

# Human TPO Protein; His Tag

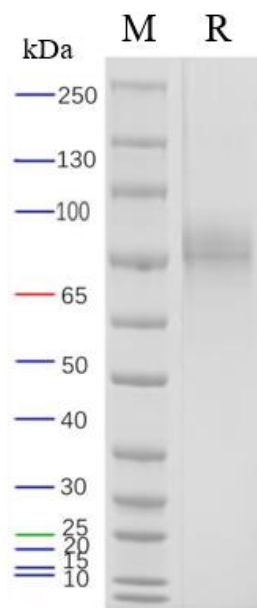
## Product Information

<b>Product Name</b>	Human TPO Protein; His Tag
<b>Storage temp.</b>	Store at $\leq -70^{\circ}\text{C}$ , stable for 6 months after receipt. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.
<b>Catalog# / Size</b>	<b>GM-87861RP-100 / 100 <math>\mu\text{g}</math></b> <b>GM-87861RP-1000 / 1 mg</b>

## Protein Information

<b>Alternative Names</b>	THPO,MGC163194,MGDF,MKCSF,ML,MPLLG,TPO,THCYT1
<b>Source</b>	Human TPO Protein; His Tag (GM-87861RP) is expressed from human 293 cells (HEK-293). It contains AA Ser 22 - Gly 353 (Accession # P40225-1). This protein carries a His tag at the C-terminus.
<b>Purity</b>	> 95% as determined by SDS-PAGE
<b>Endotoxin</b>	< 1 EU/ $\mu\text{g}$ , determined by LAL gel clotting assay
<b>Predicted Mol Mass</b>	37.2 KDa
<b>Formulation</b>	Supplied as a 0.2 $\mu\text{m}$ filtered solution of PBS, pH7.4.
<b>Description</b>	<p>Thyroid peroxidase (TPO) is a key enzyme in thyroid hormone synthesis, primarily located in thyroid follicular cells. TPO catalyzes the iodination reaction, oxidizing iodide ions into active iodine and promoting the coupling of iodinated tyrosine residues, ultimately producing the thyroid hormones T3 (triiodothyronine) and T4 (thyroxine), which play an essential role in maintaining normal metabolism and physiological function.</p> <p>Medically, TPO is closely associated with various thyroid diseases. Autoimmune thyroid diseases (such as Hashimoto's thyroiditis and Graves' disease) are often accompanied by the presence of autoantibodies against TPO (TPO-Ab) in patients. The detection of these antibody levels has become an important tool for diagnosing autoimmune thyroid diseases, and mutations in the TPO gene may also lead to conditions like congenital hypothyroidism.</p>

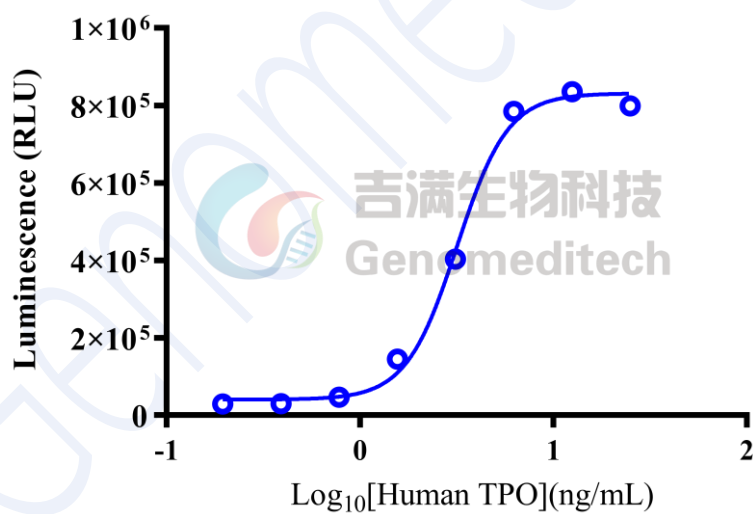
## SDS-PAGE



On SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

## Bioactivity CELL BASE

### H\_TPO Reporter 293 Cell Line



H_TPO Reporter 293 Cell Line	
EC50	3.177

Human TPO Protein; His Tag (Catalog # GM-87861RP) was added into H\_TPO Reporter 293 Cell Line (Catalog # GM-C30062) and stimulates TPO/TPOR signals.