

Active Recombinant Human TPO protein

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

SPECIFICATION

Product Overview	Recombinant Human TPO protein was expressed in CHO
Species	Human
Source	CHO
ProteinLength	332
Description	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.
Form	Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4.
Bio-activity	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 $> 3.3 \times 10^5$ IU/mg.
Molecular Mass	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
ETKAQDILGAVTLLLEGVMAARGQLGPTCLSSLLGQLSGQVRLLLGALQSLLGTQLP
PQGRTTAHKDPNAIFLSFQHLLRGKVRFLMLVGGSTLCVRRAPPTTAVPSRTSLVLT
LNELPNRTSGLLETNFTASARTTGSGLLKWQQGFRAKIPGLLNQTSRSLDQIPGYLN
RIHELLNGTRGLFPGPSRRTLGAPODISSGTSSTGSLPPNLQPGYSPSPHPPTGQYT
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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Synonyms	TPO; thyroid peroxidase; TPX; thyroperoxidase; thyroid microsomal antigen; MSA; TDH2A;
Gene ID	7173
mRNA Refseq	NM_000547
Protein Refseq	NP_000538
MIM	606765
UniProt ID	P07202

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