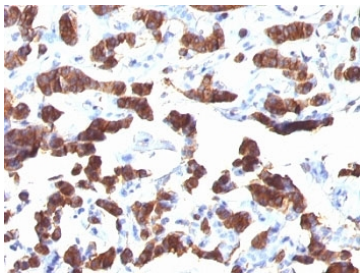
Thyroglobulin Antibody / TG Thyroid Hormone Precursor Protein Antibody [clone TGB24] (V2883)

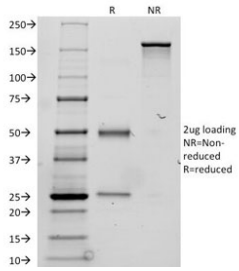
Catalog No.	Formulation	Size
V2883-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2883-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2883SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2883IHC-7ML	Prediluted 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

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	TGB24
Purity	Protein G affinity chromatography
UniProt	P01266
Localization	Cytoplasmic, secreted
Applications	ELISA : 2-4ug/ml (order BSA/azide-free format) Immunohistochemistry (FFPE) : 0.5-1ug/ml for 30 min at RT
Limitations	This TG antibody is available for research use only.



Thyroglobulin Antibody / TG Thyroid Hormone Precursor Protein Antibody (clone TGB24). Immunohistochemistry analysis of human thyroid carcinoma tissue. FFPE human thyroid carcinoma sections demonstrate strong HRP-DAB brown cytoplasmic staining in tumor epithelial cells arranged in follicular and gland-like structures, consistent with thyroglobulin production by differentiated thyroid follicular cells. Intense brown chromogenic signal is also observed within luminal colloid material, reflecting the accumulation of this thyroid hormone precursor protein secreted by follicular epithelial cells. Tumor cell cytoplasm shows diffuse granular positivity, while surrounding stromal elements exhibit minimal staining. Nuclear hematoxylin counterstain is visible in blue. Heat induced epitope retrieval was performed in 10 mM Tris with 1 mM EDTA, pH 9.0, by boiling tissue sections for 10-20 minutes followed by cooling at room temperature for 20 minutes prior to antibody incubation.



SDS-PAGE Analysis of Purified, BSA-Free Thyroglobulin Antibody / TG Thyroid Hormone Precursor Protein Antibody (clone TGB24). Confirmation of Integrity and Purity of the Antibody.

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 large glycosylated protein that undergoes extensive folding, glycosylation, and proteolytic processing during thyroid hormone production. As a secreted thyroid hormone precursor protein synthesized by follicular epithelial cells, TG plays a central role in thyroid endocrine physiology. Thyroglobulin Antibody is therefore commonly used to detect TG protein expression in studies investigating thyroid hormone biosynthesis and the biology of this secreted thyroid protein.

Within thyroid follicles, thyroglobulin accumulates in the follicular colloid where it acts as the substrate for iodination reactions that ultimately generate the thyroid hormones thyroxine and triiodothyronine. These biochemical reactions require complex enzymatic modification of the TG precursor protein and represent key steps in thyroid hormone production. Detection of Thyroglobulin protein therefore provides an effective approach for studying the molecular regulation of thyroid hormone synthesis and the biochemical processes occurring within thyroid follicles.

Because TG is one of the most abundant proteins produced by thyroid follicular epithelial cells, detection of Thyroglobulin expression is widely used in research examining thyroid endocrine physiology and thyroid follicle structure. Antibodies targeting TG enable investigation of thyroglobulin synthesis, secretion, and storage within thyroid follicular colloid and provide useful tools for studying thyroid hormone precursor protein biology.

Alterations in Thyroglobulin production may occur in thyroid diseases where thyroid hormone synthesis pathways become disrupted. Detection of TG protein using Thyroglobulin Antibody therefore supports studies of thyroid endocrine regulation, thyroid follicle biology, and molecular mechanisms governing thyroid hormone precursor protein synthesis. In this context, Thyroglobulin represents a major secreted protein of thyroid follicular epithelial cells that accumulates within follicular colloid prior to hormone release.

Application Notes

Optimal dilution of the Thyroglobulin Antibody / TG Thyroid Hormone Precursor Protein Antibody should be determined by the researcher.

1. Staining of formalin-fixed tissues requires boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT for 20 min.
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

Human thyroid follicular cells were used as the immunogen for the Thyroglobulin Antibody / TG Thyroid Hormone Precursor Protein Antibody.

Storage

Store the TG 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 antibody, Thyroid colloid protein antibody

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