

## TPO

### Recombinant Human Thyroid Peroxidase His

<b>Catalog No.</b>	CSI19712A CSI19712B CSI19712C	<b>Quantity:</b>	5 µg 20 µg 1.0 mg
<b>Alternate Names:</b>	MSA, TPX, thyroid microsomal antigen		
<b>Description:</b>	Recombinant Human Thyroid Peroxidase is a glycosylated, polypeptide chain containing 834 amino acids. The TPO is expressed with a -6x His tag.		
<b>Concentration:</b>	0.63 mg/ml		
<b>Gene ID:</b>	7173		
<b>Source:</b>	Sf9 insect cells		
<b>Molecular Weight:</b>	92.87 kDa (excluding glycosylation), 101 kDa total mass.		
<b>Formulation:</b>	Liquid in 16 mM HEPES, pH 7.6 + 160 mM NaCl + 0.08 mM KI and 20% glycerol.		
<b>Purity:</b>	>95% by SDS-PAGE		
<b>Applications:</b>	<ol style="list-style-type: none"> <li>1. Binds IgG-type human auto-antibodies.</li> <li>2. Auto-antibodies to TPO recognize conformation-dependent epitopes.</li> <li>3. Standard ELISA test (checker-board analysis of positive/negative sera panels, including international reference serum NIBSC 66/387). Coating concentration of 0.15 -0.375 µg/ml (depending on the type of ELISA plate and coating buffer).</li> <li>4. Western-Blot with monoclonal anti-TPO antibody and monoclonal anti-hexa-His-tag antibody.</li> </ol> Suitable for biotinylation and iodination.		
<b>Storage &amp; Stability:</b>	Store at 2-4°C for 2-7 days. For longer time, store desiccated ≤-20°C. <b>Avoid repeated freeze-thaw cycles.</b>		
<b>Background:</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.		

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