

## Active Recombinant Human TPO protein

**Cat. No.** TPO-9592H    **Lot. No.** (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant Human TPO protein was expressed in CHO
<b>Species</b>	Human
<b>Source</b>	CHO
<b>ProteinLength</b>	332
<b>Description</b>	<p>Megakaryocytopoiesis is the cellular development process that leads to platelet production. The main functional protein encoded by this gene is a humoral growth factor that is necessary for megakaryocyte proliferation and maturation, as well as for thrombopoiesis. This protein is the ligand for MLP/C_MPL, the product of myeloproliferative leukemia virus oncogene. Mutations in this gene are the cause of thrombocythemia 1. Alternative promoter usage and differential splicing result in multiple transcript variants differing in the 5' UTR and/or coding region. Multiple AUG codons upstream of the main open reading frame (ORF) have been identified, and these upstream AUGs inhibit translation of the main ORF at different extent.</p>
<b>Form</b>	Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4.
<b>Bio-activity</b>	Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using human Mo7e cells is less than 3 ng/ml, corresponding to a specific activity of > 3.3 × 10 <sup>5</sup> IU/mg.
<b>Molecular Mass</b>	Approximately 80 kDa, consisting of a 332 amino acid residue with a predicted

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molecular mass of approximately 35 kDa. As a result of glycosylation, the recombinant protein migrates with an apparent molecular mass of 80±10 kDa in SDS-PAGE.

**AA Sequence**

SPAPPACDLRVLSKLLRDSHVLHSRLSQCEVHPLPTPVLLPAVDFSLGEWKTQME  
ETKAQDILGAVTLLLEGVMAARGQLGPTCLSSLLGQLSGQVRLLL GALQSLLGTQLP  
PQGRRTAHKDPNAIFLSFQHLLRGKVRFLMLVGGSTLCVRRAPPTTAVPSRTSLVLT  
LNELPNRTSGLLETNFTASARTTGSGLLKWQQGFRAKIPGLLNQTSRSLDQIPGYLN  
RIHELLNGTRGLFPGPSRRTL GAPDISSGTS DTGSLPPNLQPGYSPSPHPPTGQYT  
LFPLPPTLPTPVVQLHPLLDPSPAPTPTPTSPLLNTSYTHSQNLSQEG

**Endotoxin**

Less than 1 EU/μg of rHuTPO as determined by LAL method.

**Purity**

>98% by SDS-PAGE and HPLC analysis.

**Storage**

Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.

**Reconstitution**

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤-20 centigrade. Further dilutions should be made in appropriate buffered solutions.

## GENE INFORMATION

**Gene Name**

TPO

**Official Symbol**

TPO

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<b>Synonyms</b>	TPO; thyroid peroxidase; TPX; thyroperoxidase; thyroid microsomal antigen; MSA; TDH2A;
<b>Gene ID</b>	<a href="#">7173</a>
<b>mRNA Refseq</b>	<a href="#">NM_000547</a>
<b>Protein Refseq</b>	<a href="#">NP_000538</a>
<b>MIM</b>	<a href="#">606765</a>
<b>UniProt ID</b>	<a href="#">P07202</a>

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