

Thyroid Peroxidase (TPO)

Antigen Specification

Product Number: 12100

Description:

Human thyroid peroxidase (TPO); identical with the antigen formerly called "microsomal antigen". Recombinant antigen for research use or manufacturing only.

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 (checkerboard analysis of positive/negative sera panels, including international reference serum NIBSC 66/387); immunodot and microarray test with positive/negative sera panels.

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 conditions: -70°C or below. 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 labeling of functional groups.

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