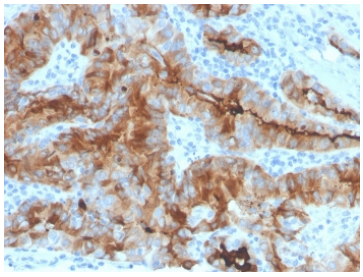
Thyroglobulin Antibody / TG [clone rTGB/4744] (V8717)

Catalog No.	Formulation	Size
V8717-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8717-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8717SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Recombinant MOUSE MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG2a, kappa
Clone Name	rTGB/4744
Purity	Protein G affinity chromatography
UniProt	P01266
Localization	Cytoplasmic, secreted
Applications	Flow Cytometry : 0.5-1ug/million cells Immunohistochemistry (FFPE) : 1-2ug/ml for 30 minutes at RT
Limitations	This Thyroglobulin antibody is available for research use only.



Immunohistochemistry analysis of Thyroglobulin antibody in human thyroid carcinoma tissue (clone rTGB/4744). FFPE human thyroid carcinoma sections demonstrate strong HRP-DAB brown cytoplasmic staining within tumor epithelial cells forming follicular and papillary structures, consistent with Thyroglobulin localization in differentiated thyroid epithelium. Luminal areas show dense brown chromogenic signal corresponding to secreted colloid material. Surrounding stromal cells display minimal to absent staining. Heat induced epitope retrieval was performed in 10 mM Tris with 1 mM EDTA, pH 9.0, by boiling tissue sections for 20 minutes followed by cooling prior to antibody incubation.

Description

Thyroglobulin antibody recognizes Thyroglobulin, a large glycoprotein encoded by the TG gene that is synthesized and secreted by thyroid follicular epithelial cells. Thyroglobulin is the precursor protein required for thyroid hormone biosynthesis and is stored in the colloid of thyroid follicles. It serves as the scaffold for iodination and coupling reactions that generate thyroxine and triiodothyronine, making it essential for endocrine regulation of metabolism.

Thyroglobulin is synthesized in the rough endoplasmic reticulum, undergoes glycosylation and dimerization in the Golgi apparatus, and is secreted into the follicular lumen where it becomes iodinated. Following stimulation by thyroid stimulating hormone, iodinated Thyroglobulin is endocytosed and proteolytically processed to release active thyroid hormones. Because of its role in hormone production, Thyroglobulin is highly expressed in normal thyroid tissue and differentiated thyroid epithelium.

Clinically, Thyroglobulin expression is widely studied in thyroid carcinoma research. It is commonly retained in differentiated thyroid cancers such as papillary and follicular carcinoma, while reduced or absent expression may be observed in poorly differentiated or anaplastic tumors. For this reason, Thyroglobulin antibody is frequently used in research settings to evaluate thyroid lineage differentiation and to study tumor biology in endocrine malignancies.

Thyroglobulin is primarily localized to the cytoplasm of thyroid follicular cells and is abundantly present in the follicular lumen as colloid material. Because of its tissue-restricted expression pattern, Thyroglobulin antibody serves as a reliable marker of thyroid epithelial origin in research applications. A Thyroglobulin antibody can be used to detect TG protein expression in studies focused on thyroid development, endocrine signaling, and thyroid tumor biology.

Application Notes

Optimal dilution of the Thyroglobulin antibody should be determined by the researcher.

Immunogen

Human thyroid follicular cells were used as the immunogen for the Thyroglobulin antibody.

Storage

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

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