

Product Data Sheet

Cat # RP-373

Recombinant Human Thyroid Peroxidase

**Size:** 5 ug

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

**Source:** *Sf9 insect cells*. Thyroid Peroxidase Human Recombinant produced in SF9 is a glycosylated, polypeptide chain containing 834 amino acids and having a molecular mass of 92,872 Dalton. The TPO is expressed with a -6xHis tag and purified by proprietary chromatographic techniques TPO is supplied at a of 0.5mg/ml in 16mM HEPES pH-7.6, 160mM NaCl, 0.08mM KI and 20% glycerol

**Immunological functions:** 1. Binds IgG-type human auto-antibodies. 2. Auto-antibodies to TPO recognize conformation-dependent epitopes. 3. Standard ELISA test (checker-board analysis of positive/negative sera panels, including international reference serum NIBSC 66/387).

**Applications and Suggested Dilutions:** Western-Blot with monoclonal anti-TPO antibody and monoclonal anti-hexa-His-tag antibody. Coating concentration: 0.15-0.375 µg/ml (depending on the type of ELISA plate and coating buffer). Suitable for biotinylation and iodination. Greater than 95% as determined by SDS-PAGE. Users must optimize the appropriate concentration and conditions for each assay.

**Storage and Stability:** Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. Avoid multiple freeze-thaw cycles. If supplied in powder then reconstitute it in 100 ul water for 1 mg/ml stock and store in liquid at 4°C for ~1 week or aliquots in suitable size and store at -20°C for long term storage.

**Usage:** This item is for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

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