



The following applies to CARGG / Comprehensive Arrhythmia Gene Panel. Testing is performed to evaluate for the presence of variants in coding regions and extending to +/- 10 base pairs of adjacent intronic sequence on either side of the coding exons of the genes analyzed. In addition, the analysis will cover select non-coding variants. Next-generation sequencing and/or a polymerase chain reaction-based quantitative method is performed to test for the presence of copy number variants (CNV) in the genes analyzed. Confirmation of select reportable variants may be performed by alternate methodologies based on internal laboratory criteria.

This list is current from November 2022 to the present. This document is intended to highlight additional evaluations for variants of high clinical interest as well as technical limitations. However, this document does not comprehensively reflect all genomic regions covered by this test. For questions regarding transcripts, genes or regions covered, contact the laboratory at 800-533-1710.

Genomic Build: GRCh37 (hg19) unless otherwise specified

Gene	Reference Transcript	Additional Evaluations	Technical Limitations
<i>ABCC9</i>	NM_005691.3	-	-
<i>ANK2</i>	NM_020977.4	-	-
<i>CACNA1C</i>	NM_000719.7	-	-
<i>CACNA1D</i>	NM_000720.4	-	-
<i>CACNA2D1</i>	NM_000722.4	-	CNV may not be detected in exons 14 and 20
<i>CACNB2</i>	NM_201590.3	-	-
<i>CALM1</i>	NM_006888.6	-	-
<i>CALM2</i>	NM_001743.6	-	-
<i>CALM3</i>	NM_005184.4	-	-
<i>CASQ2</i>	NM_001232.3	-	-
<i>CAV3</i>	NM_033337.3	-	-
<i>CDH2</i>	NM_001792.5	-	-
<i>DES</i>	NM_001927.4	-	-
<i>DSC2</i>	NM_024422.6	-	-
<i>DSG2</i>	NM_001943.5	-	-
<i>DSP</i>	NM_004415.4	-	-
<i>EMD</i>	NM_000117.3	-	-
<i>FLNC</i>	NM_001458.4	-	-
<i>GNB5</i>	NM_016194.4	-	CNV may not be detected in exon 11
<i>HCN4</i>	NM_005477.3	-	-
<i>JUP</i>	NM_002230.4	-	-
<i>KCND2</i>	NM_012281.3	-	-
<i>KCND3</i>	NM_004980.4	-	-
<i>KCNE1</i>	NM_000219.6	-	-
<i>KCNE2</i>	NM_172201.1	-	-
<i>KCNH2</i>	NM_000238.4	-	-
<i>KCNJ2</i>	NM_000891.3	-	-

## Targeted Genes and Methodology Details for Comprehensive Arrhythmia Gene Panel (continued)

Gene	Reference Transcript	Additional Evaluations	Technical Limitations
<i>KCNJ8</i>	NM_004982.4	-	-
<i>KCNQ1</i>	NM_000218.3	-	-
<i>LMNA</i>	NM_170707.4	chr1:g.156105681C>G (c.937-11C>G)	-
<i>NKX2-5</i>	NM_004387.4	-	-
<i>PKP2</i>	NM_004572.3	-	-
<i>PLN</i>	NM_002667.5	-	-
<i>PPA2</i>	NM_176869.3	-	CNV may not be detected in exon 11
<i>PRKAG2</i>	NM_016203.4	-	CNV may not be detected in exon 13
<i>RBM20</i>	NM_001134363.3	-	-
<i>RYR2</i>	NM_001035.3	-	CNV may not be detected in exons 71, 96, and 104
<i>SCN5A</i>	NM_198056.2	-	-
<i>SLC4A3</i>	NM_201574.2	-	-
<i>TECRL</i>	NM_001010874.5	-	-
<i>TMEM43</i>	NM_024334.2	-	-
<i>TNNI3K</i>	NM_015978.3	-	CNV may not be detected in exon 1
<i>TRDN</i>	NM_006073.4	chr6:g.123957870T>C (c.22+29A>G); chr6:g.123850462C>T (c.484+1189G>A)	CNV may not be detected in exons 5, 7, 22, 26, and 28
<i>TTN</i>	NM_001256850.1	-	Sequence and CNV analyses for exons 154–156 will not be performed

Effective Date	Version	Synopsis of Test Change
6/4/2025	V2	<ul style="list-style-type: none"> <li>Added Additional Evaluation for <i>LMNA</i></li> <li>Added/adjusted Technical Limitations for <i>CACNA2D1</i>, <i>PPA2</i>, <i>PRKAG2</i>, and <i>TRDN</i></li> <li>Removed Technical Limitation for <i>TECRL</i></li> </ul>