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36-3306: Anti-TPO (Thyroid Peroxidase) (Thyroid Marker) Monoclonal Antibody(Clone: TPO/1922)

Clonality :	Monoclonal
Clone Name :	TPO/1922
Application :	IHC
Reactivity :	Human
Gene :	TPO
Gene ID :	7173
Uniprot ID :	P07202
Alternative Name :	MSA; TDH2A; Thyroid microsomal antigen; Thyroid peroxidase; Thyroperoxidase; TPO; TPX
Isotype :	Mouse IgG1, kappa
Immunogen Information :	Recombinant fragment of human TPO (around aa 685-804) (Exact sequence is proprietary)

Description

Thyroperoxidase (TPO) is a 933-amino acid, type I transmembrane glycoprotein that plays a key role in thyroid gland function and autoimmunity. It is present as a dimer on the apical surface of thyroid follicular cells. TPO 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.Malignant thyroid tumors exhibit an anomaly in TPO resulting in lower affinity for anti-TPO. This antibody may aid in the differentiation between benign and malignant thyroid tumors.

Product Info

Amount :	20 µg / 100 µg
Content :	200 µg/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
Storage condition :	Antibody with azide - store at 2 to 8°C. Antibody without azide - store at -20 to -80°C. Antibody is stable for 24 months. Non-hazardous.

Application Note

Immunohistochemistry (Formalin-fixed) (1-2ug/ml for 30 minutes at RT),(Staining of formalin-fixed tissues requires heating tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 45 min at 95&degC followed by cooling at RT for 20 minutes);

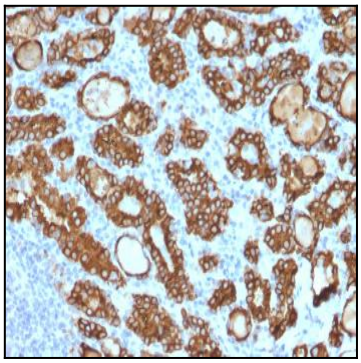


Fig. 1: Formalin-fixed, paraffin-embedded human Thyroid Carcinoma stained with Thyroid Peroxidase Mouse Monoclonal Antibody (TPO/1922).

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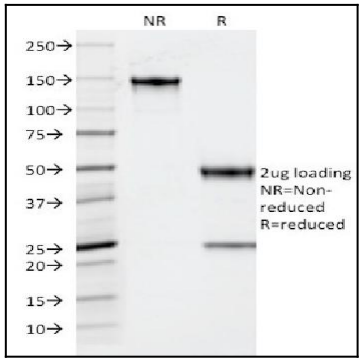


Fig. 2: SDS-PAGE Analysis Purified TPO Mouse Monoclonal Antibody (TPO/1922). Confirmation of Integrity and Purity of the Antibody.

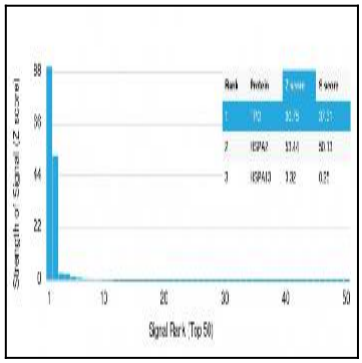


Fig. 3: Analysis of Protein Array containing >19,000 full-length human proteins using Thyroid Peroxidase Mouse Monoclonal Antibody (TPO/1922) Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (Monoclonal Antibody) (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProtTM array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProtTM are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a Monoclonal Antibody to its intended target. A Monoclonal Antibody is considered to specific to its intended target, if the Monoclonal Antibody has an S-score of at least 2.5. For example, if a Monoclonal Antibody binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that Monoclonal Antibody to protein X is equal to 29.

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