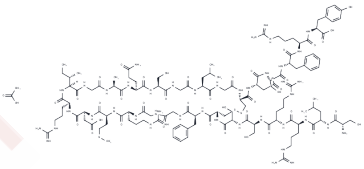
Data Sheet (Cat.No.TP1220L)

TargetMol

ANP(1-28) Acetate (human, porcine)

Chemical Properties



CAS No. :

Formula: C129H207N45O41S3

Molecular Weight: 3140.5

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Carperitide acetate (Atrial Natriuretic Peptide (ANP) (1-28), human, porcine Acetate), a 28-amino acid hormone, is naturally produced and released by the human heart upon cardiac injury or mechanical stretch. This compound effectively inhibits the secretion of endothelin-1 in a dose-dependent manner.
Targets(IC50)	Endothelin Receptor
In vitro	Atrial natriuretic peptide (ANP), isolated from mammalian hearts, exhibits diuretic, natriuretic, and vasodilatory properties. It has been observed that porcine ANP (1-28) not only inhibits the secretion of immunoreactive endothelin-1 in porcine endothelial cells and aorta upon stimulation with Angiotensin II (Ang II) but also elevates cellular cGMP levels. Similarly, human ANP (1-28) suppresses immunoreactive endothelin-1 secretion and enhances cyclic GMP in human umbilical-vein endothelial cells when stimulated by angiotensin II (ANGII) and thrombin. Moreover, in normal rat glomeruli, Human 125I-ANP (1-28) binds to high-affinity receptors, significantly increasing cGMP without affecting cAMP, showcasing its integral role in electrolyte and fluid homeostasis [1,2,3].

Solubility Information

Solubility	DMSO: 240 mg/mL (76.42 mM) H2O: 100 mg/mL (31.84 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.3184 mL	1.5921 mL	3.1842 mL
5 mM	0.0637 mL	0.3184 mL	0.6368 mL
10 mM	0.0318 mL	0.1592 mL	0.3184 mL
50 mM	0.0064 mL	0.0318 mL	0.0637 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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

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.

Ballermann BJ, et al. Physiologic regulation of atrial natriuretic peptide receptors in rat renal glomeruli. J Clin Invest. 1985 Dec;76(6):2049-56.