



LD Biopharma, Inc.
7384 Trade Street, Suite B
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Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human NPPB Protein
Catalog Number: hRP-2250
Manufacturer: LD Biopharma, Inc.

Introduction

Human natriuretic peptide B preproprotein (NPPB) encodes a cardiac hormone which may function as a paracrine anti-fibrotic factor in the heart. It also plays a key role in cardiovascular homeostasis through natriuresis, diuresis, vasorelaxation, and inhibition of renin and aldosterone secretion. NPPB specifically binds and stimulates the cGMP production of the NPR1 receptor. It binds the clearance receptor NPR3. Recent data indicated that measuring blood NT-proBNP and cardiac Troponin T level in patients with heart failure and mid-range ejection fraction (NT-proBNP $> / = 3299$ pg/mL) provides a good biomarker for predicting patient's CI-AKI and long-term mortality following elective coronary angiography or intervention.

Full-length human NPPB cDNA (27-134 aa) was constructed with codon optimization gene synthesis technology and expressed with a T7 – His - TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein was expressed in E. coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: NPPB (BNP)
Accession Number: NP_002512
Species: Human
Size: 10 μ g / Vial
Composition: 0.1 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References



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Mauermann E, et al., Absolute Postoperative B-Type Natriuretic Peptide Concentrations, but Not Their General Trend, Are Associated With 12-Month, All-Cause Mortality After On-Pump Cardiac Surgery. *Anesth. Analg.* 125 (3), 753-761 (2017)

Krzesinski P, et al., *Echocardiographic assessment and N-terminal pro-brain natriuretic peptide in hypertensives with metabolic syndrome.* *Adv Clin Exp Med* 26 (2), 295-301 (2017)

Wang K, et al., *Association of N-terminal pro-brain natriuretic peptide with contrast-induced acute kidney injury and long-term mortality in patients with heart failure and mid-range ejection fraction: An observation study.* *Medicine (Baltimore)* 96 (10), E6259 (2017)

Mezzasoma L, et al., *A Novel Role for Brain Natriuretic Peptide: Inhibition of IL-1beta Secretion via Downregulation of NF-kB/Erk 1/2 and NALP3/ASC/Caspase-1 Activation in Human THP-1 Monocyte.* *Mediators Inflamm.* 2017, 5858315 (2017)

Applications

1. May be used for in vitro NPPB propeptide processing pathway and it mediated cardiovascular homeostasis signaling pathway study for cardiomyocyte with this protein either as soluble factor or coating matrix protein.
2. May be used for protein-protein interaction assay.
3. Potential biomarker protein for monitoring CI-AKI and long-term mortality following elective coronary angiography or intervention.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGEFHPLGSPGSASDLETSGLQEQRNHLQGKLSELQVEQ
TSLEPLQESPRPTGVWKSREVATEGIRGHRKVMVLYTLRAPRSPKMQGSGCFGRKMDRISSSSG
LGCKVLRHH