



**THYROGLOBULIN MASS SPECTROMETRY, SERUM**

**Test ID: TGMS**

**USEFUL FOR:**

Accurate measurement of serum thyroglobulin (Tg) in patients that are positive for antithyroglobulin autoantibodies (TgAB).

**METHODOLOGY:**

Tryptic Protein Fragmentation, Further Purified With Immunocapture, Analysis by Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)

**REFERENCE VALUES:**

- Athyrotic individuals: <0.5 ng/mL
- Healthy individuals with intact, functioning thyroid: < or =33 ng/mL
- An interpretative comment will accompany the report

**SPECIMEN REQUIREMENTS:**

**Container/Tube:**

**Preferred:** Red top

**Acceptable:** Serum gel

**Specimen Volume:** 0.5 mL

**Minimum Volume:** 0.25 mL

**SPECIMEN STABILITY INFORMATION:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	72 hours

**CAUTIONS:**

- The test is most sensitive for detection of thyroid cancer recurrence when patients are off thyroid replacement long enough to have an elevated thyroid-stimulating hormone (TSH) prior to drawing the specimen. This test also can be used to follow patients with normal TSH; however, thyroglobulin (Tg) values from specimens with high TSH should not be compared with values with normal TSH, because TSH stimulation may change the baseline determinations, if any residual benign thyroid tissue is still present.
- Rare normal amino acid sequence variations within Tg can cause a false-low result in the Tg mass spectrometry assay, if they happen to be present in the Tg proteotypic peptide(s) that are used for Tg quantification. While the exact prevalence of such changes is unknown, our validation data on large sample numbers indicate that this affects less than 1% of samples. Therefore, if the results of the mass spectrometry measurement are much lower than those obtained previously (within 3-6 months) with an immunometric immunoassay, this possibility should be considered. In this event, we recommend alerting us as soon as possible, and we will attempt to resolve the discrepancy.

**CPT CODE:** 84432

**DAY(S) SET UP:** Monday-Friday, 4 p.m.      **ANALYTIC TIME:** 2 days

NOTE: The following referral test code will become obsolete.

<b>Test Name</b>	<b>Test ID</b>	<b>Referral Lab Code</b>	<b>Referral Lab</b>
Thyroglobulin by LC-MS/MS	ZW242	2006550	ARUP Laboratories

QUESTIONS: Contact your Mayo Medical Laboratories' Regional Manager or  
David O'Brien, MML Laboratory Technologist Resource Coordinator  
Telephone: 800-533-1710