CARDIAX DEMO

Name: CARDIAX DEMO
Date of Birth: 01-01-1111
Gender: Male
Age: 01
Height:
Weight:
Fasting: FASTING

Telephone: 000-000-0000
Street Address:
Email:

FINAL REPORT

Accession ID: 2308110365

Provider Information

Practice Name: DEMO CLIENT, MD
Provider Name: DEMO CLIENT, MD
Phlebotomist: 0

Telephone: 000-000-0000
Address: 3521 Leonard Ct, Santa Clara, CA 95054

Report Information

Current Result | Previous Result | In Control | Moderate | Risk

Specimen Information

Sample Type	Collection Time	Received Time	Report	Final Report Date
EDTA	2023-09-13 10:13 (PDT)	2023-09-14 11:20 (PDT)	CardiaX - P2	2023-09-20 17:36 (PDT)

VibrantWellness
3521 Leonard Ct, Santa Clara, CA 95054
1-866-364-0963 | support@vibrant-america.com | www.vibrant-america.com

TNP Test not performed | R&L Refer to risks and limitations at the end of report | Notes Refer to Lab notes at the end of the table

INTRODUCTION

Vibrant Wellness is pleased to present to you, CardiaX testing, to help you make healthy lifestyle choices in consultation with your physicians and dietitians. It is intended to be used as a tool to encourage a general state of health and well-being. CardiaX is a genetic microarray test which detects and interprets variants known to be associated with increased predispositions to various heart conditions and metabolic responses to certain associated pharmacological agents. Its intended use is to help reduce the risk of certain heart conditions by making healthy lifestyle choices.

Methodology:

The Vibrant CardiaX panel uses real-time PCR methodology. DNA is extracted and purified from Blood/Saliva samples and a SNP (single nucleotide polymorphism) genotyping assay is performed using real-time PCR to detect the specific allele targets of each assay performed.

Interpretation of Report:

The genetic mutations on the report are organized as multiple tables under different subheadings for associated markers. The mutation alleles are indicated with a + symbol and wild type alleles are indicated with a – symbol. Risk associated variants are indicated with red and alleles with no risk are indicated with green. All contents provided in the report are purely for informational purposes only and should not be considered medical advice. Any changes based on the information provided should be made in consultation with the clinical provider.

The Vibrant Wellness platform provides tools for you to track and analyze your general wellness profile. Testing for the CardiaX panel is performed by Vibrant Genomics, a CLIA certified lab CLIA#: 05D2098445. Vibrant Wellness provides and makes available this report and any related services pursuant to the Terms of Use Agreement (the "Terms") on its website at www.vibrant-wellness.com. By accessing, browsing, or otherwise using the report or website or any services, you acknowledge that you have read, understood, and agree to be bound by these terms. If you do not agree to these terms, you shall not access, browse, or use the report or website. The statements in this report have not been evaluated by the Food and Drug Administration and are only meant to be lifestyle choices for potential risk mitigation. Please consult your physician for medication, treatment, diet, exercise, or lifestyle management as appropriate. This product is not intended to diagnose, treat, or cure any disease or condition.

Please note:

Pediatric ranges have not been established for this test. It is important that you discuss any modifications to your diet, exercise, and nutritional supplementation with your physician before making any changes. To schedule an appointment with Vibrant Clinical Dietitians please call: Toll-Free 866-364-0963.

