

Thyroid Peroxidase (TPO)

Antigen Specification

Product Number: 12100

Description:

Human thyroid peroxidase (TPO); identical with the antigen formerly called “microsomal antigen”.

Recombinant antigen for in vitro research and manufacturing use 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. 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 monoclonal anti-His-tag antibody.

Calculated molecular weight:

93 kDa (protein component excluding glycosylation).

Calculated isoelectric point:

pH 6.2

Immunological tests/Functionality:

Standard ELISA test (checkerboard analysis of positive/negative samples, including international reference serum NIBSC 66/387); immunodot analyses with positive/negative samples.

Recommended buffer/storage and handling conditions:

Recommendations for storage buffer: 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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