

Anti-Thyroglobulin Antibody [JE47-61]

ET7109-64



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P, IF-Tissue, IF-Cell
Molecular Wt:	Predicted band size: 305 kDa
Clone number:	JE47-61

Description: Thyroglobulin (Tg) is a vertebrate secretory protein synthesized in the thyrocyte endoplasmic reticulum (ER), where it acquires N-linked glycosylation and conformational maturation (including formation of many disulfide bonds), leading to homodimerization. Thyroglobulin is secreted from the endoplasmic reticulum to its site of iodination, and subsequent thyroxine biosynthesis, in the follicular lumen. It acts as a substrate for the synthesis of thyroxine and triiodothyronine as well as the storage of the inactive forms of thyroid hormone and iodine. Its primary functions include iodide storage and thyroid hormonogenesis. Tg consists largely of repeating domains, and many tyrosyl residues in these domains become iodinated to form monoiodo- and diiodotyrosine, whereas only a small portion of Tg structure is dedicated to hormone formation. Mutations in this gene cause thyroid dys hormonogenesis, manifested as goiter, and are associated with moderate to severe congenital hypothyroidism. Polymorphisms in this gene are associated with susceptibility to autoimmune thyroid diseases (AITD) such as Graves disease and Hashimoto thyroiditis.

Immunogen: Recombinant protein within Human Thyroglobulin aa 2,620-2,768 / 2,768.

Positive control: Human thyroid gland tissue, human thyroid cancer tissue, TT.

Subcellular location: Secreted.

Database links: SwissProt: P01266 Human

Recommended Dilutions:

WB	1:500
IHC-P	1:1,000
IF-Tissue	1:200
IF-Cell	1:100

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

Purity: Protein A affinity purified.

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Orders:0086-571-88062880

Technical:0086-571-89986345

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Images

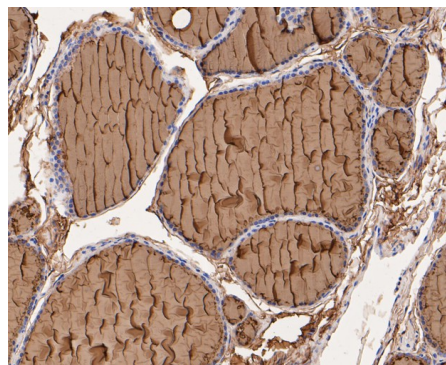


Fig1: Immunohistochemical analysis of paraffin-embedded human thyroid gland tissue using anti-Thyroglobulin antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (ET7109-64, 1/50) for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

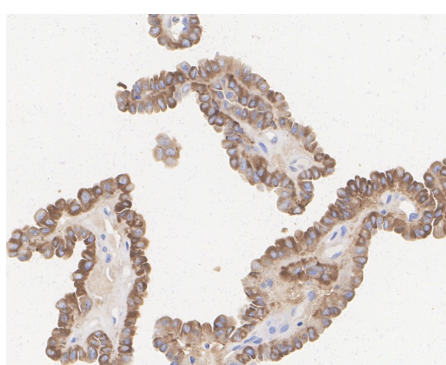
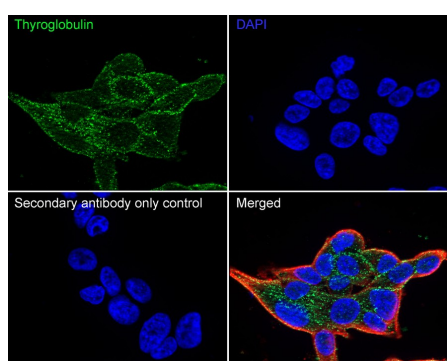


Fig2: Immunohistochemical analysis of paraffin-embedded human thyroid cancer tissue with Rabbit anti-Thyroglobulin antibody (ET7109-64) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (ET7109-64) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Fig3: Immunocytochemistry analysis of TT cells labeling Thyroglobulin with Rabbit anti-Thyroglobulin antibody (ET7109-64) at 1/100 dilution.



Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-Thyroglobulin antibody (ET7109-64) at 1/100 dilution in 1% BSA in PBST overnight at 4 °C. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (HA601187, red) was stained at 1/100 dilution overnight at +4 °C. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

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Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Di Jeso B et al. Thyroglobulin From Molecular and Cellular Biology to Clinical Endocrinology. *Endocr Rev* 37(1):2-36 (2016).

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