

## Apolipoprotein B-100

**Analyte:** Apolipoprotein B-100

**Specimen Type:** Serum preferred

**Optimum Volume:** 0.5 mL

2-8°C   -20°C   -70°C

5 days   26 days   2 years

**Reporting units:** mg/dL

**Method:** Immunoturbidimetric and ELISA

### Biological or Clinical Significance:

Human plasma low density lipoproteins (LDL) consist of approximately 21% protein by weight, of which approximately 90% is apolipoprotein B. Numerous studies have indicated that measurements of Apo B are useful in assessing coronary artery disease risk. Individuals at risk for coronary artery disease consistently have higher blood levels of Apo B than control subjects. In fasting samples, approximately 99% of the total circulating Apo B is Apo B-100. Apolipoprotein B-48 (Apo B-48) is the primary protein component of the triglyceride-rich lipoproteins originating in chylomicrons from lipid-rich food and VLDL which is synthesized in the liver. In postprandial hyperlipidemia, the amount of Apo B from Apo B-48 increases. Extended postprandial hyperlipidemia is associated with insulin resistance, postprandial hyperglycemia, metabolic syndrome, thickening of the carotid tunica intima and media (atherosclerosis), and myocardial infarction. To assess and monitor these conditions, it may be useful to analyze and monitor the relative Apo B-100 and Apo B-48.

### Principle of Test Method:

Apo B-100 is derived by subtracting Apo B-48 from Apo B total. Apo B-48 is measured by ELISA and Apo B total is measured by an automated immunoturbidimetric assay.