PRODUCT INFORMATION

TPO (C-Term) Rabbit Monoclonal Antibody
Item No. 32293

Overview and Properties

Contents: This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms: Iodide Peroxidase, Thyroid Peroxidase, Thyroperoxidase
Immunogen: Peptide from the C-terminal region of human TPO
Cross Reactivity: (+) TPO
Species Reactivity: (+) Human
Form: Liquid
Storage: -20°C (as supplied)
Stability: ≥1 year
Storage Buffer: PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone: RM368
Host: Rabbit
Isotype: IgG
Applications: Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:500-1:1,000 for IHC and 1:200-1:1,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images

Immunohistochemical staining of formalin-fixed and paraffin-embedded human thyroid tissue using TPO (C-Term) Rabbit Monoclonal Antibody at a dilution of 1:1,000.

WB of TT cell lysate using TPO (C-Term) Rabbit Monoclonal Antibody at a dilution of 1:200.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman’s Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 01/13/2021
Thyroid peroxidase (TPO) is a heme-containing enzyme that is essential for the biosynthesis of thyroid hormones.1,2 It exists as a homodimer where each monomer is composed of an extracellular N-terminal signal peptide and propeptide, an ectodomain containing MPO-, CCP-, and EGF-like domains, a transmembrane domain, and an intracellular C-terminal domain.2 TPO is regulated primarily at the transcriptional level by thyroid-stimulating hormone (TSH), which upregulates TPO expression. TPO is expressed by thyroid follicular cells and localizes to the apical plasma membrane in its active state.1,2 It catalyzes the oxidation of iodine, resulting in the formation of monoiodotyrosine (MIT) and diiodotyrosine (DIT) residues on thyroglobulin, a protein that functions as a scaffold for thyroid hormone biosynthesis.3 TPO subsequently catalyzes the oxidative coupling between MIT and DIT residues on thyroglobulin to produce the thyroid hormones triiodothyronine (T₃) and thyroxine (T₄).3 Serum TPO autoantibodies are a hallmark of autoimmune thyroid diseases, including Hashimoto’s disease and Graves’ disease, and have been found in patients with breast cancer.2,4 Cayman’s TPO (C-Term) Rabbit Monoclonal Antibody can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References