MAYO CLINIC LABORATORIES

Test Definition: TGMS

Thyroglobulin Mass Spectrometry, Serum

Reporting Title: Thyroglobulin, Mass Spec., S
Performing Location: Rochester

Specimen Requirements:

Collection Container/Tube: Red top (gel tubes/SST are not acceptable)
Submission Container/Tube: Plastic vial
Specimen Volume: 1.25 mL
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume:

0.75 mL

Forms:

If not ordering electronically, complete, print, and send an Oncology Test Request (T729) with the specimen.

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	416 days	
	Ambient	72 hours	

Result Codes:

Result ID	Reporting Name	Type	Unit	LOINC®
62749	Thyroglobulin, Mass Spec., S	Numeric	ng/mL	3013-0
35998	Interpretation	Alphanumeric		59462-2

LOINC and CPT codes are provided by the performing laboratory.

Supplemental Report:

No

CPT Code Information:

84432

Reference Values:

Healthy individuals with intact, functioning thyroid: < or =33 ng/mL
The reference ranges listed below, however, are for thyroid cancer follow up of athyrotic patients and apply to unstimulated and stimulated thyroglobulin (Tg) measurements. Ranges are based on best practice guidelines and the literature, which includes Mayo Clinic studies, and represent clinical decision levels.

Decision levels for thyroid cancer patients, who are not completely athyrotic (ie, patient has some remnant normal thyroid tissue), have not been established, but are likely to be somewhat higher: remnant normal thyroid tissue contributes to serum Tg concentrations 0.2-1.0 ng/mL per gram of remnant tissue, depending on the thyroid-stimulating hormone (TSH) level.

Tg <0.2 ng/mL: Tg levels must be interpreted in the context of TSH levels, serial Tg measurements, and radioiodine ablation status. Undetectable Tg levels in athyrotic individuals on suppression therapy indicate a minimal risk (<1%-2%) of clinically detectable recurrent papillary/follicular thyroid cancer.

Tg > or =0.2 ng/mL to 2.0 ng/mL: Tg levels must be interpreted in the context of TSH levels, serial Tg measurements, and radioiodine ablation status. Tg levels of 0.2-2.0 ng/mL in athyrotic individuals on suppressive therapy indicate a low risk of clinically detectable recurrent papillary/follicular thyroid cancer.

Tg 2.1 ng/mL to 9.9 ng/mL: Tg levels must be interpreted in the context of TSH levels, serial Tg measurements and radioiodine ablation status. Tg levels of 2.1-9.9 ng/mL in athyrotic individuals on suppression therapy indicate an increased risk of clinically detectable recurrent papillary/follicular thyroid cancer.

Tg > or =10 ng/mL: Tg levels must be interpreted in the context of TSH levels, serial Tg measurements and radioiodine ablation status. Tg levels of 10 ng/mL or above in athyrotic individuals on suppressive therapy indicate a significant (>25%) risk of clinically detectable recurrent papillary/follicular thyroid cancer.