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Recombinant Human Natriuretic Peptides B proprotein (proBNP)

Catalog No.	Size	Species	Protein Accession No.
230-00009	10, 50, 100 µg	Human	P16860

Synonyms

Gamma-brain natriuretic peptide, natriuretic peptides B, BNP, brain type natriuretic peptide, natriuretic protein.

Description

Brain natriuretic peptide (BNP) is a polypeptide of 134-amino acids comprised of a 26-amino acid signal peptide (Met1-Ser26), a 76-amino acid N-terminal fragment (NT-proBNP) (His27-Arg102), and a 32-amino acid mature polypeptide of brain natriuretic peptide 32 (BNP-32)(Ser103-His134). BNP-32 is secreted by the ventricles of the heart in response to excessive stretching of heart muscle cells (cardiomyocytes). BNP-32 is co-secreted along with NT-proBNP which is biologically inactive. Both BNP-32 and NT-proBNP markers are used for screening, diagnosis of acute congestive heart failure (CHF). The plasma concentrations of both BNP and NT-proBNP are also typically increased in patients with asymptomatic/symptomatic left ventricular dysfunction.

Preparation

The human *proBNP* (His27-His134) gene without signal peptide coding sequence (Met1-Ser26) was cloned and expressed in *Escherichia coli*. The recombinant protein has an N-terminal 6×histidine tag and was purified by immobilized metal ion affinity chromatography (IMAC).

Source

Recombinant histidine-tagged protein, purified from *E. coli*.

Predicted Molecular Mass

~16 kDa with the 6×histidine tag.

Formulation

- Fine white powder, lyophilized.

- proBNP protein was constituted in a 0.2 µm filtered phosphate-buffered saline (PBS) before lyophilized.
- It is recommended to briefly spin the vial prior to opening to bring the contents to the bottom, and reconstitute the lyophilized product with sterile 18 MΩ-cm deionized water or your desired buffer to a concentration of 0.1-1.0 mg/mL.

Stability & Storage

- Lyophilized product is stable at room temperature for 3 weeks, it is recommended to be stored desiccated below -20°C in a manual defrost freezer.
- Upon reconstituted, the protein should be stored at 4°C for one week. For long term storage, it is recommended to add a carrier protein (0.1% HSA or BSA) and store at -20 or -80°C. Please avoid repeated freeze-thaw cycles.

Purity

>89%, determined by SDS-PAGE and stained with Coomassie blue.

References

- Bhalla V, et al. (2004). B-type natriuretic peptide: the level and the drug-partners in the diagnosis of congestive heart failure. *Congest Heart Fail* **10** (1 Suppl 1): 3–27.
- Atisha D, et al. (2004). A prospective study in search of an optimal B-natriuretic peptide level to screen patients for cardiac dysfunction. *Am. Heart J.* **148** (3): 518–23.
- Maisel A, et al. (2002). Rapid measurement of B-type natriuretic peptide in the emergency diagnosis of heart failure. *N Engl J Med* **347** (3): 161–7.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**