# Human Thrombopoietin / THPO / TPO Protein (His Tag)

**Catalog Number:** **10381-H08C**

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Biological Solution Specialist

## General Information

**Gene Name Synonym:**

THPO, MGC163194, MGDF, MKCSF, ML, MPLLG, TPO

**Protein Construction:**

A DNA sequence encoding the human THPO (NP_000451.1) precursor (Met 1-Gly 353) was fused with a polyhistidine tag at the C-terminus.

**Source:** Human

**Expression Host:** CHO Cells

## QC Testing

**Purity:** > 85 % as determined by SDS-PAGE

**Bio-Activity**

**Measured in a cell proliferation assay using MO7e human megakaryocytic leukemic cells. The ED50 for this effect is typically 50-200 ng/ml.**

**Endotoxin:**

< 1.0 EU per μg of the protein as determined by the LAL method

**Stability:**

Samples are stable for up to twelve months from date of receipt at -70 ℃

**Predicted N terminal:** Ser 22

**Molecular Mass:**

The recombinant human THPO consists of 343 amino acids with the predicted molecular mass of 36.9 kDa. As a result of glycosylation, the apparent molecular mass of rhTHPO is approximately 60-80 kDa in SDS-PAGE under reducing conditions.

**Formulation:**

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

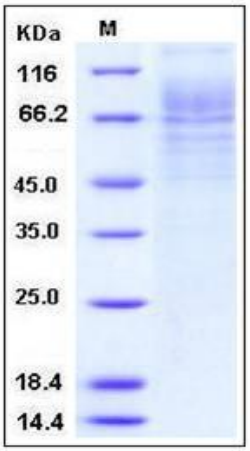
## Usage Guide

**Storage:**

Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

**SDS-PAGE:**




**Reconstitution:**

Detailed reconstitution instructions are sent along with the products.

## Protein Description

Thrombopoietin (THPO) is a hematopoietic growth factor that is involved in the regulation of platelet production. This cytokine is composed of an amino-terminal erythropoietin-like domain which is the functional domain and a highly glycosylated carboxyl domain that appears to stabilize circulating thrombopoietin. THPO stimulates both proliferation of progenitor megakaryocytes and their maturation to platelet-producing megakaryocytes, and also accelerates the recovery of platelets. It has been identified that surface c-MPL, the receptor for THPO, binds to the ligand and mediates the action. THPO has multilineage effects in hematopoiesis, not only stimulating megakaryocytopoiesis but also acting in synergy with other cytokines to enhance proliferation and survival of committed erythroid progenitors and primitive hematopoietic stem cells. Mouse THPO is found mainly in the liver, kidney and skeletal muscle.

**References**

1. Gurney AL, et al., 1994, Science, 265 (5177): 1445-7.
2. de Sauvage FJ, et al., 1994, Nature, 369 (6481): 533-8.
3. Eaton DL,et al., 1995, Curr Opin Hematol, 2 (3): 167-71.
4. Lok S,et al., 1994, Stem Cells, 12 (6): 586-98.
5. Drexler HG,et al., 1996, Leukemia, 10 (9): 1405-21.
6. Miyazaki H,et al., 1999, Int J Hematol, 70 (4): 216-25.