VibrantWellness

Cardiac Health Panel

Key Clinical Messages

What is the Cardiac Health Panel?

Vibrant's Cardiac Health Panel is a blood test that measures serum lipids, apolipoproteins, and markers of inflammation.

Why Order the Cardiac Health Panel?

Cardiovascular disease is a leading cause of death in America[1]. Yet, cardiovascular disease is preventable and modifiable[2]. Vibrant's Cardiac Health Panel helps identify the root causes of inflammation driving heart disease progression to guide therapeutic lifestyle changes that help prevent and reverse cardiovascular disease.

References:

1. Centers for Disease Control and Prevention. Heart Disease Facts. Last Reviewed: October 14, 2022. Accessed on April 24, 2023 at https://www.cdc.gov/heartdisease/facts.htm
2. Centers for Disease Control and Prevention. Prevent Heart Disease. Last Reviewed: March 21, 2023. Accessed on April 24, 2023 at https://www.cdc.gov/heartdisease/prevention.htm
3. Sairam SG, Sola S, Barooah A, et al. The role of Lp-PLA2 and biochemistry parameters as potential biomarkers of coronary artery disease in Asian South-Indians: a case-control study. Cardiovasc Diagn Ther. 2017;7(6):589-597. doi:10.21037/cdt.2017.08.13

What Markers Are Included on Vibrant's Cardiac Health Panel?

Vibrant's Cardiac Health Panel includes the following 16 markers.

Lipids

- Total Cholesterol
- LDL Calculation - low-density lipoprotein
- HDL Direct - high-density lipoprotein
- Cholesterol/HDL Ratio
- Triglycerides
- LDL Direct

Apolipoproteins

- Apo A-1 - Apolipoprotein A-1
- Apo B - Apolipoprotein B
- Apo B: ApoA-1

LipoProtein Markers

- sdLDL - small, dense low-density lipoprotein
- Lp(a) - Lipoprotein (a)

Inflammation

- PLAC - lipoprotein-associated phospholipase A2 (formerly called Lp-PLA_2)[3]
- Homocysteine
- hs-CRP - high sensitivity C-reactive protein
- ox-LDL - oxidized LDL
- MPO - myeloperoxidase

Myocardial Stress

- NT-ProBNP

Regulatory Statement:
This test has been laboratory developed and their performance characteristics determined by Vibrant America LLC, a CLIA-certified laboratory performing the test CLIA#:05D2078809. The test has not been cleared or approved by the U.S. Food and Drug Administration (FDA). Although FDA does not currently clear or approve laboratory-developed tests in the U.S., certification of the laboratory is required under CLIA to ensure the quality and validity of the tests.

Which Tests Pair Well with the Cardiac Health Panel?

- **CardiaX** – to investigate genetic predispositions to various heart conditions and metabolic responses to certain associated pharmacological agents
- **Methylation Panel** – to investigate genetic predispositions which could affect methylation pathways
- **Micronutrients** – to optimize nutrient and antioxidant status
- **NutriPro** – to optimize nutrient and antioxidant status and investigate genetic predisposition toward nutrient deficiency
- **Gut Zoomer** – to investigate digestive insufficiency and malabsorption contributing to micronutrients deficiencies/insufficiencies, dysbiosis patterns (LPS bacterial overgrowth, low Akkermansia muciniphila, etc.), and other drivers of inflammation
- **Wheat Zoomer** – to investigate wheat/gluten sensitivity and intestinal hyperpermeability contributing to inflammation
- **Food Zoomers and Food Sensitivity** – to investigate intact protein sensitivities (Food Sensitivity) and peptide sensitivities (Food Zoomers) contributing to inflammation

Reference Ranges

Lipids	In Control Range	Moderate Range	High Risk Range
Cholesterol, Total (mg/dL)	≤ 199	200-240	≥ 241
LDL Calculation (mg/dL)	≤ 99	100-129	≥ 130
HDL Direct (mg/dL)	≥ 56 (Male) ≥ 66 (Female)	35-55 (Male) 45-65 (Female)	≤ 34 (Male) ≤ 44 (Female)
Cholesterol/HDL Ratio (mg/dL)	≤ 3.5	3.6-4.9	≥ 5.0
Triglycerides (mg/dL)	≤ 149	150-200	≥ 201

LDL Direct	In Control Range	Moderate Range	High Risk Range
LDL Direct (mg/dL)	≤ 99	100-129	≥ 130

Apolipoproteins	In Control Range	Moderate Range	High Risk Range
Apo A-1 (mg/dL)	≥ 120 (Male) ≥ 140 (Female)	N/A	≤ 119 (Male) ≤ 139 (Female)
Apo B	≤ 89	90-119	≥ 120
Apo B:Apo A-1	≤ 0.69 (Male) ≤ 0.59 (Female)	0.70-0.90 (Male) 0.60-0.80 (Female)	≥ 0.91 (Male) ≥ 0.81 (Female)

Inflammation	In Control Range	Moderate Range	High Risk Range
PLAC (nmol/min/mL)	≤ 224	N/A	≥ 225
Homocysteine (µmol/L)	≤ 9	10-14	≥ 15
hs-CRP (mg/L)	≤ 0.9	1.0-3.0	≥ 3.1
ox-LDL (U/L)	≤ 60.0	60.1-70.0	≥ 70.1
MPO (pmol/L)	≤ 599.9	600.0-2999.9	≥ 3000.0

Myocardial Stress	In Control Range	Moderate Range	High Risk Range
NT-ProBNP	≤ 184	185-449	≥ 450

Vibrant America Clinical Lab investigated the transferability of the expected values per the FDA-approved test to its patient population to determine its own reference ranges.

Which Patients Benefit from This Test?

Conditions, signs, and risks associated with cardiovascular disease include:

- Chest pain or discomfort, upper back or neck pain, indigestion, heartburn, nausea or vomiting, extreme fatigue, upper body discomfort, dizziness, and shortness of breath
- Diabetes
- Overweight and obesity
- Unhealthy diet: high intake of saturated fat, low intake of omega-3 fatty acids, and/or a diet very high in carbohydrates
- Physical inactivity (sedentary lifestyle)
- Excessive alcohol use
- Cigarette smoking

Why Vibrant?

Vibrant is a CLIA-certified and CAP-accredited lab. Our Cardiac Health Panel technology enables full automation, high sensitivity, and rapid turnaround time.

Methodology

Vibrant uses the Cobas Pro Analyzer and the following methodologies to measure analytes on the Cardiac Health Panel.

- **Enzymatic-colorimetric** for Total Chol, LDL, HDL, Triglycerides, sdLDL, and Homocysteine
- **Enzyme assay** for PLAC
- **Latex enhanced Immunoturbidimetric assay** for MPO
- **ELISA** for ox-LDL
- **Immunoturbidometric** for Apo A-1, ApoB
- **Antibody agglutination** for Lp(a)
- **Turbidimetric** for hs-CRP

Test Prep

Fasting Required: Not required.

Dietary Restrictions: None.

Medication Restrictions: None.

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