Cardiax

⊕⊕ Homozygous Mutant ⊕⊖ Heterozygous ⊖⊖ Homozygous Wild

Test Name	Gene Name	Risk Association	Your Mutation	Your Risk	Reference
Q568P	CORIN	Reduced catalytic activity of corin	⊕⊕ A/A	Elevated	C/C

Corin is a type II transmembrane serine protease that is primarily expressed in the heart and plays an important role in the regulation of blood pressure and cardiovascular function. Its catalytic activity is responsible for the conversion of the precursor protein pro-atrial natriuretic peptide (pro-ANP) into the active hormone atrial natriuretic peptide (ANP) in the heart. ANP is involved in the regulation of blood pressure and fluid balance in the body. The Q568P amino acid change is a missense mutation that has been identified in the corin gene. The Q568P mutation involves a substitution of of a glutamine (Q) amino acid with a proline (P) amino acid at position 568 in the corin protein. This substitution has been associated with reduced catalytic activity of corin and impaired processing of pro-atrial natriuretic peptide (pro-ANP), which can lead to reduced levels of ANP and subsequent hypertension. Homozygous mutant (abnormal) individuals with reduced corin catalytic activity, have reduced ANP levels and are associated with a increased risk of hypertension. Susceptible individuals are advised to consume a Dietary Approaches to Stop Hypertension (DASH) diet low in sodium. Regular exercise is recommended for health.

rs10757274	9p21	Myocardial infarction	⊕⊖ A/G	Partially elevated	A/A

The locus on chromosome 9p21 is associated with risk of cardiovascular diseases. It is mainly associated with the risk of coronary heart disease. The polymorphism associated with this locus increases the risk of cardiovascular diseases in susceptible individuals. Susceptible individuals are advised to consume fruits, vegetables, soy products, garlic, soluble fiber, and foods rich in monounsaturated fatty acids and n-3 fatty acids (such as canola and olive oil). Aerobic exercises can help reduce cardiovascular disease risk.

rs2383207	9p21	Myocardial infarction	⊕⊖ A/G	Partially elevated	A/A

The locus on chromosome 9p21 is associated with the risk of cardiovascular diseases. It is mainly associated with the risk of coronary heart disease. The polymorphism associated with this locus increases the risk of coronary heart disease in susceptible individuals. Susceptible individuals are advised to consume fruits, vegetables, soy products, garlic, soluble fiber, and foods rich in monounsaturated fatty acids and n-3 fatty acids (such as canola and olive oil). Aerobic exercises can help reduce cardiovascular disease risk.

rs2383206	9p21	Myocardial infarction	⊕⊖ A/G	Partially elevated	A/A

The locus on chromosome 9p21 is associated with risk of cardiovascular diseases. It is mainly associated with the risk of coronary heart disease. The polymorphism associated with this locus increases the risk of myocardial infarction in susceptible individuals.Susceptible individuals are advised to consume fruits, vegetables, soy products, garlic, soluble fiber, and foods rich in monounsaturated fatty acids and n-3 fatty acids (such as canola and olive oil). Aerobic exercises can help reduce cardiovascular disease risk.

rs12526453	PHACTR1	Altered gene function	⊕⊖ C/G	Partially elevated	C/C

The PHACTR1 gene encodes a member of the phosphatase and actin regulator family of proteins. This family member can bind actin and regulate the reorganization of the actin cytoskeleton. It plays a role in tubule formation and endothelial cell survival. Polymorphisms in this gene are associated with susceptibility to myocardial infarction and coronary artery disease (CAD). However, the mechanism by which the gene is involved in the pathogenesis of heart diseases is still to be elucidated. A mutation in the PHACTR1 gene at the 6p24.1 locus can affect its function leading to the risk of CAD. Heterozygous (partially abnormal) individuals may have altered gene function and are associated with an increased risk of CAD. Susceptible individuals are advised to consume fruits, vegetables, soy products, garlic, soluble fiber, and foods rich in monounsaturated fatty acids and n-3 fatty acids (such as canola and olive oil). Regular exercise is recommended for cardiac health.

