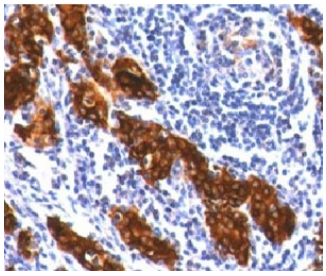
Thyroglobulin Antibody Clone TG157-2 / TG [clone TG157-2] (V7001)

Catalog No.	Formulation	Size
V7001-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7001-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7001SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7001IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, k
Clone Name	TG157-2
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	7038
Localization	Cytoplasmic and secreted
Applications	Immunohistochemistry (FFPE): 0.5-1ug/ml for 30 min at RT (1) Prediluted IHC only format: incubate for 30 min at RT (2)
Limitations	This Thyroglobulin antibody is available for research use only.



Thyroglobulin Antibody Clone TG157-2. Immunohistochemistry analysis of Thyroglobulin using Thyroglobulin Antibody Clone TG157-2 in FFPE human thyroid tissue section. HRP-DAB brown chromogenic staining highlights strong cytoplasmic signal in thyroid follicular epithelial cells forming thyroid follicles, with additional staining of follicular luminal colloid material. The staining pattern is characteristic of Thyroglobulin expression in differentiated thyroid follicular epithelium and reflects the well established use of Thyroglobulin as a marker of thyroid follicular cell differentiation.

Description

Thyroglobulin (TG) is a large secreted glycoprotein produced by thyroid follicular epithelial cells and stored within the follicular lumen of the thyroid gland where it serves as the precursor for thyroid hormone synthesis. The TG gene located on chromosome 8q24 encodes a highly glycosylated protein that undergoes complex folding, glycosylation, and proteolytic processing during thyroid hormone biosynthesis. Because thyroglobulin synthesis is largely restricted to thyroid follicular epithelium, TG expression is widely studied as a marker of thyroid lineage and thyroid follicular cell differentiation. Thyroglobulin Antibody is therefore commonly used to detect TG protein expression in thyroid tissues and experimental systems investigating thyroid biology.

Within the thyroid gland, thyroglobulin is synthesized in the rough endoplasmic reticulum of follicular epithelial cells and transported through the Golgi apparatus before secretion into the follicular lumen. In the colloid, TG serves as the substrate for iodination reactions that ultimately generate the thyroid hormones thyroxine and triiodothyronine. These biochemical processes require extensive modification of the thyroglobulin precursor protein and reflect the specialized endocrine function of thyroid follicular cells. Because TG production is tightly linked to thyroid follicular cell differentiation, detection of Thyroglobulin protein provides a useful marker for identifying cells of thyroid origin in both normal tissues and thyroid-derived tumors.

Thyroglobulin Antibody clone TG157-2 is a mouse monoclonal antibody developed for detection of TG protein in studies examining thyroid follicular epithelial cell biology. Detection of thyroglobulin expression allows researchers to investigate thyroid hormone precursor protein synthesis and to study mechanisms regulating thyroid follicular cell differentiation. In tissue-based analyses, TG protein expression typically reflects the functional activity of thyroid follicular epithelial cells and can be used to examine thyroid gland structure and endocrine physiology. Antibodies targeting TG are therefore valuable tools in research exploring thyroid development, endocrine signaling, and thyroid tumor biology.

Alterations in thyroglobulin expression may also occur in thyroid tumors where changes in thyroid follicular cell differentiation influence TG production. Well differentiated thyroid carcinomas frequently retain TG expression, whereas poorly differentiated tumors may show reduced thyroglobulin production as follicular cell identity becomes disrupted. Detection of TG protein using Thyroglobulin Antibody therefore provides an informative approach for studying thyroid lineage markers, thyroid tumor differentiation status, and molecular mechanisms regulating thyroid follicular epithelial cell function.

Application Notes

Titering of the Thyroglobulin Antibody Clone TG157-2 may be required for optimal performance.

1. FFPE testing requires sections to be boiled in pH 9 10mM Tris with 1mM EDTA for 10-20 minutes, followed by cooling at RT for 20 minutes, prior to staining.
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

The immunogen for this Thyroglobulin Antibody Clone TG157-2 was human thyroid epithelial cells.

Storage

Store the Thyroglobulin antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

TG antibody, Thyroglobulin protein antibody, Thyroid hormone precursor protein antibody, Thyroid follicular cell marker antibody

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