# TPO Antibody – Rabbit Polyclonal

## PRODUCT OVERVIEW

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| **Product Name** | TPO, Polyclonal Antibody |
| **Full Product Name** | TPO Polyclonal Antibody |
| **Product Gene Name** | anti-TPO antibody |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Host** | Rabbit |
| **Species Reactivity** | Human |
| **Form/Format** | PBS with 0.02% sodium azide, 50% glycerol, pH 7.3. |
| **Purity/Purification** | Affinity Purification |
| **Preparation and Storage** | Store at -20 degree C. Avoid freeze/thaw cycles. |
| **Molecular Weight** | 67kDa; 84kDa; 92kDa; 96kDa; 98kDa; 102kDa |
| **OMIM** | 274500 |
| **3D Structure** | ModBase 3D Structure for P07202 |
| **Immunogen** | Recombinant protein of human TPO (NP_783653.1). |
| **ISO Certification** | Manufactured in an ISO 9001:2015 Certified Laboratory. |
| **Applications Tested/Suitable for anti-TPO antibody** | Western Blot (WB) |
| **Application Notes for anti-TPO antibody** | WB: 1:500-1:2000 |
| **Related Product Information for anti-TPO antibody** | 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. |
| **Other Notes** | Small volumes of anti-TPO antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for TPO purchase** | MBS8571748 is an antibody targeting TPO. Also known as TPO Polyclonal Antibody. Reactive in Human. Host: Rabbit. |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TPO. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 28558982 |
| **NCBI GeneID** | 7173 |
| **NCBI Accession #** | NP_000538.3 |

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| **UniProt Primary Accession #** | P07202 |
| **UniProt Related Accession #** | P07202 |
| **GenBank Nucleotide #** | NP_000538.3 |
| **NCBI Official Full Name** | thyroid peroxidase isoform a |
| **NCBI Official Synonym Full Names** | thyroid peroxidase |
| **NCBI Official Symbol** | TPO |
| **NCBI Official Synonym Symbols** | MSA; TPX; TDH2A |
| **UniProt Protein Name** | Thyroid peroxidase |
| **Protein Family** | Thyroid peroxidase |
| **UniProt Gene Name** | TPO |
| **UniProt Synonym Gene Names** | TPO |
| **UniProt Entry Name** | PERT_HUMAN |
| **NCBI Protein Information** | thyroid peroxidase |
| **UniProt Comments for TPO** | TPO: Iodination and coupling of the hormonogenic tyrosines in thyroglobulin to yield the thyroid hormones T(3) and T(4). An alternative splicing in the thyroperoxidase mRNA can cause Graves' disease. Defects in TPO are the cause of thyroid dyshormonogenesis 2A (TDH2A). A disorder due to defective conversion of accumulated iodide to organically bound iodine. The iodide organification defect can be partial or complete. Belongs to the peroxidase family. XPO subfamily. 8 isoforms of the human protein are produced by alternative splicing.<br><br>Protein type: Membrane protein, integral; EC 1.11.1.8; Oxidoreductase; Amino Acid Metabolism - tyrosine; Mitochondrial<br><br>Chromosomal Location of Human Ortholog: 2p25<br><br>Cellular Component: extracellular space; cell surface; mitochondrion; integral to plasma membrane; plasma membrane<br><br>Molecular Function: peroxidase activity; heme binding; iodide peroxidase activity; calcium ion binding<br><br>Biological Process: embryonic hemopoiesis; hydrogen peroxide catabolic process; thyroid hormone generation; hormone biosynthetic process; response to oxidative stress<br><br>Disease: Thyroid Dyshormonogenesis 2a |
| **Research Articles on TPO** | **1.** the substitutions mutations, namely, p.Ala373Ser, p.Ser398Thr, and p.Thr725Pro, had been involved in Bangladeshi patients with TDH and molecular docking-based study revealed that these mutations had damaging effect on the TPO protein activity |
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