abcam

ab203057

Anti-Thyroid Peroxidase/TPO antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Proclin 300 Constituents: 50% Glycerol (glycerin, glycerine), 48.98% TBS, 1X, 1% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Mouse Thyroid peroxidase aa 350-450 conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link P35419
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/100 - 1/1000
Notes	-

Target data

See full target information Thyroid peroxidase

Function	Iodination and coupling of the hormonogenic tyrosines in thyroglobulin to yield the thyroid hormones T(3) and T(4).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Thyroid Peroxidase (TPO) also known as thyroperoxidase is an enzyme with a molecular mass of around 105 kDa. It is expressed in the thyroid gland's follicular cells. TPO plays a mechanical role in the synthesis of thyroid hormones by catalyzing iodination and coupling reactions needed to produce triiodothyronine (T3) and thyroxine (T4). These hormones are essential for regulating metabolism growth and development. The activity of TPO is an important step in thyroid hormone production.
Biological function summary	TPO participates in the thyroid's hormone biosynthesis pathway. It forms a part of the multi-enzyme complex that includes thyroglobulin and iodide. The enzyme facilitates the iodination of tyrosine residues on thyroglobulin and the coupling of iodotyrosines important for creating active thyroid hormones. TPO's enzymatic

	function is important for maintaining appropriate levels of circulating T3 and T4 impacting various physiological processes in the body.
Pathways	TPO contributes to the thyroid hormone synthesis pathway which is a critical pathway for metabolic regulation. It works in close association with other proteins such as thyroglobulin and sodium/iodide symporter (NIS) to ensure efficient thyroid hormone production. TPO's involvement in these pathways indicates its importance in the endocrine system's normal function and homeostasis.
Associated diseases and disorders	TPO is often associated with autoimmune thyroid diseases like Hashimoto's thyroiditis and Graves' disease. High TPO antibodies such as anti-TPO antibodies are commonly detected in these conditions indicating an autoimmune response against the thyroid. The presence of high anti-thyroid peroxidase antibodies can lead to the destruction of thyroid tissue often resulting in hypothyroidism. TPO's connection to these diseases highlights its role in autoimmune conditions affecting thyroid function.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

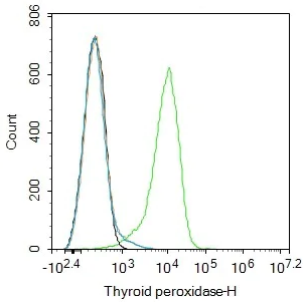
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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Terms & Conditions.

1 product image



Flow Cytometry - Anti-Thyroid Peroxidase/TPO antibody (ab203057)

Thyroid Peroxidase/TPO Flow Cytometry staining of MCF-7 cells using rabbit Anti-Thyroid Peroxidase/TPO antibody

MCF-7 cells were incubated in 5% BSA blocking buffer for 30 min at room temperature. Cells were then stained with Thyroid peroxidase Polyclonal Antibody (ab203057) at 1/100 dilution in blocking buffer and incubated for 30 min at room temperature, washed twice with 2% BSA in PBS, followed by secondary antibody incubation for 40 min at room temperature. Acquisitions of 20,000 events were performed. Cells stained with primary antibody (green), and isotype control (orange).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.