

**TEST:            ANTI-THYROID PEROXIDASE AUTOANTIBODY  
ANTI-THYROGLOBULIN (IgG) AUTOANTIBODY**

**PRINCIPLE:**

Circulating thyroid autoantibodies have been widely implicated in the etiology of autoimmune thyroid disease and both thyroglobulin and thyroid peroxidase autoantibodies are measured routinely in clinical practice. Serum autoantibodies to thyroid microsomal antigen(s) are commonly found in patients with thyroid autoimmune diseases and their presence correlates well with histological changes in Hashimoto's thyroiditis. Antibodies to thyroid antigens are positive in 70-90% of patients with chronic thyroiditis. These antibodies are also found in 64% of patients with primary hypothyroidism, 50% with thyrotoxicosis 10% with simple goiters and 17% with thyroid tumors. Thyroglobulin autoantibodies are detected at high titers, mainly in autoimmune thyroiditis and Graves' disease. Serum autoantibodies to thyroglobulin/colloid have been found in 40-70% of patients with chronic thyroiditis and in smaller percentages of patients with thyrotoxicosis and nontoxic goiters.

**SPECIMEN REQUIREMENTS:**

**Collect one 10 ml red top blood collection tube** by standard venipuncture techniques. Do not draw specimen in tubes containing any preservative or anticoagulant. The serum should be separated from the clot and stored at 2-8°C for up to one week until tested. Store at -20°C or lower if testing is delayed further. Avoid repeated freeze-thaw cycles. Microbial contaminated serum, hemolyzed, lipemic or specimens containing heavy, visible particulate should not be used. Optimum volume required is 1.0 ml. Minimum is 100 µl of serum.

**METHOD:** Enzyme Linked Immunoassay (ELISA)

**REFERENCES:**

1. Davies TF and DeBernardo E, Thyroid autoantibodies and disease. In "Autoimmune Endocrine Disease", TF Davies ed, Wiley, New York, NY, 1983, p. 127
2. Wall JR and Kuroki T. Immunologic Factors in thyroid disease. Medical Clinics of North America, 69; 913, 1985
3. Ohwovoriole AE et al. Improved ELISA for thyroid microsomal autoantibodies, comparison with hemmagglutination and immunofluorescence techniques. Int Arch Allergy Appl Immun, 86: 183, 1988

**Normal Range: Negative**

**Turnaround Time: One Week**