



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:

2ml serum collected in a red top tube with no additive or in a serum separator tube (gel barrier). Serum should be separated from the clot as soon as possible to avoid hemolysis. Store/transport sample at room temperature (15-30°C) for no longer than 8 hours or at 2-8°C for up 48 hours. If testing is further delayed, sera should be frozen at -20°C or lower. Avoid repeat freeze-thaw cycles.

METHOD:

Enhanced Chemiluminescence.

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 hemagglutination and immunofluorescence techniques. Int Arch Allergy Appl Immun, 86: 183, 1988

Normal Range: Anti-TPO < 9 IU/mL, Anti-TG <4.0 IU/mL

Turnaround Time: 3 days