



**Pariksha
Biotech**
A game changer in IVD

High- Q Cardiac Risk Marker Assays



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





High- Q Cardiac Risk Marker Assays



Command on Quality

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Summary:

Heart is a four-chambered fist sized muscular organ. It is assigned multiple responsibilities including fulfilling oxygen and nutrient requirements of cells along with removal of waste byproducts like carbon dioxide and other elements. The heart, also called 'Myocardium', pumps continuously for ensuring ceaseless nutritional supply for maintaining cellular functions. A minute halt in the nutritional supply, hinders cellular activity leading to numerous ailments that prove fatal; making it imperative to monitor cardiac health at regular intervals.

Assessing the functioning of an organ that works round-the-clock is not as simple as it sounds. Few molecules, called 'Cardiac Risk Markers' serve as indicators for an individual's risk of heart disease.

Cardiac Risk Markers- What to know?

Disease development is a slow process taking a few months to may be years. Our body secretes certain molecules while suffering any cardiac injury or stress for corrective healing action. The amount of these molecules is directly proportional to the damage severity making them excellent indicators of cardiac events; hence the name, 'Cardiac Risk Markers'.

These markers are already present in the body in low levels, but fluctuate during cardiovascular diseases or post myocardial damage. They aid in preventive, diagnostic, prognostic (disease development) as well as therapeutic monitoring (treatment). Every application demands distinct markers with certain features. Let's understand the basic features and then move to gain knowledge about cardiac risk markers

Understanding Cardiac Risk Markers:

Every marker plays a vital role in aiding a Cardiologist understand an individual's risk factor or cardiac disease. Let us try to understand few markers and their role in disease detection

Lipoprotein (a):

Lipoprotein (a) or Lp(a) is a lowdensity 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 ApoA1, encoded by gene APOA1, is a major highdensity 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



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