CENTOGENE
THE RARE DISEASE COMPANY

CentoCardio

Helping You Beat the Statistics

PRODUCT SHEET

NGS Panel for Cardiology

CENTOGENE's Next Generation Sequencing (NGS) gene panel for inherited cardiac diseases can help physicians identify the genetic cause of cardiac diseases, including cardiomyopathy, arrhythmia, and congenital cardiac disorders. Timely detection and diagnosis of heart disorders can lead to enhanced treatment options, help prevent sudden cardiac death, and improve prognosis. Testing can also identify asymptomatic and at-risk family members – facilitating surveillance or interventions to prevent illness or sudden death.

Our panel follows a phenotype-directed approach that includes all clinically relevant genes and genes necessary for the differential diagnosis of syndromes with overlapping phenotype(s) – enabling the diagnosis of a disease that could have otherwise been missed. Our high-quality sequencing is supported by complementary assays to provide advanced detection and enable an accurate diagnosis. This approach maximizes the clinical utility, minimizes the risk of incorrect panel choice, increases cost-effectiveness, and ultimately simplifies the diagnostic process.

The CENTOGENE Advantage

Coverage of **all relevant disease-causing genes** and non-coding and coding pathogenic variants

Powered by CENTOGENE's Biodatabank, the **world's largest real-world data repository** for rare and neurodegenerative diseases

The most **up-to-date panel gene content** with the latest medical and in-house findings

High-quality analysis for precise clinical interpretation using advanced bioinformatics and artificial intelligence-powered tools

Key Features and Performance

COVERAGE	• ≥99.0% targeted regions covered at ≥20x • For each gene, all SNVs described in HGMD®, ClinVar, and the CENTOGENE Biodatabank for rare and neurodegenerative diseases. This includes relevant deep intronic and regulatory variants
GENES	For a complete overview of included genes, please visit: centogene.com/ngspanels-medical-reporting
SPECIFICITY	≥99.9% guaranteed for all reported variants. Variants with low quality and/or unclear zygosity are confirmed by orthogonal methods (Sanger, MLPA, qPCR)
CNV SENSITIVITY	NGS-based Copy Number Variations (CNV) are detected with a sensitivity of above 95.0% for all homozygous deletions and heterozygous deletions/duplications spanning at least three consecutive exons. Heterozygous CNVs spanning less than three exons cannot reliably be detected and are therefore excluded from routine analysis and will only be inspected and reported upon medical or technical indication.
TAT	25 business days

CentoCardio Panel Overview

NUMBER OF GENES	323
ANALYSIS	• Next-Generation-Sequencing (NGS) • CNV analysis included • Mitochondrial DNA analysis included
CONDITIONS	Arrhythmogenic right ventricular cardiomyopathy, Brudgada syndrome, catecholaminergic polymorphic ventricular tachycardia, congenital heart defects, dilated cardiomyopathy, hereditary arrhythmia syndromes, heterotaxy syndrome, hypertrophic cardimyopathy, hereditary hypomagnesemia, long QT syndrome, and short QT syndrome
MATERIAL	1 CentoCard or 1 buccal swab or 1 µg DNA

Going The Extra Mile

All of our NGS panels include sequencing, deletion / duplication (CNV) analysis, and complementary assays to offer the most complete analysis for maximum diagnostic yield.

DELETION / DUPLICATION	High resolution NGS-based CNV analysis to detect larger deletions / duplications is included in all our panels at no extra cost. Deletion / duplications constitute 5.0 – 10.0 % of disease-causing variants. By including CNV analysis in our panels, the potential of providing the most accurate diagnosis increases
MITOCHONDRIAL GENOME	High quality mitochondrial testing is now included for panels where symptoms may be caused by mitochondrial DNA mutations
COMPLEMENTARY ASSAYS	To maximize clinical utility, our panels are reinforced with auxiliary assays, such as repeat expansions to cover genes regions that cannot be examined by current sequencing technology
IMPROVED INTERPRETATION	CENTOGENE`s Biodatabank, the world's largest real-world data repository for rare and neurodegenerative diseases enables access to more than 31 million unique variants for best medical interpretation
VARIANT RECLASSIFICATION PROGRAM	Our variant reclassification program includes all our panels. Physicians are notified free of charge if new genetic evidence which impacts the nature of a previous diagnosis is identified

FOR ORDERING

www.centoportal.com

FOR MORE INFORMATION

www.centogene.com

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