
Lab Dept: Chemistry

Test Name: THYROID-STIMULATING IMMUNOGLOBULIN (TSI)

General Information

Lab Order Codes: TSIS

Synonyms: Autoimmune Thyroid Stimulator; LATS (Long-Acting Thyroid Stimulator); Thyroid Receptor Antibody; TSH Receptor Antibody

CPT Codes: 84445 – Thyroid stimulating immune globulins (TSI)

Test Includes: TSI index value

Logistics

Test Indications: Useful for second-order testing for autoimmune thyroid disease, including:

Differential diagnosis of etiology of thyrotoxicosis in patients with ambiguous clinical signs and/or contraindicated (e.g., pregnant or breast-feeding) or indeterminate thyroid radioisotope scans.

Diagnosis of clinically suspected Graves' disease (e.g., extrathyroidal manifestations of Graves' disease; endocrine exophthalmos, pretibial myxedema, thyroid acropachy) but normal thyroid function tests.

Determining the risk of neonatal thyrotoxicosis in a fetus of a pregnant female with active or past Graves' disease.

Differential diagnosis of gestational thyrotoxicosis versus first trimester manifestation of recurrence of Graves' disease.

Assessing the risk of Graves' disease relapse after antithyroid drug treatment.

A combination of TSI and Thyrotropin Receptor Antibody is useful as an adjunct in the diagnosis of unusual cases of hypothyroidism (e.g., Hashitoxicosis)

Lab Testing Sections: Chemistry - Sendouts

Referred to: Mayo Medical Laboratory (MML Test: TSI)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 2-6 days, test performed Monday – Friday

Special Instructions: N/A

Specimen

Specimen Type: Blood

Container: SST (Gold, marble or red) tube

Draw Volume: 1.5 mL (Minimum: 0.3 mL) blood

Processed Volume: 0.5 mL (Minimum: 0.1 mL) serum

Note: Submission of the minimum volume does not allow for repeat analysis and could result in a QNS (quantity not sufficient) test result.

Collection: Routine venipuncture

Special Processing: Lab staff: Centrifuge specimen, remove serum aliquot into a screw-capped plastic vial. Store and ship at frozen temperatures.

Patient Preparation: None

Sample Rejection: Specimens other than serum; mislabeled specimens

Interpretive

Reference Range: ≤ 1.3 TSI index

Note: Reference values apply to all ages.

Critical Values: N/A

Limitations: Positive results are strongly indicative of Graves' disease, but do not always correlate with the presence and severity of hyperthyroidism.

Patients with Hashimoto's disease may have an elevated TSI index, which can be >1.8 . A TSI index of >1.3 and ≤ 1.8 also is occasionally observed in various other thyroid disorders, including nodular goiter, and subacute thyroiditis.

Methodology: Recombinant bioassay

References: [Mayo Medical Laboratories](#) November 2017

Updates: 1/3/2017: Storage moved from refrigerated to frozen.
11/14/2017: Collection container update.

