

**NEW
CARDIAC
BIOMARKER
FOR DOGS**

Canine NT-proBNP (N-terminal pro-B type natriuretic peptide)

NT-proBNP Testing is a valuable diagnostic tool for veterinary practitioners. B-type natriuretic peptide (BNP) is a hormone produced and secreted by cardiac muscle cells (cardiomyocytes) in response to excessive cellular stretch¹. BNP helps to regulate homeostasis of intravascular volume and systemic pressure, and counteracts the effects of the renin-angiotensin-aldosterone system (RAAS), which becomes upregulated with heart disease.

In dogs, NT-proBNP is correlated with heart size and systolic function, and so concentrations can be used to detect dogs with early disease.

Species: Canine	Sample: Serum minimum 200µl	TAT: 24 hours
Canine (Billing code 4273)		
Reference range:		
<900pmol/L <i>Normal</i>	900–1,800pmol/L <i>Suspected</i>	>1,800pmol/L <i>Abnormal</i>

Clinical applications:

- Aids in distinguishing cardiac from respiratory disease
- Staging of myxomatous mitral valve degeneration (MMVD)
- Detects dilated cardiomyopathy (DCM) in large breeds

When to use:

Dogs suspected of having heart diseases

1. Respiratory and/or exercise intolerance
2. Older dogs (> 8 yrs)

Canine NT-proBNP

< 900 pmol/L

Clinically significant heart disease unlikely

Look for other causes
of clinical signs

900-1,800 pmol/L

Further diagnostics recommended
if clinical suspicion is high

Perform other diagnostic tests, such as ECG, thoracic
radiography and echocardiography

> 1,800 pmol/L

High likelihood of heart failure

Definitive diagnosis



**NEW
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BIOMARKER
FOR CATS**

Feline NT-proBNP (N-terminal pro-B type natriuretic peptide)

N-terminal pro-B type natriuretic peptide (NTproBNP) is useful in identification and monitoring of heart disease in cats. NT-proBNP (N-terminal pro-B type natriuretic peptide) is cleaved from BNP which is produced by the muscle cells of the heart and increases with excessive stretching of the cells. NT-proBNP concentration reflects the degree of cardiac activation secondary to stimulus, such as stretching, allowing this marker to be used to assess the magnitude of cardiac muscle stretching.

Species: Feline	Sample: Serum minimum 200µl	TAT: 24 hours
Feline (Billing code 4274)		
Reference range:		
<100pmol/L <i>Normal</i>	≥100 pmol/L <i>Abnormal</i>	

Clinical applications:

- **To screen for occult heart disease**
 - Prior to anaesthesia
 - In apparently healthy cats with heart murmurs or arrhythmias
 - At risk breeds - Maine Coon, Ragdoll, Birman, Persian
- **To distinguish, cardiac and respiratory disease**
 - To differentiate cardiac and pulmonary causes of respiratory signs such as dyspnoea, tachypnoea and cough.
- **To determine the severity of heart disease.**
 - For monitoring stabilisation of congestive heart failure during hospitalisation
 - For predicting survival in cats with congestive heart failure

References

1. Viera de Lima G and de Silveira Ferreira F. N-terminal-pro brain natriuretic peptides in dogs and cats: A technical and clinical review. *Vet World*. 10: 1072-1082 2017.

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