

# Anti Thyroglobulin – [Serum] Analysis

## Objective

The objective of this test is to detect anti-thyroglobulin antibodies in serum. This test aids in the diagnosis and monitoring of autoimmune thyroid diseases such as Hashimoto's thyroiditis and Graves' disease, and in evaluating patients with differentiated thyroid carcinoma.

## Materials and Methods

### Materials:

- Serum sample from patient
- ELISA or chemiluminescent immunoassay kits for anti-thyroglobulin antibodies
- Microplate reader or automated analyzer
- Standard laboratory equipment (pipettes, centrifuge)

### Methods:

1. Sample Collection: Collect venous blood and separate serum using centrifugation.
2. Antibody Detection: Perform ELISA or chemiluminescent assay to detect and quantify anti-thyroglobulin antibodies.
3. Calibration: Use assay-specific calibrators to ensure accurate results.
4. Interpretation: Positive results indicate autoimmune thyroid disease or thyroid carcinoma follow-up.
5. Correlation: Combine findings with other thyroid tests (TSH, T4, anti-TPO) for a complete assessment.

## Results

- Negative: No anti-thyroglobulin antibodies detected
- Positive: Elevated levels suggest autoimmune thyroiditis or thyroid carcinoma surveillance
- High titres: Strongly associated with Hashimoto's thyroiditis or active autoimmune thyroid disease

## Conclusion

Anti-thyroglobulin antibody testing is valuable for diagnosing autoimmune thyroid disorders and monitoring thyroid cancer patients post-treatment. Results should be interpreted in conjunction with clinical findings and other thyroid function tests.