

Thyroid peroxidase Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54256**Specification****Thyroid peroxidase Polyclonal Antibody - Product Information**

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	P07202
Reactivity	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	101 KDa
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Thyroid peroxidase
Epitope Specificity	111-210/933
Isotype	IgG
Purity	
affinity purified by Protein A	
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Membrane; Single-pass type I membrane protein. Isoform 3: Cell surface.
SIMILARITY	Belongs to the peroxidase family. XPO subfamily. Contains 1 EGF-like domain. Contains 1 Sushi (CCP/SCR) domain.
SUBUNIT	Iodination and coupling of the hormonogenic tyrosines in thyroglobulin to yield the thyroid hormones T(3) and T(4).
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.
DISEASE	Note=An alternative splicing in the thyroperoxidase mRNA can cause Graves' disease. Defects in TPO are the cause of thyroid dyshormonogenesis 2A (TDH2A) [MIM:274500]. A disorder due to defective conversion of accumulated iodide to organically bound iodine. The iodide organification defect can be partial or complete.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Background Descriptions

This gene encodes a membrane-bound glycoprotein. The encoded protein acts as an enzyme and plays a central role in thyroid gland function. The protein functions in the iodination of tyrosine residues in thyroglobulin and phenoxy-ester formation between pairs of iodinated tyrosines to

generate the thyroid hormones, thyroxine and triiodothyronine. Mutations in this gene are associated with several disorders of thyroid hormonogenesis, including congenital hypothyroidism, congenital goiter, and thyroid hormone organification defect IIA. Multiple transcript variants encoding distinct isoforms have been identified for this gene, but the full-length nature of some variants has not been determined. [provided by RefSeq, May 2011].

Thyroid peroxidase Polyclonal Antibody - Additional Information

Gene ID 7173

Other Names

Thyroid peroxidase, TPO, 1.11.1.8, TPO (http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=12015)
HGNC:12015

Dilution

WB ~ 1:1000
IHC-P ~ N/A
IHC-F ~ N/A
IF ~ 1:50 ~ 200
E ~ N/A

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Thyroid peroxidase Polyclonal Antibody - Protein Information

Name TPO ([HGNC:12015](#))

Function

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

Cellular Location

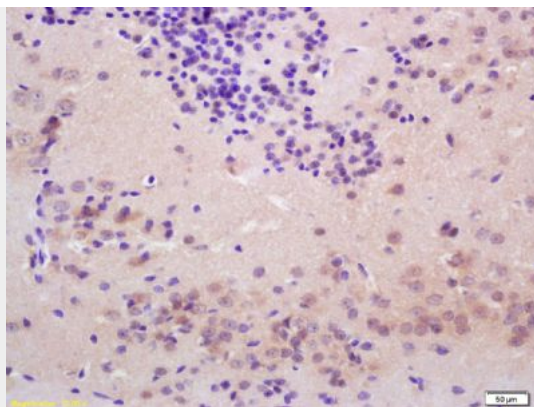
Membrane; Single-pass type I membrane protein.

Thyroid peroxidase Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

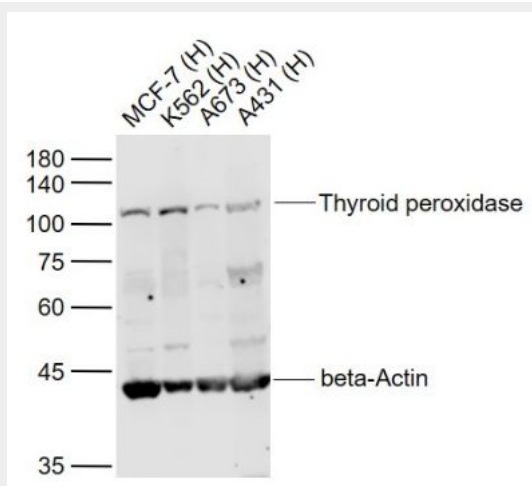
Thyroid peroxidase Polyclonal Antibody - Images



Tissue/cell: Rat brain; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-Thyroid peroxidase Polyclonal Antibody, Unconjugated(bs-10406R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Sample:

Lane 1: MCF-7 (Human) Cell Lysate at 30 ug

Lane 2: K562 (Human) Cell Lysate at 30 ug

Lane 3: A673 (Human) Cell Lysate at 30 ug

Lane 4: A431 (Human) Cell Lysate at 30 ug

Primary:

Anti- Thyroid peroxidase (bs-10406R) at 1/1000 dilution

Anti-beta-Actin (bs-0061R) at 1/2000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 105-110 kD

Observed band size: 105 kD