

---

**Product Data Sheet**

---

Product Name: Atrial Natriuretic Peptide (ANP) (1-28), human, porcine

Cat. No.: GC34023

**Chemical Properties**

Cas. No. 89213-87-6

SMILES Ser-Leu-Arg-Arg-Ser-Ser-Cys-Phe-Gly-Gly-Arg-Met-Asp-Arg-Ile-Gly-Ala-Gln-Ser-Gly-Leu-Gly-Cys-Asn-Ser-Phe-Arg-Tyr (Disulfide bridge: Cys7-Cys23)

Formula C<sub>127</sub>H<sub>203</sub>N<sub>45</sub>O<sub>39</sub>S<sub>3</sub>

M.Wt 3080.44

Solubility Water: 1 mg/ml

Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Protocol****Animal experiment [1]:**

Animal models

Female beagle dogs weighing 10-14 kg

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

---

**Product Data Sheet**

---

Protocol: Effects of carperitide on coronary vasodilation in nonischemic hearts.

**Protocol**

Five dogs were used. Coronary arterial and venous blood was sampled for blood gas analysis. Myocardial oxygen consumption (ml per 100 g per min) is calculated by coronary blood flow (CBF) (ml per 100 g per min) the oxygen difference between coronary arterial and venous blood (ml dl<sup>-1</sup>). Measured coronary perfusion pressure (CPP) and CBF after dogs were randomly administered carperitide at a dose of 0.025, 0.05, 0.1 or 0.2 µg kg<sup>-1</sup> min<sup>-1</sup> into the left anterior descending coronary artery (LAD).

**Dosage form**

0.025, 0.05, 0.1 or 0.2 µg kg<sup>-1</sup> min<sup>-1</sup>

**Applications**

CBF increased based on the dose of carperitide, with saturation of coronary vasodilation at a dose of 0.1 µg kg<sup>-1</sup> min<sup>-1</sup> despite no changes in CPP (102±2 mm Hg) or myocardial oxygen consumption.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

---

## Product Data Sheet

---

### References:

[1]. Asanuma H, Sanada S, et,al. Carperitide induces coronary vasodilation and limits infarct size in canine ischemic hearts: role of NO. Hypertens Res. 2014 Aug;37(8):716-23. doi: 10.1038/hr.2014.70. Epub 2014 Apr 3. PMID: 24694647.

### Background

Atrial Natriuretic Peptide (ANP) (1-28), human, porcine (Carperitide) is a hormone containing 28 amino acids that is produced and secreted by the heart in response to cardiac injury and mechanical stretching[1]. Carperitide is widely used in patients with Heart failure(HF)[2].

Carperitide(1 mM;10min)significantly reduced infarct size in isolated rat hearts[3]. Carperitide inhibits immunoreactive (ir)-endothelin-1 secretion and increases cyclic GMP in the human umbilical-vein endothelial cells[4].

Carperitide dose increased, coronary blood flow (CBF) increased, and coronary artery diastole reached saturation at 0.1µg kg<sup>-1</sup> min<sup>-1</sup>, but there was no change in CPP or myocardial oxygen consumption in dog[5].

### References:

[1]. Kohno M, Yokokawa K, 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. doi: 10.1161/01.res.70.2.241. PMID: 1310444.  
[2]. Mukoyama M, Nakao K, et al. Brain natriuretic peptide as a novel cardiac hormone in humans. Evidence for an exquisite dual natriuretic peptide system, atrial natriuretic peptide and brain natriuretic peptide. J Clin Invest. 1991 Apr;87(4):1402-12. doi: 10.1172/JCI115146. PMID: 1849149; PMCID: PMC295184.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

---

**Product Data Sheet**

---

[3]. Okawa H, Horimoto H, et,al.Preischemic infusion of alpha-human atrial natriuretic peptide elicits myoprotective effects against ischemia reperfusion in isolated rat hearts. Mol Cell Biochem. 2003 Jun;248(1-2):171-7. doi: 10.1023/a:1024148621505. PMID: 12870670.

[4].Kohno M, Yasunari K, 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. doi: 10.1172/JCI115228. PMID: 1645748; PMCID: PMC296954.

[5].Asanuma H, Sanada S, et,al.Carperitide induces coronary vasodilation and limits infarct size in canine ischemic hearts: role of NO. Hypertens Res. 2014 Aug;37(8):716-23. doi: 10.1038/hr.2014.70. Epub 2014 Apr 3. PMID: 24694647.

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

**Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com**

**Address: 10292 Central Ave. #205, Montclair, CA, USA**