salt) in water. The solubility of endothelin-3 (human, rat) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Endothelin-3 is a peptide vasoconstrictor and a ligand of the endothelin (ET) receptors ET_A and ET_B (K_bs = 1.05 and 1.49, respectively).¹ It induces β -arrestin recruitment in CHO-K1 cells expressing human ET_A and ET_B (pD₂s = 7.31 and 9.44, respectively). Endothelin-3 increases blood pressure in spontaneously hypertensive and normotensive rats when administered at doses of 310 and 955 pmol/kg, respectively.² It also stimulates migration and adhesion of enteric neural crest cells (ENCCs) to the embryonic gut in mice *via* interaction with ET_B.³ Mutations in the endothelin-3 gene, *Edn3*, induce distal aganglionosis caused by failed colonization of ENCCs in the hindgut and lack of ENCC migration to the ileo-caecal junction in mice.

References

- Maguire, J.J., Kuc, R.E., Pell, V.R., *et al.* Comparison of human ET_A and ET_B receptor signalling *via* G-protein and β -arrestin pathways. *Life Sci.* **91(13-14)**, 544-549 (2012).
- Watanabe, T.X., Kumagaya, S., Nishio, H., *et al.* Effects of endothelin-1 and endothelin-3 on blood pressure in conscious hypertensive rats. *J. Cardiovasc. Pharmacol.* **13(Suppl 5)**, S207-S208 (1989).
- Gazquez, E., Watanabe, Y., Broders-Bondon, F., *et al.* Endothelin-3 stimulates cell adhesion and cooperates with β 1-integrins during enteric nervous system ontogenesis. *Sci. Rep.* **6(37877)**, 1-14 (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.

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