Cardiax

⊕⊕ Homozygous Mutant ⊕⊖ Heterozygous ⊖⊖ Homozygous Wild

Test Name	Gene Name	Risk Association	Your Mutation	Your Risk	Reference
rs4680	COMT	Impaired systemic elimination	⊕⊖ A/G	Partially elevated	A/A

The COMT gene provides instructions for making an enzyme called catechol-O-methyltransferase. The enzyme is involved in the degradative pathways of the catecholamine transmitters. It also plays a central role in DNA repair and estrogen-induced carcinogenesis. COMT's roles in reducing the toxic effects of catechol estrogen exposure and catecholamine flux are important in maintaining cardiovascular and renal function. Thus, a mutation in the COMT gene may affect its function leading to the risk of coronary artery disease (CAD). Heterozygous (partially abnormal) individuals may have altered gene function and are associated with an increased risk of CAD. Susceptible individuals are advised to consume fruits, vegetables, soy products, garlic, soluble fiber, and foods rich in monounsaturated fatty acids and n-3 fatty acids (such as canola and olive oil). Regular exercise is recommended for cardiac health.

rs1801133	MTHFR	Unavailability of vitamin B9	⊕⊖ C/T	Partially elevated	C/C

The MTHFR gene encodes an enzyme involved in vitamin B9 (folic acid) metabolism. A mutation in the gene reduces vitamin B9 which is required for the metabolism of an amino acid called homocysteine. The unavailability of vitamin B9 increases homocysteine levels which may raise systolic blood pressure. This increase in homocysteine levels is linked to the early development of heart disease, blood pressure (hypertension), and blood clots. Smoking induces homocysteine elevations.Heterozygous (partially abnormal) individuals may have elevated homocysteine levels and are associated with an increased risk of developing coronary artery disease (CAD). Susceptible individuals are advised to eat approximately 1 oz of dark chocolate, 1 oz of almonds per day. They must adopt a Mediterranean-style diet that includes a variety of antioxidant-rich foods, heart healthy fats, and complex carbohydrates and consume a diet rich in omega-3 fatty acids. Regular exercise is recommended for cardiac health.

rs762551	CYP1A2	Impaired metabolising function	⊕⊖ A/C	Partially elevated	C/C

The CYP1A2 gene encodes a member of the cytochrome P450 superfamily of enzymes. CYP1A2 is the main enzyme responsible for the metabolism of caffeine. Additionally, studies have shown that polymorphisms in the CYP1A2 gene are associated with cardiovascular diseases (CVD) such as myocardial infarction and hypertension. Individuals who are fast metabolizers have a reduced risk of heart attack and hypertension if they consume at least one cup of coffee per day compared to not consuming any coffee. As a result, alterations in the gene may affect its metabolizing functions and can lead to the risk of CVD in slow metabolizers/affected individuals. Heterozygous (partially abnormal) individuals may have altered gene function and are slow metabolizers. Due to affected metabolic functions they are associated with a higher risk of CVD. Susceptible individuals are advised to consume fruits, vegetables, soy products, garlic, soluble fiber, and foods rich in monounsaturated fatty acids and n-3 fatty acids (such as canola and olive oil). Regular exercise is recommended for cardiac health.

rs1799998	CYP11B2	Altered blood pressure	⊕⊖ C/T	Partially elevated	T/T

The CYP11B2 gene encodes an enzyme called aldosterone synthase. This enzyme is found in the adrenal glands, which are located on top of the kidneys. Aldosterone synthase is a member of the cytochrome P450 family of enzymes. It helps produce a hormone called aldosterone. Aldosterone helps control blood pressure by maintaining proper salt and fluid levels in the body. As a result, a mutation in the CYP11B2 gene that encodes for aldosterone synthase can lead to altered blood pressure and the risk of hypertension. Heterozygous (partially abnormal) individuals may have higher aldosterone levels and are associated with an elevated risk of hypertension. Susceptible individuals are advised to consume a Dietary Approaches to Stop Hypertension (DASH) diet low in sodium. Regular exercise is recommended for health.

