



Client Communication

Change in Instrumentation and Methodology: Thyroglobulin Antibody and Thyroid Peroxidase Antibody

Effective May 8th, 2023, Clinical Pathology Laboratories (CPL) is pleased to announce a change in the method and analytic platform for Thyroglobulin Antibody (Anti-Tg) and Thyroid Peroxidase Antibody (Anti-TPO). The new methodology is electrochemiluminescence immunoassay (ECLIA).

The change in instrumentation and methodology will result in changes to reference range and the clinical reporting range of the two assays.

Reference Range Changes:

Assay	Current Reference Range	New Reference Range
Thyroglobulin AB	< 4 IU/mL	<= 115 IU/mL
Thyroid Peroxidase AB	< 9 IU/mL	<= 34 IU/mL

Clinical Reporting Range Changes:

Assay	Current Clinical Reporting Range	New Clinical Reporting Range
Thyroglobulin AB	1 - 2200 IU/mL	10 - 4000 IU/mL
Thyroid Peroxidase AB	1 - 900 IU/mL	9 - 600 IU/mL

Important note: *Thyroglobulin AB values determined on patient samples by different testing procedures cannot be directly compared with one another and can cause erroneous medical interpretations. Re-baselining of patients may be required in some cases, and will be offered by CPL at provider request. CPL will also maintain the current analytic platform and methodology for 30 days after the above effective date.*



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Thyroglobulin (Tg) is produced in the thyroid gland and is a main component in the lumen of the thyroid follicle. In synergy with the enzyme thyroid-specific peroxidase (TPO), Tg has an essential function in the iodination of L-tyrosine and in the formation of the thyroid hormones T4 and T3.

Thyroid-specific peroxidase (TPO) is synthesized in the endoplasmic reticulum, where it is folded to its native state and undergoes core glycosylation, before being transported to the apical plasma membrane of thyrocytes.

The detection of anti-TPO and anti-Tg are considered diagnostic markers of autoimmune thyroid disorders. The prevalence of these two antibodies is high in patients with Graves' disease and Hashimoto's thyroiditis.

Name	Order Code
Thyroglobulin AB RFLX EIA vs LCMS	4447
Thyroglobulin AB	4516
Thyroid Peroxidase AB	4513
Thyroid Antibody Group (TPO + TG)	4610
Thyroglobulin, Quantitative and Antibody	4927
Autoimmune Antibody Profile	4268
ANA Autoimmune Profile	4521
FARR ANA Autoimmune Profile	4537
ANA Autoimmune Panel Reflex to FARR	4884
Thyroid Cascade Reflex	2832

References

Fröhlich E, Wahl R. Thyroid Autoimmunity: Role of Anti-thyroid Antibodies in Thyroid and Extra-Thyroidal Diseases. *Front Immunol.* 2017 May 9;8:521. doi: 10.3389/fimmu.2017.00521. PMID: 28536577; PMCID: PMC5422478.

Ghosh R, Chatterjee S, Dubey S, Pandit A, Ray BK, Benito-León J. Anti-Thyroid Peroxidase/Anti-Thyroglobulin Antibody-Related Neurologic Disorder Responsive to Steroids Presenting with Pure Acute Onset Chorea. *Tremor Other Hyperkinet Mov (N Y).* 2020 Jul 8;10:19. doi: 10.5334/tohm.175. PMID: 32775033; PMCID: PMC7394228.