

Apolipoproteins A1 – [Serum] Analysis

Objective

The objective of this test is to measure serum Apolipoprotein A1 (ApoA1) levels. ApoA1 is the major protein component of high-density lipoprotein (HDL) and plays a vital role in reverse cholesterol transport. This test helps assess cardiovascular risk and lipid metabolism disorders.

Materials and Methods

Materials:

- Serum sample from patient
- Immunoturbidimetric or nephelometric assay kits for ApoA1
- Automated biochemical analyzer
- Standard laboratory equipment (pipettes, centrifuge)

Methods:

1. Sample Collection: Collect venous blood and separate serum via centrifugation.
2. Measurement: Perform ApoA1 quantification using immunoturbidimetric or nephelometric method.
3. Calibration: Use calibrators provided with the assay kit for accurate measurement.
4. Interpretation: Compare results with reference ranges to evaluate HDL function and cardiovascular risk.
5. Quality Control: Include control samples to ensure accuracy and reproducibility of results.

Results

- Normal range (men): 110–180 mg/dL (varies by lab)
- Normal range (women): 120–200 mg/dL (varies by lab)
- Low ApoA1: Associated with increased cardiovascular risk and low HDL cholesterol
- High ApoA1: Usually protective; may be seen in individuals with high HDL levels

Conclusion

Apolipoprotein A1 testing is an important marker for assessing cardiovascular health and lipid metabolism. It provides more specific information than HDL cholesterol alone and should be interpreted alongside a complete lipid profile for comprehensive cardiovascular risk assessment.