Cardiax

⊕⊕ Homozygous Mutant ⊕⊖ Heterozygous ⊖⊖ Homozygous Wild

Test Name	Gene Name	Risk Association	Your Mutation	Your Risk	Reference
rs1050450	GPX1	Oxidative stress	⊕⊖ C/T	Partially elevated	C/C

The GPX1 gene encodes glutathione peroxidase which combats toxicity by reducing toxic molecules such as hydrogen peroxide and lipid peroxide to water and alcohol, respectively, in the presence of glutathione. Thus, the gene is involved in antioxidant functions. However, genetic variations in the GPX1 enzyme can affect its antioxidant activity thus, giving rise to oxidative stress. Increased oxidative stress leading to decreased nitric oxide (vasodilator) availability promotes arterial hypertension which can give rise to cardiovascular diseases (CVD). As a result, a mutation in the GPX1 gene can affect enzyme activity which can give rise to oxidative stress leading to a risk of CVD. Heterozygous (partially abnormal) individuals may have altered enzymatic activity leading to increased oxidative stress, thus, a higher risk of CVD. Susceptible individuals are advised to consume fruits, vegetables, soy products, garlic, soluble fiber, and foods rich in monounsaturated fatty acids and n-3 fatty acids (such as canola and olive oil). Regular exercise is recommended for cardiac health.

rs3918226	NOS3	Impaired eNOS function	⊕⊖ C/T	Partially elevated	C/C

The NOS3 gene, also known as the endothelial nitric oxide synthase (eNOS) gene, encodes the eNOS enzyme that is primarily expressed in endothelial cells and plays a crucial role in the regulation of vascular function. The eNOS enzyme catalyzes the conversion of L-arginine and oxygen to L-citrulline and nitric oxide (NO), which is a potent vasodilator that helps to regulate blood pressure and maintain healthy blood flow. Variation in the gene causes potential modulation of eNOS expression. This leads to constriction of arterial vessels. As a result, a mutation in the gene may impair eNOS function leading to arterial hypertension.Heterozygous (partially abnormal) individuals with impaired eNOS function have a higher risk of arterial hypertension.Susceptible individuals are advised to consume a Dietary Approaches to Stop Hypertension (DASH) diet low in sodium. Regular exercise is recommended for health.

rs1549758	NOS3	Impaired eNOS function	⊕⊖ C/T	Partially elevated	C/C

The NOS3 gene, also known as the endothelial nitric oxide synthase (eNOS) gene, encodes the eNOS enzyme that is primarily expressed in endothelial cells and plays a crucial role in the regulation of vascular function. The eNOS enzyme catalyzes the conversion of L-arginine and oxygen to L-citrulline and nitric oxide (NO), which is a potent vasodilator that helps to regulate blood pressure and maintain healthy blood flow. Overall, the NOS3 gene plays a critical role in the regulation of vascular function and has been implicated in the pathogenesis of various cardiovascular and metabolic disorders, including coronary heart disease (CHD). Variation in the gene causes potential modulation of eNOS expression. This might affect the regulation of vascular function . As a result, a mutation in the gene may impair eNOS function leading to CHD.Heterozygous (partially abnormal) individuals with impaired eNOS function have a higher risk of CHD.Susceptible individuals are advised to consume a Dietary Approaches to Stop Hypertension (DASH) diet low in sodium. Regular exercise is recommended for health.

rs1799983	NOS3	Reduced NO levels	⊕⊖ G/T	Partially elevated	G/G

The NOS3 gene, also known as the endothelial nitric oxide synthase (eNOS) gene, encodes the eNOS enzyme that is primarily expressed in endothelial cells and plays a crucial role in the regulation of vascular function. The eNOS enzyme catalyzes the conversion of L-arginine and oxygen to L-citrulline and nitric oxide (NO), which is a potent vasodilator that helps to regulate blood pressure and maintain healthy blood flow. Variation in the gene reduces eNOS expression, activity and subsequently reduces NO production. Reduced NO could be a potential candidate marker for hypertension development.Heterozygous (partially abnormal) individuals with reduced NO levels have a higher risk of hypertension. Susceptible individuals are advised to consume a Dietary Approaches to Stop Hypertension (DASH) diet low in sodium. Regular exercise is recommended for health.

