



LKT Laboratories, Inc.

## Nesiritide Acetate

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### Product Information

Product ID N1873

CAS No. 114471-18-0

#### Chemical Name

**Synonym** B-type natriuretic peptide, Brain natriuretic peptide, BNP, BNP-32 (human)

**Formula** C<sub>143</sub>H<sub>244</sub>N<sub>50</sub>O<sub>42</sub>S<sub>4</sub>

**Formula Wt.** 3464.1

**Melting Point**

**Purity** ≥95%

**Solubility** Soluble in water, DMSO.

**Store Temp** -20° C

**Ship Temp** Ambient

**Description** Nesiritide is recombinant B-type natriuretic peptide (BNP). BNP is often clinically used as a biomarker for cardiovascular problems like ventricular failure, stroke, and myocardial infarction. Nesiritide exhibits immunosuppressive, anti-inflammatory, and cardioprotective activities. Nesiritide exhibits mixed effects when administered clinically in the treatment of heart failure. Nesiritide decreases CD8+ T cells and levels of TNF- $\alpha$ , IL-1 $\alpha$ , and IL-6. This peptide inhibits angiotensin II (ATII)-induced hypertrophy in animal models. Nesiritide suppresses generation of ROS, prevents decreases in the mitochondrial membrane potential, increases levels of Bcl-2, and decreases levels of Bax, inhibiting apoptosis and protecting cardiomyocytes against ischemia/reperfusion-induced injury. The additional diuretic, natriuretic, and vasorelaxant effects of nesiritide are mediated by its binding of the natriuretic peptide receptor A (guanylate cyclase A).

H-Ser-Pro-Lys-Met-Val-Gln-Gly-Ser-Gly-Cys-Phe-Gly-Arg-Lys-Met-Asp-Arg-Ile-Ser-Ser-Ser-Ser-Gly-Leu-Gly-Cys-Lys-Val-Leu-Arg-Arg-His-OH (Cys10-Cys26)

### Pricing and Availability

*Bulk quantities available upon request*

Product ID	Size	List Price
N1873	0.5 mg	\$175.00
N1873	1 mg	\$275.00
N1873	2.5 mg	\$500.00

**References** Shaw SM, Critchley WR, Puchalka CM, et al. Brain natriuretic peptide induces CD8+ T cell death via a caspase 3 associated pathway--implications following heart transplantation. *Transpl Immunol.* 2012 Mar;26(2-3):119-22. PMID: 22138041.

Gassanov N, Biesenbach E, Caglayan E, et al. Natriuretic peptides in therapy for decompensated heart failure. *Eur J Clin Pharmacol.* 2012 Mar;68(3):223-30. PMID: 21901345.

Sun Y, Deng T, Lu N, et al. B-type natriuretic peptide protects cardiomyocytes at reperfusion via mitochondrial calcium uniporter. *Biomed Pharmacother.* 2010 Mar;64(3):170-6. PMID: 20149572.

Kishimoto I, Tokudome T, Horio T, et al. Natriuretic Peptide Signaling via Guanylyl Cyclase (GC)-A: An Endogenous Protective Mechanism of the Heart. *Curr Cardiol Rev.* 2009 Jan;5(1):45-51. PMID: 20066148.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.