

Active Recombinant Human Thyroid Peroxidase

Cat. No. TPO-1530H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Thrombopoietin produced in E.Coli is a single, non-glycosylated polypeptide chain containing 174 amino acids and having a molecular mass of 18608 Dalton which comprises the receptor binding domain of the Mpl-ligand protein.
Species	Human
Source	E.coli
Description	Thyroid peroxidase (TPO) is an enzyme expressed mainly in the thyroid that liberates iodine for addition onto tyrosine residues on thyroglobulin for the production of thyroxine (T4) or triiodothyronine (T3), thyroid hormones. In humans, thyroperoxidase is encoded by the TPO gene.
Form	Lyophilized from 10 mM NaP, pH 8.0.
Purity	Purity Greater than 98% as determined by: Analysis by RP-HPLC. Reducing and non-reducing SDS-PAGE.
Bio-activity	Recombinant TPO is fully biologically active when compared to standard. The ED50 as determined by the dose-dependant stimulation of MO7e cells is less than 0.8 ng/ml.
Physical Appearance	Sterile Filtered white lyophilized (freeze-dried) powder.
Solubility	Centrifuge vial before opening. When reconstituting the product, gently pipet and

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wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg μ s/ml, which can be further diluted into other aqueous solutions.

Purity Greater than 98% as determined by

Analysis by RP-HPLC. Reducing and non-reducing SDS-PAGE.

Protein Content determined by

UV spectroscopy at 280 nm. Analysis by RP-HPLC calibrated against a known standard. Quantitation on SDS-PAGE against a known standard.

Endotoxin Level

Endotoxin level as measured by LAL is <0.01ng/ug or <0.1EU/ug.

Amino acid sequence

SPAPPACDLR VLSKLLRDSH VLHSRLSQCP EVHPLPTPVL LPAVDFSLGE
WKTQMEETKA QDILGAVTLL LEGVMAARGQ LGPTCLSSLL GQLSGQVRLL
LGALQSLLGT QLPPQGRRTA HKDPNAIFLS FQHLLRGKVR FLMLVGGSTL
CVRRAPPTTA VPSRTSLVLT LNEL

Storage

Lyophilized product is very stable at -20 degrees. Reconstituted material should be aliquoted and frozen at -20. It is recommended to add a carrier protein (0.1% HSA or BSA) for long term storage.

GENE INFORMATION

Gene Name

TPO thyroid peroxidase [Homo sapiens]

Official Symbol

TPO

Synonyms

TPO; thyroid peroxidase; MSA; TPX; thyroid peroxidase; thyroperoxidase;
OTTHUMP00000115304; OTTHUMP00000115536; thyroid microsomal antigen; EC

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	1.11.1.8
Gene ID	7173
mRNA Refseq	NM_000547
Protein Refseq	NP_000538
MIM	606765
UniProt ID	P07202
Chromosome Location	2p25
Function	calcium ion binding; heme binding; iodide peroxidase activity; iron ion binding; oxidoreductase activity