

## Recombinant Human TPO Protein, His-tagged

**Cat. No.** TPO-1487H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant human thyroid peroxidase protein produced in SF9 is a glycosylated, polypeptide chain containing 834 amino acids. The TPO is expressed with a -6xHis tag and purified by proprietary chromatographic techniques.                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Source</b>           | Insect cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Description</b>      | Thyroid Peroxidase (TPO) represents one of the main autoantigenic targets in autoimmune thyroid disease of humans. Its identity with the formerly so-called `microsomal antigen` has been shown several years ago. As an integral membrane glycoprotein it is restricted to the apical plasma membrane of the follicular epithelial cells and comprises two identical subunits of approx. 100 kDa molecular weight. The hemoprotein TPO plays a key role in the thyroid hormone biosynthesis by catalysing both the iodination of tyrosyl residues and the coupling of iodotyrosyl residues in thyroglobulin (TG) to form precursors of the thyroid hormones T4 and T3. |
| <b>Molecular Mass</b>   | 92,872 Dalton (excluding glycosylation), 101 kDa total mass.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Purity</b>           | Greater than 95% as determined by SDS-PAGE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Storage</b>          | Store at 4 centigrade if entire vial will be used within 2-4 weeks.<br>Store, frozen at -20 centigrade for longer periods of time.<br>Avoid multiple freeze-thaw cycles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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|-------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Concentration</b>    | 0.15-0.375 µg/ml (depending on the type of ELISA plate and coating buffer). Suitable for biotinylation and iodination. |
| <b>Storage Buffer</b>   | TPO is supplied in 16mM HEPES pH-7.6, 160mM NaCl, 0.08mM KI and 20% glycerol.                                          |
| <b>GENE INFORMATION</b> |                                                                                                                        |
| <b>Gene Name</b>        | TPO                                                                                                                    |
| <b>Official Symbol</b>  | TPO thyroid peroxidase [ Homo sapiens (human) ]                                                                        |
| <b>Synonyms</b>         | Thyroid peroxidase; EC 1.11.1.8; TPO; MSA; TPX; TDH2A; thyroid peroxidase; thyroid microsomal antigen; thyroperoxidase |
| <b>Gene ID</b>          | 7173                                                                                                                   |
| <b>mRNA Refseq</b>      | NM_000547                                                                                                              |
| <b>Protein Refseq</b>   | NP_000538                                                                                                              |
| <b>MIM</b>              | 606765                                                                                                                 |
| <b>UniProt ID</b>       | P07202                                                                                                                 |

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