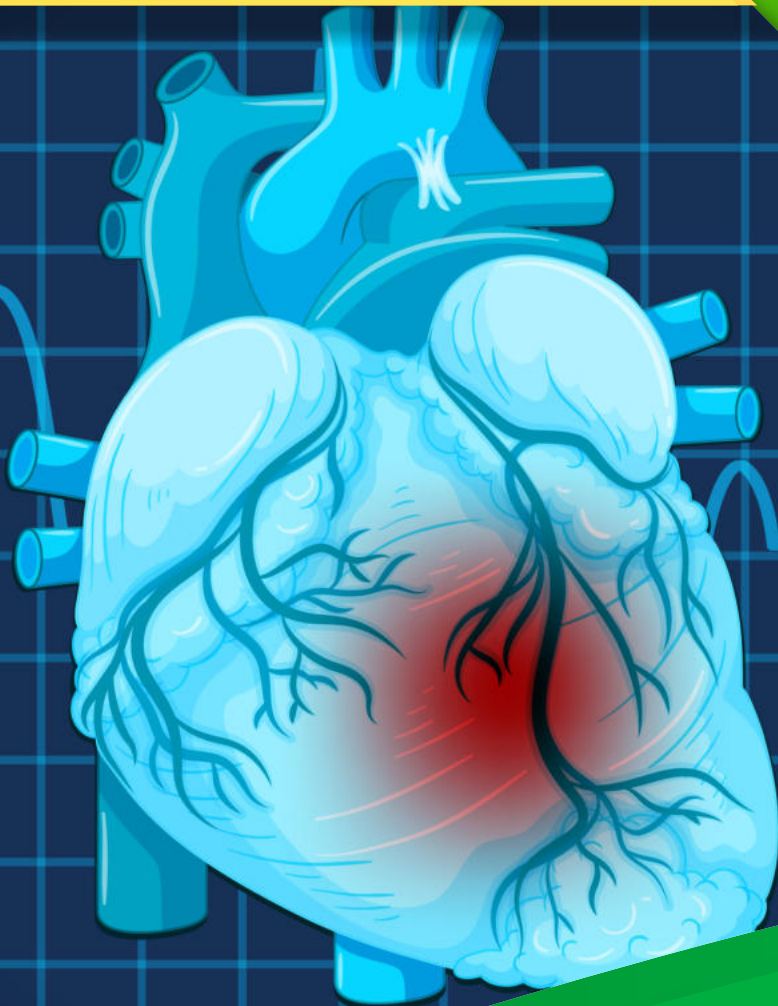


Cardiac Risk Markers



- Lipoprotein (a) - LETIA
- Apolipoprotein A1- TIA
- Apolipoprotein B - TIA
- Apolipoprotein B / Apolipoprotein A1 Ratio - TIA
- hS-CRP - LETIA
- Lp-PLA2 (Plac Assay)-LETIA



Summary:

The heart is a four-chambered, fist-sized muscular organ responsible for pumping oxygen and nutrients to cells and removing waste like carbon dioxide. Known as the myocardium, it functions continuously to support vital cellular activity. Any interruption in this process can lead to severe, potentially fatal conditions—making regular heart health monitoring essential.

Because the heart works nonstop, evaluating its function is complex. However, specific molecules known as cardiac risk markers help indicate the likelihood of heart disease.

What Are Cardiac Risk Markers?

Heart disease develops over time. In response to cardiac stress or damage, the body releases certain molecules to promote healing. The levels of these molecules rise with the severity of damage, making them useful indicators of heart problems.

These markers, normally present in low amounts, fluctuate significantly during heart conditions or after a cardiac event. They are used for prevention, diagnosis, prognosis, and treatment monitoring.

Each application may require different markers with specific properties. The Role of Cardiac Risk Markers Cardiac markers help cardiologists assess an individual's risk or presence of heart disease. Understanding their function is crucial in detecting and managing cardiovascular conditions effectively.

