Thyroglobulin Antibody for IHC / TG Antibody [clone MSVA-189R] (V6119)

Catalog No.	Formulation	Size
V6119-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6119-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-189R
UniProt	P01266
Localization	Secreted
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This Thyroglobulin Antibody for IHC / TG Antibody is available for research use only.

Thyroglobulin Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of Thyroglobulin / TG in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using rabbit monoclonal antibody clone MSVA-189R. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates strong cytoplasmic and luminal localization in thyroid gland tissue, with intense staining in follicular epithelial cells and follicular colloid material, while non-thyroid tissues remain largely negative. Within tumor tissue microarrays, strong staining is observed in well-differentiated thyroid carcinomas, whereas reduced or absent signal is seen in poorly differentiated thyroid tumors and non-thyroid malignancies. Evaluation across large TMA panels enables direct comparison of TG expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported Thyroglobulin expression profiles in the Human Protein Atlas and support its use as a marker of differentiated thyroid follicular epithelium.

Description

Thyroglobulin (TG) is a large secreted glycoprotein produced by thyroid follicular epithelial cells and stored within the colloid of thyroid follicles, where it functions as the precursor for thyroid hormone synthesis. The TG gene is located on

chromosome 8q24 and encodes a glycosylated protein that undergoes extensive processing during thyroid hormone production. In histologic studies, TG expression is highly restricted to thyroid follicular epithelium, making thyroglobulin an important lineage marker of thyroid tissue. Thyroglobulin Antibody for IHC is therefore widely used in immunohistochemistry to detect TG expression and confirm thyroid follicular differentiation in tissue sections.

In immunohistochemistry, Thyroglobulin Antibody for IHC typically produces strong cytoplasmic staining in thyroid follicular epithelial cells that line thyroid follicles, reflecting the abundant synthesis and secretion of thyroglobulin within these cells. This cytoplasmic staining pattern is characteristic of differentiated thyroid follicular cells and is also observed in many thyroid-derived tumors that retain follicular differentiation. As a result, TG immunohistochemistry is frequently used in surgical pathology as a marker of thyroid origin. TG IHC antibody staining is particularly valuable when evaluating metastatic lesions in lymph nodes, lung, bone, or other tissues where the tissue of origin may not be immediately evident based on morphology alone. Demonstration of thyroglobulin expression by immunohistochemistry can therefore support the identification of metastatic thyroid carcinoma and help distinguish thyroid-derived tumors from non-thyroid malignancies.

Thyroglobulin Antibody for IHC clone MSVA-189R is a recombinant rabbit monoclonal antibody developed for sensitive detection of TG in formalin-fixed, paraffin-embedded tissue sections. In immunohistochemistry workflows, TG staining highlights the cytoplasm of thyroid follicular epithelial cells and tumor cells that maintain follicular differentiation. Tissue microarray analysis provides additional confirmation of the antibody's staining performance. Evaluation using human tissue microarray (TMA) sections containing a broad panel of normal and cancer tissues demonstrates strong, selective staining of thyroid follicular cells while showing minimal staining in non-thyroid tissues. Such human tissue microarray (TMA) validation across multiple tissue types supports the specificity of TG IHC antibody staining and reinforces its utility as a marker of thyroid follicular lineage in histologic studies.

Beyond diagnostic pathology, thyroglobulin immunohistochemistry is also widely used in research focused on thyroid gland biology, follicular epithelial cell differentiation, and mechanisms of thyroid tumor progression. Changes in TG expression may reflect the degree of tumor differentiation in thyroid cancers, with well differentiated tumors typically retaining thyroglobulin expression while poorly differentiated tumors may show reduced staining. Detection of TG expression using Thyroglobulin Antibody for IHC therefore provides an informative approach for studying thyroid lineage differentiation and tumor biology. By enabling visualization of thyroglobulin-positive cells in tissue sections and human tissue microarray (TMA) panels, TG IHC antibody reagents support detailed analysis of thyroid tissue architecture, tumor differentiation status, and thyroid-related disease processes.

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Application Notes

1. Optimal dilution of the Thyroglobulin Antibody for IHC should be determined by the researcher.

2. This TG / Thyroglobulin antibody is recombinantly produced by expression in CHO cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

Recombinant full-length human Thyroglobulin protein was used as the immunogen for the Thyroglobulin Antibody for IHC.

Storage

TG / Thyroglobulin antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

TG antibody, Thyroglobulin protein antibody, Thyroid follicular cell marker antibody, Thyroid differentiation marker antibody