Cardiax

⊕⊕ Homozygous Mutant ⊕⊖ Heterozygous ⊖⊖ Homozygous Wild

Test Name	Gene Name	Risk Association	Your Mutation	Your Risk	Reference
rs1042714	ADR-B2	Idiopathic thromboembolism	⊕⊖ C/G	Partially elevated	C/C

The ADR-B2 gene encodes beta-2 adrenergic receptors. This receptor belongs to the G-protein coupled receptor superfamily. The genetic polymorphism associated with this gene increases the risk of idiopathic thromboembolism in susceptible individuals. undefined

CardiaX

Cardiax

⊕⊕ Homozygous Mutant ⊕⊖ Heterozygous ⊖⊖ Homozygous Wild

Test Name	Gene Name	Risk Association	Your Mutation	Your Risk	Reference
rs10757274	9p21	Myocardial infarction	⊕⊖A/G	Partially elevated	A/A
rs10757278	9p21	Myocardial infarction	⊖⊖A/A	Normal	A/A
rs2383207	9p21	Myocardial infarction	⊕⊖A/G	Partially elevated	A/A
rs2383206	9p21	Myocardial infarction	⊕⊖A/G	Partially elevated	A/A
rs169713	PHACTR1	Abnormalities in blood flow	⊖⊖C/C	Normal	C/C
rs12526453	PHACTR1	Altered gene function	⊕⊖C/G	Partially elevated	C/C
rs2200733	4q25	Atrial fibrillation	⊖⊖C/C	Normal	C/C
rs10033464	4q25	Atrial fibrillation	⊕⊕G/G	Normal	G/G
rs4680	COMT	Impaired systemic elimination	⊕⊖A/G	Partially elevated	A/A
rs4646994	ACE	Altered blood pressure	⊖⊖I/I	Normal	I/I
rs10911021	1q25	Lower plasma pyroglutamic acid/glutamic acid ratio	⊖⊖C/C	Normal	C/C
ApoE	APOE	Higher total and LDL cholesterol	⊖⊖ε3/ε3	Normal	ε3/ε3, ε2/ε3, ε1/ε4, ε1/ε2
rs1801133	MTHFR	Unavailability of vitamin B9	⊕⊖C/T	Partially elevated	C/C
rs1801131	MTHFR	Increased homocysteine levels	⊕⊕A/A	Normal	A/A
rs2472297	15q24	Increased caffeine intake	⊖⊖C/C	Normal	C/C
rs762551	CYP1A2	Impaired metabolising function	⊕⊖A/C	Partially elevated	C/C
rs4238001	SCARB1	Decreased protein levels of SR-B.	⊖⊖C/C	Normal	C/C
T555I	CORIN	Reduced catalytic activity of corin	⊖⊖C/C	Normal	C/C
Q568P	CORIN	Reduced catalytic activity of corin	⊕⊕A/A	Elevated	C/C
rs1799998	CYP11B2	Altered blood pressure	⊕⊖C/T	Partially elevated	T/T
rs1050450	GPX1	Oxidative stress	⊕⊖C/T	Partially elevated	C/C
rs3918226	NOS3	Impaired eNOS function	⊕⊖C/T	Partially elevated	C/C
rs1549758	NOS3	Impaired eNOS function	⊕⊖C/T	Partially elevated	C/C

