

Endothelin-2 (49-69), human

Cat. No.:	HY-P0207
CAS No.:	123562-20-9
Molecular Formula:	C ₁₁₅ H ₁₆₀ N ₂₆ O ₃₂ S ₄
Molecular Weight:	2546.92
Sequence:	Cys-Ser-Cys-Ser-Ser-Trp-Leu-Asp-Lys-Glu-Cys-Val-Tyr-Phe-Cys-His-Leu-Asp-Ile-Ile-Trp (Disulfide bridge: Cys1-Cys15, Cys3-Cys11)
Sequence Shortening:	CSCSSWLDKECVFCHLDIIW (Disulfide bridge: Cys1-Cys15, Cys3-Cys11)
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Endothelin-2 (49-69), human (Endothelin-2 (human, canine)) is a 21-amino acid vasoactive peptide that binds to G-protein-linked transmembrane receptors, ET-RA and ET-RB.
In Vitro	At nanomolar concentrations, Endothelin-2 exhibits a strong and long-lasting vasoconstrictor activity characteristic of endothelin (EC ₅₀ =0.52 nM) ^[1] . Endothelin-2 is a chemoattractant for macrophages and THP-1 monocytic cells, but not for freshly isolated monocytes. The chemotactic response to Endothelin-2 shows a typical bell-shaped response curve. Experiments with endothelin receptor antagonists shows that migration to Endothelin-2 is mediated via the ET-RB receptor. Endothelin-2 expression by tumors may modulate the behavior of macrophages such that activated cells accumulate in areas of hypoxia ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Two distinct phases of pressor effects are typically seen in response to Endothelin-2: the early phase immediately follows the depressor response and dominates during the next 3-10 min, whereas the late pressor effect develops 10-20 min after the injection and lasts >1 hr ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration ^[1]	Rats ^[1] For the assay of pressor activity, male Wistar rats weighing 300-350 g are anesthetized with urethane (1 g/kg i.p.) and pretreated with atropine (0.25 mg/kg i.v.), propranolol (1 mg/kg i.v.), and bunazocine (1 mg/kg i.v.). Additional maintenance doses (one-half of the initial doses) of the autonomic blockades are administered every 3-4 hr. Each animal is given only one bolus of Endothelin-2. 1 nM of Endothelin-2 in 50 µL of buffer is bolus injected from a cannula inserted in the right femoral vein. The blood pressure is recorded from a cannula, which is placed in the right carotid artery and connected to a pressure transducer ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
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REFERENCES

[1]. Grimshaw MJ, et al. Endothelin-2 is a macrophage chemoattractant: implications for macrophage distribution in tumors. Eur J Immunol. 2002 Sep;32(9):2393-400.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA