

## Rabbit Polyclonal Anti-proBNP antibody

Catalog Number: PBNP-101AP

**Lot Number:**

### General Information

<b>Product</b>	proBNP Antibody
<b>Description</b>	Gamma-brain natriuretic peptide Antibody
<b>Accession #</b>	Uniprot: P16860
<b>Verified Applications</b>	CM, ELISA, ICC, IF, IHC, IP, WB
<b>Species Cross Reactivity</b>	Human, Monkey
<b>Host</b>	Rabbit
<b>Immunogen</b>	Synthetic peptide taken within amino acid region 100-150 on human proBNP.
<b>Specificity</b>	Will not cross react with proANP
<b>Alternative Nomenclature</b>	ANFB_HUMAN antibody, BNP-32 antibody, Brain Natriuretic Peptide 32 antibody, Brain type natriuretic peptide antibody, Gamma brain natriuretic peptide antibody, Natriuretic peptide precursor B antibody, NPPB antibody

### Physical Properties

<b>Quantity</b>	100 µg
<b>Volume</b>	200 µl
<b>Form</b>	Affinity Purified Immunoglobulins
<b>Immunoglobulin &amp; Concentration</b>	0.8 mg/ml IgG in antibody stabilization buffer
<b>Storage</b>	Store at -20°C for long term storage.

### Recommended Dilutions

<b>DOT Blot</b>	1:10,000
<b>ELISA</b>	1:10,000
<b>Immunocytochemistry</b>	1:200
<b>Immunofluorescence</b>	1:200
<b>Immunohistochemistry</b>	1:200
<b>Immunoprecipitation</b>	1:200
<b>Western Blot</b>	1:500

## Related Products

## Catalog #

<b>FITC-Conjugated</b>	PBNP-FITC
<b>BIOTIN-Conjugated</b>	PBNP-BIOTIN
<b>Antigenic Blocking Peptide</b>	P-PBNP
<b>Western Blot Positive Control</b>	PC-PBNP

## Overview:

The family of natriuretic peptides comprise of several 22-53 amino acid peptides with vasodilator and diuretic properties that play a pivotal role in cardiovascular homeostasis. The arterial natriuretic peptide (ANP) and the brain natriuretic peptide (BNP) are selected as prohormones (proANP and proBNP) and their levels significantly increases in non survival cardiac dysfunction patients (1). They are also useful as a laboratory markers for myocardial dysfunction and other clinical conditions such as pulmonary thromboembolism, transient tachypnea, sepsis and stroke. The levels of these peptides may also differentiate between survival and non-survival acute sepsis. The human BNP gene is located on chromosome 1 and encodes the prohormone, proBNP. The main stimulus for peptide synthesis and secretion is myocyte stretch. The cardiac myocytes are the major source of proBNP; cardiac fibroblasts also produce the ProBNP. The release of BNP is under the control of several neurohormone. The biological effects include diuresis, vasodilatation, and inhibition of renin and aldosterone production and of cardiac and vascular myocyte growth (2)

There has been growing interest in the use of serum B-type natriuretic peptide (BNP) and the N-terminal segment of its pro-hormone (NT-proBNP) as biomarkers for cardiac disease. Increased plasma concentrations of cardiac-derived B-type natriuretic peptide (BNP) and N-terminal pro-B-type natriuretic peptide (proBNP) are both associated with left ventricular dysfunction (3). BNP protects the heart from adverse consequences of overload by increasing natriuresis and diuresis, relaxing vascular smooth muscle, inhibiting the renin-angiotensin-aldosterone system and by counteracting cardiac hypertrophy and fibrosis. Human cardiomyocytes synthesized BNP as a 108 amino acid prohormone (proBNP), which is cleaved to 32-amino acid BNP and the 76-residue N-terminal fragment (NT-proBNP). Serum levels of both fragments are good indicator of cardiac dysfunction, increased concentrations are strong predictors of recurring myocardial infarction, heart failure and even death.

The ProANP protein is approximately 18kDa (151 amino acids). The Anti-ProANP-selective antibody was generated against a peptide from amino acids 100-150. Western blot positive control (PC-PBNP) and antigenic blocking peptide (P-PBNP) for proBNP are available. The affinity purified mono-specific polyclonal antibody to ProANP strongly labels a 15-18 kDa protein in PC-PANP samples and in various tissues examined. Antibodies can be conjugated with fluorescent probes or secondary enzymes upon request at nominal cost. FabGennix also provides antibodies against other natriuretic peptides and related pathways, for a complete listing please visit <http://fabgennix.com>.

## References:

1. Hoffmann U, Brueckmann M, Bertsch T, Wiessner M, Liebetrau C, Lang S, Haase KK, Borggrefe M, Huhle G. Increased plasma levels of NT-proANP and NT-proBNP as markers of cardiac dysfunction in septic patients. Clin Lab. 2005;51(7-8):373-9.
2. Hall C. Essential biochemistry and physiology of (NT-pro)BNP. Eur J Heart Fail. 2004 Mar 15;6(3):257-60. Related Articles, Links
3. Goetze JP, Jensen G, Moller S, Bendtsen F, Rehfeld JF, Henriksen JH. BNP and N-terminal proBNP are both extracted in the normal kidney. Eur J Clin Invest. 2006 Jan;36(1):8-15. Related Articles, Links

For users who may require large amounts of the products listed above, please inquire about bulk material discounts.

This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.