Access NT-proBNP

*Efficiently support diagnosis and assessment
of heart failure severity with trustworthy results*

Background

An estimated 26 million patients globally have heart failure,[1] and its prevalence continues to rise. An aging population, increases in cardiovascular risk factors and improved survival of cardiovascular conditions have all contributed to the increase in heart failure cases.[2] Fortunately, early diagnosis and intervention in heart failure patients may help to prevent the development of symptoms and improve survival.[3–5] Diagnostic biomarkers play a critical role in early diagnosis and intervention.

B-type natriuretic peptide (BNP) and the N-terminal (NT)-pro hormone BNP (NT-proBNP) are well established for use in diagnosis of heart failure and are included in standard of care guidelines for both the American College of Cardiology/American Heart Association (ACC/AHA)[6] and European Society of Cardiology (ESC).[7] Testing of natriuretic peptide biomarkers adds value to clinical judgement and has demonstrated benefit when used in both emergency and outpatient settings.

NT-proBNP, like BNP, aids in diagnosis, risk stratification and severity assessment for heart failure; it supports decision making across every stage of heart failure care.

Test principle

The human NT-proBNP binds to the anti-NT-proBNP antibody on the solid phase, while the anti-NT-proBNP antibody-alkaline phosphatase conjugate reacts with a different antigenic site on the NT-proBNP molecule.

Assay Features and Benefits

NT-proBNP   ALP

Anti-NT-proBNP
monoclonal (capture)

Anti-NT-proBNP alkaline
phosphatase conjugate (detection)
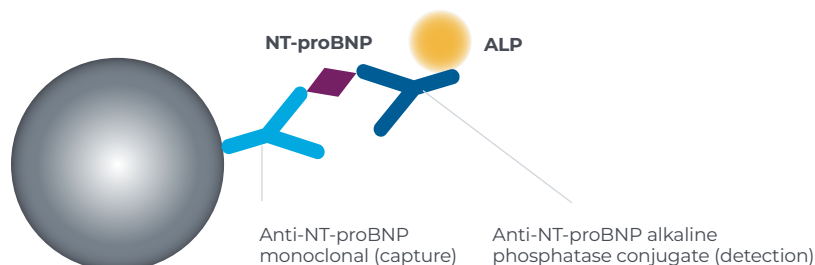
- Gain confidence in interpreting test results with an assay that is backed by an up-to-date prospective clinical trial supporting use of guideline-directed cutoffs
- Obtain specific information that supports interpretation of NT-proBNP levels in individuals with comorbidities
- Increase accuracy in diagnosing heart failure with age-based cutoffs that improve specificity by 31% compared to a single cutoff strategy
- Save time with rapid results (under 11 minutes on the DxI 9000 Analyzer)

Heart failure affects **~26** million people globally[1]

50% of patients are readmitted to the hospital within 6 months of discharge[2]

9.91 million years lost due to disability[8]

Current worldwide economic burden of heart failure

$346.17 billion USD[8]

45-60% of heart failure deaths occur within five years of first hospital admission[2]

Access NT-proBNP is available for use on the DxI 9000 Access Immunoassay Analyzer

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Characteristics

System compatibility	DxI 9000 Immunoassay Analyzer
Sample Type/Size	Serum, plasma (lithium heparin, EDTA) Sample Size: 55 µL
Sample Stability	15-25°C (room temperature): 72 hours 2-10°C: 6 days
Analytical Measuring Range	Approximately 10.0-35,000 ng/L (pg/mL) Automated dilution: Up to approximately 350,000 ng/L (pg/mL)
Limit of Detection (LoD)	≤10.0 ng/L (pg/mL)
20% CV Limit of Quantitation (LoQ)	≤10.0 ng/L (pg/mL)
Imprecision	Within-laboratory imprecision: ≤4.0 ng/L (pg/mL) SD at concentrations ≤50 ng/L (pg/mL) ≤8.0% CV at concentrations >50 ng/L (pg/mL)
Rule-out cutoff for Heart Failure (age-independent)	300 ng/L
Rule-in cutoffs for Heart Failure (age-dependent)	<50 years old: ≥450 ng/L (pg/mL) 50-75 years old: ≥900 ng/L (pg/mL) >75 years old: ≥1,800 ng/L (pg/mL)
Open Pack Stability	61 days
Calibration Stability	61 days
Open Calibrator Stability	64 days
Time to First Result	≤11 minutes
Approximate Calibrator Levels	Provided at zero and approximately 60, 300, 1,200, 4,000, 12,000 and 35,000 ng/L (pg/mL)

Ordering Information

Item Description	Size	Reference Number
Access NT-proBNP	2 reagent packs, 100 tests/pack	**C71977**
Access NT-proBNP Calibrators	S0-S6: 1 vial/level, 1.5 mL/vial	**C71978**

For questions, please contact your local Beckman Coulter representative
or visit **BeckmanCoulter.com/NTpro**

References

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7. McDonagh TA, Metra M, Adamo M, et al. 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure. Eur Heart J. 2021;42(36):3599-3726. doi:10.1093/eurheartj/ehab368

8. Lippi G, Sanchis-Gomar F. Global epidemiology and future trends of heart failure. AME Med J. 2020;5:15-15. doi:10.21037/amj.2020.03.03

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