

# 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.