

Product datasheet

Anti-Thyroid Peroxidase/TPO antibody [EPR5380] ab109383

Recombinant RabMAb

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Overview

Product name	Anti-Thyroid Peroxidase/TPO antibody [EPR5380]
Description	Rabbit monoclonal [EPR5380] to Thyroid Peroxidase/TPO
Host species	Rabbit
Tested applications	Suitable for: mIHC, WB, IP, IHC-P
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human thyroid lysate IHC-P: Human thyroid gland tissue IP: Human thyroid cell lysate mIHC: Human thyroid gland tissue.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	<p>pH: 7.20</p> <p>Preservative: 0.05% Sodium azide</p> <p>Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant</p>
Purity	Protein A purified

Clonality	Monoclonal
Clone number	EPR5380
Isotype	IgG

Applications

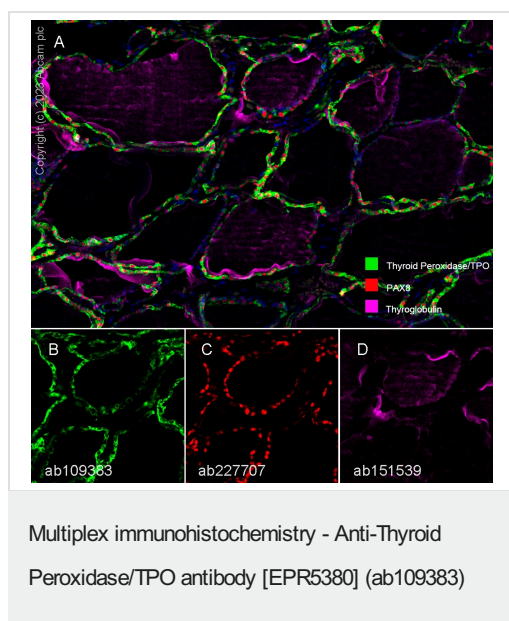
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab109383 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
mlHC		1/1500.
WB		1/1000 - 1/10000. Predicted molecular weight: 103 kDa.
IP		1/10 - 1/100.
IHC-P		1/100 - 1/250. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. Heat up to 98 degrees C, below boiling, and then let cool for 10-20 min.

Target

Function	Iodination and coupling of the hormonogenic tyrosines in thyroglobulin to yield the thyroid hormones T(3) and T(4).
Pathway	Hormone biosynthesis; thyroid hormone biosynthesis.
Involvement in disease	Note=An alternative splicing in the thyroperoxidase mRNA can cause Graves' disease. Defects in TPO are the cause of congenital hypothyroidism due to dysmorphogenesis type 2A (CHDH2A) [MIM:274500]; also called genetic defect in thyroid hormonogenesis 2A or thyroid hormone organification defect II. CHDH2A is due to defective conversion of accumulated iodide to organically bound iodine. The iodide organification defect can be partial or complete.
Sequence similarities	Belongs to the peroxidase family. XPO subfamily. Contains 1 EGF-like domain. Contains 1 Sushi (CCP/SCR) domain.
Post-translational modifications	Glycosylated. Heme is covalently bound through a H(2)O(2)-dependent autocatalytic process. Heme insertion is important for the delivery of protein at the cell surface. Cleaved in its N-terminal part.
Cellular localization	Membrane and Cell surface.

Images



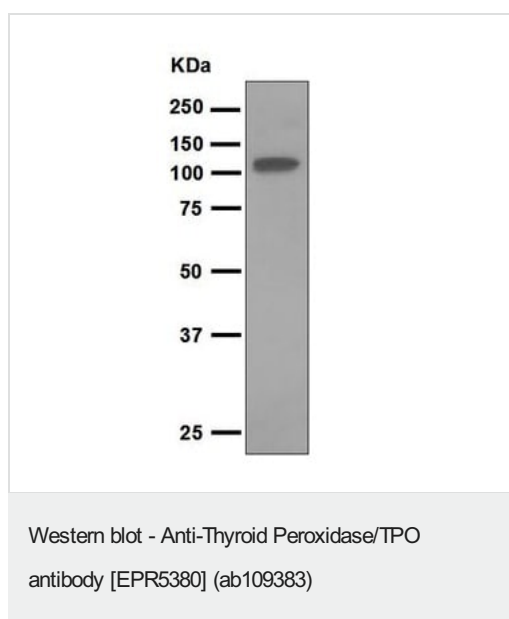
Fluorescence multiplex immunohistochemical analysis of Human thyroid gland tissue (Formalin/PFA-fixed paraffin-embedded sections).

Panel A: merged staining of anti-Thyroglobulin (**ab151539**, magenta; Opal™690), anti-Thyroid Peroxidase/TPO (ab109383, green; Opal™520) and anti-PAX8 (**ab227707**, red; Opal™570) on human thyroid gland. Panel B: anti-Thyroid Peroxidase/TPO stained on cytoplasm of follicular epithelial cells. Panel C: anti-PAX8 stained on nucleus of follicular epithelial cells. Panel D: anti-Thyroglobulin stained on colloid. Opal Polymer HRP Ms + Rb was used as a secondary antibody.

The section was incubated in three rounds of staining: in the order of **ab151539** at 1/5000 dilution (0.167 µg/ml), ab109383 at 1/1500 dilution (0.072 µg/ml) , and **ab227707** at 1/200 dilution (5.22 µg/ml) for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

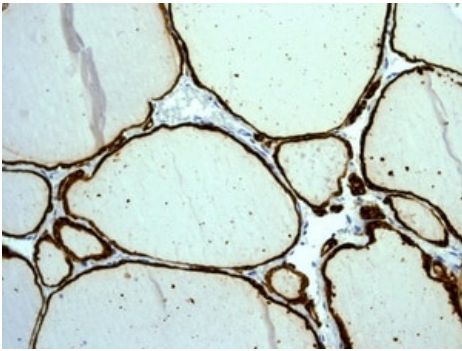
The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope. DAPI (blue) was used as a nuclear counter stain.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Anti-Thyroid Peroxidase/TPO antibody [EPR5380] (ab109383) at 1/1000 dilution + Human thyroid lysate at 10 µg

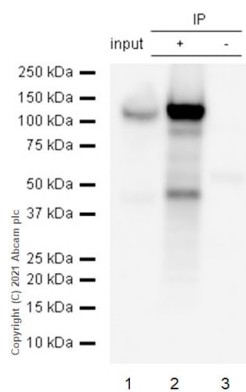
Predicted band size: 103 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Thyroid Peroxidase/TPO antibody [EPR5380] (ab109383)

ab109383, at a 1/100 dilution, staining Thyroid Peroxidase/TPO in paraffin-embedded Human thyroid gland tissue

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunoprecipitation - Anti-Thyroid Peroxidase/TPO antibody [EPR5380] (ab109383)

Thyroid Peroxidase/TPO was immunoprecipitated from 0.35 mg Human thyroid whole cell lysate 10 µg with 109383 at 1/100 dilution (2µg). VeriBlot for IP Detection Reagent (HRP)([ab131366](#)) was used at 1/5000 dilution.

Lane 1: Human thyroid whole cell lysate 10 µg

Lane 2: ab109383 IP in Human thyroid whole cell lysate

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of ab109383 in Human thyroid whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDm/TBST.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-Thyroid Peroxidase/TPO antibody [EPR5380] (ab109383)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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