

# Brain Natriuretic Peptide

Human, Recombinant (rHuBNP)

Expressed in *E. coli*

Cat. No. CRP0874

Lot. No. (See product label)

## PRODUCT INFORMATION

**Description:** As a protein secreted by brain and heart artia, human brain natriuretic protein is mainly stored in cardiac ventricular myocardium. It can cause natriuresis, diuresis, vasodilation, and inhibits secretion of rennin and aldosterone. It can also improves heart function.

**Amino-AcidSequence:** 32 aa, non-glycosylated

**M. W. :** 3,464Da

**Recombinant:** Expressed in *E. coli*

**Purity:** >96% by SDS-PAGE and HPLC analyses.

**Formulation:** Lyophilized from a 0.2mm filtered concentrated (1mg/ml) solution in 0.5M NaCl, 20mM PB, pH 7.4.

**Biological Activity:** Fully biologically active when compared to standard.

**Endotoxin:** Less than 1EU/mg of rHuBNP as determined by LAL method.

**Reconstitution:** We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at  $\leq -20^{\circ}\text{C}$ . Further dilutions should be made in appropriate buffered solutions.

**Storage:** This lyophilized preparation is stable for several weeks at  $2-8^{\circ}\text{C}$ , but should be kept at  $-20^{\circ}\text{C}$  for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at  $2-8^{\circ}\text{C}$ . For maximal stability, apportion the reconstituted preparation into working aliquots and store at  $-20^{\circ}\text{C}$  to  $-70^{\circ}\text{C}$ . Avoid repeated freeze/thaw cycles.

## FOR RESEARCH USE ONLY

## GENE INFORMATION

**Gene Name:** [NPPB](#)

**Synonyms:** BNP; OTTHUMP0000002506; OTTHUMP00000044486; brain type natriuretic peptide; natriuretic protein; Natriuretic peptides B precursor; brain type natriuretic peptide; natriuretic peptide precursor B; natriuretic protein

**mRNA Refseq:** [NM\\_002521.2](#)

**Protein Refseq:** [NP\\_002512.1](#)

**MIM:** [600295](#)

**GeneID:** [4879](#)

**Uniprot ID:** [P16860](#)

**Chromosome Location:** 1p36.2

**Summary:** This gene is a member of the natriuretic peptide family and encodes a secreted protein which functions as a cardiac hormone. The protein undergoes two cleavage events, one within the cell and a second after secretion into the blood. The protein's biological actions include natriuresis, diuresis, vasorelaxation, inhibition of renin and aldosterone secretion, and a key role in cardiovascular homeostasis. A high concentration of this protein in the bloodstream is indicative of heart failure. Mutations in this gene have been associated with postmenopausal osteoporosis.

**Function:** diuretic hormone activity, hormone activity.

## REFERENCES

1. Bhatia V, Nayyar P, Dhindsa S. Brain natriuretic peptide in diagnosis and treatment of heart failure. *J Postgrad Med.* 2003; 49 (2): 182–185.
2. Maisel A, Krishnaswamy P, et al. Rapid measurement of B-type natriuretic peptide in the emergency diagnosis of heart failure. *N Engl J Med.* 2002; 347 (3): 161–167.
3. Bibbins-Domingo K, Gupta R, Na B, Wu A H B, Schiller N B, Whooley M A. N-Terminal Fragment of the Prohormone Brain-Type Natriuretic Peptide (NT-proBNP), Cardiovascular Events, and Mortality in Patients With Stable Coronary Heart Disease 2007; 297 (2): 169–176.