

Carperitide

Chemical Properties

CAS No.:	89213-87-6
Formula:	C ₁₂₇ H ₂₀₃ N ₄₅ O ₃₉ S ₃
Molecular Weight:	3080.44
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

Biological Description

Description	Carperitide (Atrial Natriuretic Peptide (ANP) (1-28), human, porcine) is a 28-amino acid hormone, that is normally produced and secreted by the human heart in response to cardiac injury and mechanical stretch. Carperitide (Atrial Natriuretic Peptide (ANP) (1-28), human, porcine) inhibits endothelin-1 secretion in a dose-dependent way.
In vitro	Carperitide (Atrial triuretic Peptide (ANP) (1-28), human, porcine) is a diuretic, triuretic, and vasodilatory peptide hormone origilly isolated from mammalian hearts. In cultured porcine endothelial cells the inhibition by porcine ANP (1-28) of immunoreactive endothelin-1 secretion after stimulation with Angiotensin II (Ang II) is paralleled by an increase in the cellular cGMP level. Porcine ANP (1-28) strongly inhibits immunoreactive endothelin-1 secretion in porcine aorta after stimulation with Ang II[1]. ANP is a cardiac hormone involved in electrolyte and fluid homeostasis. The inhibition by ANP of endothelin-1 secretion stimulated by angiotensin II (ANGII) and thrombin using cultured human umbilical-vein endothelial cells. Human ANP (1-28) inhibits immunoreactive (ir)-endothelin-1 secretion and increases cyclic GMP in the human umbilical-vein endothelial cells[2]. In glomeruli from normal rats, Human 125I-ANP (1-28) binds to a single population of high affinity receptors with a mean equilibrium dissociation constant of 0.46 nM. Human ANP (1-28) binds to the glomerular ANP receptor with high affinity stimulated cGMP accumulation. Human ANP (1-28) markedly stimulates cGMP generation, but not cAMP generation in normal rat glomeruli[3].

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.325 mL	1.623 mL	3.246 mL
5 mM	0.065 mL	0.325 mL	0.649 mL
10 mM	0.032 mL	0.162 mL	0.325 mL
50 mM	0.006 mL	0.032 mL	0.065 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Kohno M, et al. Atrial and brain natriuretic peptides inhibit the endothelin-1 secretory response to angiotensin II in porcine aorta. *Circ Res.* 1992 Feb;70(2):241-7.
2. Kohno M, et al. Inhibition by atrial and brain natriuretic peptides of endothelin-1 secretion after stimulation with angiotensin II and thrombin of cultured human endothelial cells. *J Clin Invest.* 1991 Jun;87(6):1999-2004.
3. Ballermann BJ, et al. Physiologic regulation of atrial natriuretic peptide receptors in rat renal glomeruli. *J Clin Invest.* 1985 Dec;76(6):2049-56.

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Tel:781-999-4286

E-mail:info@targetmol.com

Address:36 Washington Street,Wellesley Hills,MA 02481