

# PRODUCT INFORMATION



## [Ala<sup>1,3,11,15</sup>]-Endothelin-1 (trifluoroacetate salt)

Item No. 39017

**Formal Name:** L-alanyl-L-seryl-L-alanyl-L-seryl-L-seryl-L-leucyl-L-methionyl-L- $\alpha$ -aspartyl-L-lysyl-L- $\alpha$ -glutamyl-L-alanyl-L-valyl-L-tyrosyl-L-phenylalanyl-L-alanyl-L-histidyl-L-leucyl-L- $\alpha$ -aspartyl-L-isoleucyl-L-isoleucyl-L-tryptophan, trifluoroacetate salt

**Synonyms:** 4-Ala-ET-1, [Ala<sup>1,3,11,15</sup>]-ET-1

**Peptide Sequence:** ASASSLMDKEAVYFAHLDIIW-OH

**MF:** C<sub>109</sub>H<sub>163</sub>N<sub>25</sub>O<sub>32</sub>S • XCF<sub>3</sub>COOH

**FW:** 2,367.7

**Purity:**  $\geq$ 98%

**Supplied as:** A solid

**Storage:** -20°C

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

H-Ala-Ser-Ala-Ser-Ser-Leu-Met-Asp-Lys-Glu-Ala-Val-Tyr-Phe-Ala-His-Leu-Asp-Ile-Ile-Trp-OH  
• XCF<sub>3</sub>COOH

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

### Laboratory Procedures

[Ala<sup>1,3,11,15</sup>]-Endothelin-1 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the [Ala<sup>1,3,11,15</sup>]-endothelin-1 (trifluoroacetate salt) in water. We do not recommend storing the aqueous solution for more than one day.

### Description

[Ala<sup>1,3,11,15</sup>]-Endothelin-1 is an endothelin receptor type B (ET<sub>B</sub>) agonist and linear synthetic peptide derivative of endothelin-1 in which all four cysteine residues have been substituted with alanine.<sup>1</sup> It selectively binds to ET<sub>B</sub> over ET<sub>A</sub> receptors (IC<sub>50</sub>s = 0.33 and 570 nM, respectively, for the porcine receptors). [Ala<sup>1,3,11,15</sup>]-Endothelin-1 (10 and 100 nM) increases wound closure percentage in a scratch assay using human umbilical vein endothelial cells (HUVECs).<sup>2</sup> It increases body temperature in conscious rabbits when administered at doses of 0.15 or 0.3 nmol/kg.<sup>3</sup> [Ala<sup>1,3,11,15</sup>]-Endothelin-1 (20 nmol/kg, i.v.) induces bronchoconstriction and increases mean arterial blood pressure in anesthetized guinea pigs.<sup>4</sup> It has been used to determine the cross reactivity of monoclonal antibodies against endothelin in enzyme immunometric assays.<sup>5</sup>

### References

1. Saeki, T., Ihara, M., Fukuroda, T., *et al.* [Ala<sup>1,3,11,15</sup>]-Endothelin-1 analogs with ET<sub>B</sub> agonistic activity. *Biochem. Biophys. Res. Commun.* **179**(1), 286-292 (1991).
2. Wren, A.D., Hiley, C.R., and Fan, T.P. Endothelin-3 mediated proliferation in wounded human umbilical vein endothelial cells. *Biochem. Biophys. Res. Commun.* **196**(1), 369-375 (1993).
3. Koshi, T., Edano, T., Arai, K., *et al.* Pyrogenic action of endothelin in conscious rabbit. *Biochem. Biophys. Res. Commun.* **186**(3), 1322-1326 (2024).
4. Noguchi, K., Noguchi, Y., Hirose, H., *et al.* Role of endothelin ET<sub>B</sub> receptors in bronchoconstrictor and vasoconstrictor responses in guinea-pigs. *Eur. J. Pharmacol.* **233**(1), 47-51 (1993).
5. Pradelles, P., Grassi, J., Cr minon, C., *et al.* Immunometric assay of low molecular weight haptens containing primary amino groups. *Anal. Chem.* **66**(1), 16-22 (1994).

#### 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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