CardiaX

Cardiax

⊕⊕ Homozygous Mutant ⊕⊖ Heterozygous ⊖⊖ Homozygous Wild

Test Name	Gene Name	Risk Association	Your Mutation	Your Risk	Reference
rs1799983	NOS3	Reduced NO levels	⊕⊖ G/T	Partially elevated	G/G
rs1042714	ADR-B2	Idiopathic thromboembolism	⊕⊖ C/G	Partially elevated	C/C
rs670	APOA1	Altered lipid levels	⊖⊖ G/G	Normal	G/G
rs5082	APOA2	Lipid abnormalities	⊖⊖ T/T	Normal	T/T
rs1126742	CYP4A11	Elevated blood pressure	⊖⊖ T/T	Normal	T/T
rs2108622	CYP4F2	Impaired vascular function	⊖⊖ C/C	Normal	C/C
rs5186	AGTR1	Impaired RAAS system	⊖⊖ A/A	Normal	A/A
rs138326449	APOC3	Increased triglyceride levels	⊖⊖ G/G	Normal	G/G

Risk and Limitations

This test has been developed and its performance characteristics determined and validated by Vibrant Genomics LLC., a CLIA certified lab. These assays have not been cleared or approved by the U.S. Food and Drug Administration. Vibrant Wellness provides additional contextual information on these tests and provides the report in a more descriptive fashion.

The Vibrant CardiaX Genetics panel does not demonstrate absolute positive and negative predictive values for any condition. Its clinical utility has not been fully established. Clinical history and current symptoms of the individual must be considered by the healthcare provider prior to any interventions. Test results should be used as one component of a physician's clinical assessment.

CardiaX Genetics testing is performed at Vibrant Genomics, a CLIA certified laboratory. Vibrant Genomics has effective procedures in place to protect against technical and operational problems. However, such problems may still occur. Examples include failure to obtain the result for a specific test due to circumstances beyond Vibrant's control. Vibrant may re-test a sample to obtain these results but upon re-testing the results may still not be obtained. As with all medical laboratory testing, there is a small chance that the laboratory could report incorrect results. A tested individual may wish to pursue further testing to verify any results.

Genetic testing is helpful in analyzing the risk of various diseases. However, it is important to note that Genetic risk determinants are neither necessary nor sufficient for the development of diseases. Environmental and lifestyle risk factors could also affect the risk of disease development. Results from genetic analysis should always be interpreted along with clinical findings on the individual. Genetic testing evaluates only for the genotypes indicated; it does not test for other genetic abnormalities found elsewhere in the genome. Different genetic variants can be tested by different genetic labs to evaluate the risk for a particular disease, depending on what is tested, genetic risk may not be comparable between labs. It should be realized that there are possible sources of error like any lab testing which include sample misidentification, trace contamination of PCR reactions, technical errors and rare genetic variants that may interfere with analysis.

Some individuals may feel anxious about getting their genetic test health results. If the potential user feels very anxious, such user should speak to his or her doctor or other health care professional prior to collection of a sample for testing. Users should consult with their doctor or other health care professional if they have any questions or concerns about the results of their test or their current state of health. Users of the test are also encouraged to discuss their test results with a genetic counselor, board-certified clinical molecular geneticist, or equivalent health care professional.

The information in this report is intended for educational purposes only. While every attempt has been made to provide current and accurate information, neither the author nor the publisher can be held accountable for any errors or omissions. Tested individuals may find their experience is not consistent with Vibrant's selected peer reviewed scientific research findings of relative improvement for study groups. The science in this area is still developing and many personal health factors affect diet and health. Since subjects in the scientific studies referenced in this report may have had personal health and other factors different from those of tested individuals, results from these studies may not be representative of the results experienced by tested individuals. Further, some recommendations may or may not be attainable, depending on the tested individual's physical ability or other personal health factors. A limitation of this testing is that many of these scientific studies may have been performed in selected populations only. The interpretations and recommendations are done in the context of these studies, but the results may or may not be relevant to tested individuals of different or mixed ethnicities.

Vibrant Wellness makes no claims as to the diagnostic or therapeutic use of its tests or other informational materials. Vibrant Wellness reports and other information do not constitute medical advice and are not a substitute for professional medical advice. Please consult your healthcare practitioner for questions regarding test results, or before beginning any course of medication, supplementation, or dietary changes.