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→15),(3→11)-*bis*(disulfide), 2,2,2-trifluoroacetate

Synonym: ET-3

MF: $C_{121}H_{168}N_{26}O_{33}S_4 \bullet XCF_3COOH$

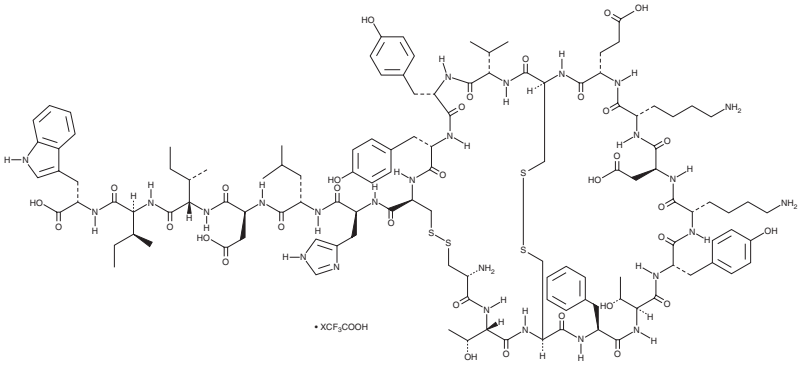
FW: 2,643.0

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

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 vasoconstricter 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 (pD_2s = 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

1. 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).
2. Watanabe, T.X., Kumagaye, 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).
3. Gazquez, E., Watanabe, Y., Broders-Bondon, F., *et al.* Endothelin-3 stimulates cell adhesion and cooperates with β1-integrins during enteric nervous system ontogenesis. *Sci. Rep.* **6(37877)**, 1-14 (2016).

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