

Certificate of Analysis

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Product Name: Endothelin 1 (human, porcine)

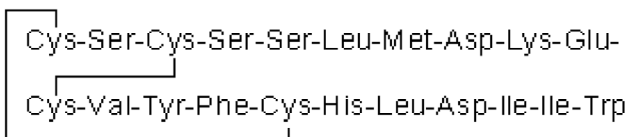
Catalog No.: 1160

Batch No.: 28

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: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence:



2. ANALYTICAL DATA

HPLC: Shows 96.8% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid		Theoretical	Actual	Amino Acid		Theoretical	Actual
Ala				Lys	1.00	0.97	
Arg				Met	1.00	0.94	
Asx	2.00	2.15	Phe	1.00	0.98		
Cys	4.00	1.77	Pro				
Glx	1.00	0.99	Ser	3.00	2.06		
Gly			Thr				
His	1.00	1.08	Trp	1.00	0.01		
Ile	2.00	1.58	Tyr	1.00	0.90		
Leu	2.00	1.93	Val	1.00	1.06		

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

bio-techne.com
 info@bio-techne.com
 techsupport@bio-techne.com

North America
 Tel: (800) 343 7475

China
 info.cn@bio-techne.com
 Tel: +86 (21) 52380373

Europe Middle East Africa
 Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
 Tel: +1 612 379 2956

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CAS Number: 117399-94-7

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.

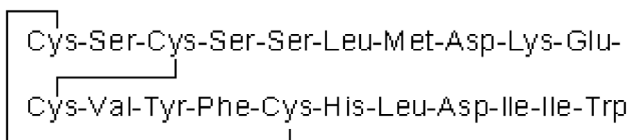
Physical and Chemical Properties:

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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: TFA

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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