

Certificate of Analysis

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Product Name: Endothelin 1 (human, porcine)

Catalog No.: 1160

Batch No.: 30

CAS Number: 117399-94-7

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₀₉H₁₅₉O₃₂N₂₅S₅
Batch Molecular Weight: 2492
Physical Appearance: White lyophilised solid
Counter Ion: Trifluoroacetate
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence:

Cys-Ser-Cys-Ser-Ser-Leu-Met-Asp-Lys-Glu-
 Cys-Val-Tyr-Phe-Cys-His-Leu-Asp-Ile-Ile-Trp

2. ANALYTICAL DATA

HPLC: Shows 97.0% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala			Lys	1.00	1.01
Arg			Met	1.00	0.93
Asx	2.00	2.02	Phe	1.00	1.01
Cys	4.00	1.87	Pro		
Glx	1.00	1.00	Ser	3.00	1.91
Gly			Thr		
His	1.00	1.00	Trp	1.00	Not Detected
Ile	2.00	1.71	Tyr	1.00	0.88
Leu	2.00	2.05	Val	1.00	1.09

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Endothelin 1 (human, porcine) is a potent endogenous peptide agonist at ET_A and ET_B receptors. Produces strong vasoconstriction and pressor responses. Competitive binding assay shows that Endothelin 1 reversibly binds to receptors (IC₅₀ values are 0.12 nM and 0.15 nM at ET_B and ET_A receptors respectively). Potency is dependent on blood vessel type (EC₅₀ ranges from 2.72 nM - 17.4 nM). Activates PLC (EC₅₀ = 0.3 nM), increases production of PGE₂ (EC₅₀ = 12 nM) and induces intracellular calcium release in human ciliary muscle cells. Also upregulates leptin mRNA expression and secretion in adipocytes (EC₅₀ = 8.8 nM). Please see product specific page on www.tocris.com for full description.

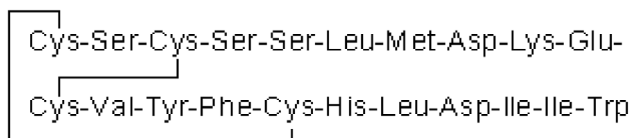
Physical and Chemical Properties:

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Batch Molecular Weight: 2492

Physical Appearance: White lyophilised solid

Peptide Sequence:



Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in water

This product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Counter Ion: Trifluoroacetate

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such as Cys, Met, Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 µm filter to remove potential bacterial contamination whenever possible.

References:

Xiong *et al* (2001) Endothelin-1 stimulates leptin production in adipocytes. *J.Biol.Chem.* **276** 28471. PMID: 11359784.

Servitja *et al* (1998) Involvement of ET_A and ET_B receptors in the activation of phospholipase D by endothelins in cultured rat cortical astrocytes. *Br.J.Pharmacol.* **124** 1728. PMID: 9756390.

Matsumoto *et al* (1996) Endothelin-induced changes of second messengers in cultured human ciliary muscle cells. *Invest.Ophthalmol.Vis.Sci.* **37** 1058. PMID: 8631621.

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