Data Sheet (Cat.No.TP1219)

ANP (1-28), human, porcineANP(1-28)

Chemical Properties

CAS No.:	1366000-58-9
Formula:	C127H203N45O39S3.C2H4O2
Molecular Weight:	3140.5
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Atrial natriuretic peptide (ANP), a stimulator of particulate guanylate cyclase, has been found to protect against reoxygenation-induced hypercontracture in isolated cardiomyocytes by increasing cyclic guanosine monophosphate synthesis; ANP also contributes to stimulation of lipolysis during repeated bouts of exercise and in the control of lipolysis during exercise.
In vitro	Atrial triuretic peptide (ANP) 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	H2O: Soluble (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.318 mL	1.592 mL	3.184 mL
5 mM	0.064 mL	0.318 mL	0.637 mL
10 mM	0.032 mL	0.159 mL	0.318 mL
50 mM	0.006 mL	0.032 mL	0.064 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 ℃ for 6 months; - 20 ℃ 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.

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