

## Recombinant Human Thyroid Peroxidase (TPO)

### Antigen Specification

**Product Number: 12100**

**Description:**

Human thyroid peroxidase (TPO); identical with the antigen formerly called "microsomal antigen". Recombinant antigen for solid (ELISA) and fluid phase diagnostic assays.

**Immunological function:**

Binds IgG-type human auto-antibodies. Auto-antibodies to TPO recognize conformation-dependent epitopes.

**Origin:**

Recombinant. Expressed by recombinant baculovirus (*Autographa californica* multiple nuclear polyhedrosis virus; AcMNPV) infection of *Spodoptera frugiperda* Sf9 insect cells.

**Expression construct:**

Truncated cDNA coding for the extracellular part of human TPO. Transmembrane and intracytoplasmic parts of the molecule are removed and replaced by a hexa-histidine purification tag at the C-terminus. After cleavage of the secretory leader pre-sequence the mature recombinant TPO has a length of 834 amino acids.

**Biochemical tests:**

SDS-PAGE (purity > 95 %); Western-Blot with i: monoclonal anti-TPO antibody; ii: monoclonal anti-hexa-His-tag antibody

**Calculated molecular weight:**

92,872 Dalton (protein component excluding glycosylation)

**Calculated isoelectric point:**

pH 6.2

**Immunological tests/Functionality:**

Standard ELISA test (checker-board analysis of positive/negative sera panels, including international reference serum NIBSC 66/387)

**Recommended buffer/storage and handling conditions:**

Recommendations for storage buffer: ionic strength around 150 mM, neutral to slightly alkaline pH and 20 % glycerol as cryoprotective agent. Storage temperature: -70° to -80° C. Repeated freeze/thaw cycles should be avoided. Use of reducing sulfhydryl reagents and denaturing detergents will result in the destruction of conformation epitopes.

**Coating concentration:**

0.15-0.375 µg/ml (depending on the type of ELISA plate and coating buffer). Suitable for biotinylation and iodination.

**Coating concentration:**

0.6-1.0 µg/ml (depending on the type of ELISA plate and coating buffer). Suitable for biotinylation and iodination.

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