Lipoprotein (a):

Lipoprotein (a) or Lp(a) is a low-density cholesterol-rich complex, made of two molecules: lipoprotein (LDL) and Apolipoprotein [Apo(A)]. The main characteristics of Lp(a) are that it is genetically determined and is unaffected by lifestyle changes. Elevated levels of Lp(a) are associated with Cardiovascular diseases, stroke, atherosclerosis, heart attack, etc

Features and Benefits:

- Latex Enhanced Turbidimetric Immuno Assay (LETIA)
- Liquid Stable Two Reagents
- Two step Fixed Time Assay (30 Sec Delay + 180 Sec Measuring)
- Lyophilized Calibrator Provided.
- Linearity: 3 – 110 mg/dL
- Measuring Wavelength 630 nms
- Unhemolysed Serum is the specimen
- Available as multipurpose reagents and dedicated system packs

Apolipoprotein A1 :

Apolipoprotein A1 Apolipoprotein A1 or Apo A1, encoded by gene APOA1, is a major high-density lipoprotein (HDL) associated with accumulated fat transport to liver. Higher levels of ApoA1 are related with lower risk of heart attacks whereas, lower levels indicate risk of atherosclerosis and cardiovascular diseases

Features and Benefits:

- Quantitative Turbidimetric Immuno Assay (TIA)
- Two liquid reagents (Diluent and Antibody).
- Lyophilized Calibrator Provided
- 5 Minutes Endpoint Bichromatic Spline Assay
- Linearity : 250 mg/dL
- Available as multipurpose reagents and dedicated system packs

Apolipoprotein B :

Apolipoprotein B Apolipoprotein B or ApoB, encoded by gene APOB, is associated with low and very low-density lipoprotein as well as chylomicrons. It is produced in the intestines (ApoB-48) and liver (ApoB-100) having the function of cholesterol movement within the body. Higher levels of ApoB indicate higher risk of stroke or heart diseases.

Features and Benefits:

- Quantitative Turbidimetric Immuno Assay (TIA)
- Two liquid reagents (Diluent and Antibody).
- Lyophilized Calibrator Provided
- 5 Minutes Endpoint Bichromatic Spline Assay
- Linearity : 250 mg/dL
- Available as multipurpose reagents and dedicated system packs

Apolipoprotein B to Apolipoprotein A1 Ratio:

The ratio- ApoB/ApoA1 is regarded as a strong predictor of myocardial infarction or heart attack risk.

hs-CRP: :

C-reactive protein (CRP) is a protein that increases in the blood with inflammation and infection as well as following a heart attack, surgery, or trauma. Studies have suggested that a persistent low level of inflammation plays a major role in atherosclerosis, the narrowing of blood vessels due to build-up of cholesterol and other lipids, which is often associated with cardiovascular disease (CVD). The hs-CRP test accurately measures low levels of CRP to identify low but persistent levels of inflammation and thus helps predict a person's risk of developing CVD. hs-CRP is often ordered in conjunction with other tests that are performed to assess risk of heart disease, such as a lipid panel (cholesterol, triglycerides, HDL-C, LDL-C) when your healthcare provider would like additional information on your risk. Features and Benefits:

- Latex Enhanced Turbidimetric Immuno Assay (LETIA)
- Two liquid reagents
- 4 Level calibrator set provided
- Linearity : 150 mg/L
- Multipoint Linear Assay
- 4 Minutes Assay (5 Sec Delay and 240 Sec Measuring)
- No Prozone effect was detected upon 100 mg/L
- Can be used on semi and fully auto analyzers

Lp-PLA2 (Plac Test):

Lp-PLA2- PLAC-Cardiac-Risk-Marker is a test used in measuring the amount of lipoprotein associated phospholipase (Lp-PLA2) in blood. Lp-PLA2 is an enzyme associated with low-density lipoprotein (LDL). Lp-PLA2 is carried to the coronary artery walls by LDL, where it causes an inflammatory response. This condition will cause plaque if present more prone to rupture as the Lp-PLA2 enzyme is known to cause inflammation of coronary artery walls. Hence, high levels of Lp-PLA2 will indicate an increased risk of heart attack or stroke. As a result, PLAC Test, which measures the levels of Lp-PLA2, is considered as a specific independent cardiac risk marker.

Features and Benefits:

- Latex Enhanced Turbidimetric Immuno Assay (LETIA)
- Liquid Stable Two Reagents
- Two step Fixed Time Assay
- 5 Level Calibrators provided
- Linearity: 800 ng/mL
- Measuring Wavelength 546 nm
- Serum is the preferred specimen
- Available as multipurpose reagents and dedicated system packs