

# Recombinant Human Thrombopoietin/THPO Protein

Catalog No.: RP00174 Recombinant

## **Sequence Information**

Species Gene ID Swiss Prot Human 7066 P40225

Tags

C-His

#### **Synonyms**

THPO;MGDF;MKCSF;ML;MPLLG;THCYT1;TPO

## **Product Information**

**Source** Purification HEK293 cells ≥ 95 % as

determined by SDS-

PAGE.

Calculated MW Observed MW

36.31 kDa 70-90 kDa

#### **Endotoxin**

< 0.1 EU/ $\mu$ g of the protein by LAL method.

#### Formulation

Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4.Contact us for customized product form or formulation.

#### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

#### Contact

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### **Background**

Thrombopoietin (TPO or THPO), also known as myeloproliferative leukemia virus ligand (c-Mpl), is a hematopoietic growth factor belonging to the EPO/TPO family. Megakaryocytopoiesis is the cellular development process that leads to platelet production. TPO is necessary for megakaryocyte proliferation and maturation, as well as for thrombopoiesis. TPO is the ligand for MLP/C\_MPL, the product of myeloproliferative leukemia virus oncogene. Mutations in TPO gene are the cause of thrombocythemia .

#### **Basic Information**

#### Description

Recombinant Human Thrombopoietin/THPO Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Ser22-Gly353) of human Thrombopoietin/THPO (Accession #NP\_000451.1) fused with a 6×His tag at the C-terminus.

#### **Bio-Activity**

1.Recombinant Human TPO(50 ng/mL) , IL-3(15 ng/mL, Cat. RP01362), IL-6(15 ng/mL, Cat. RP00201) and IL-11(15 ng/mL, Cat. RP00050) induce hematopoietic stem and progenitor cells to differentiate into megakaryocytes. After 6 days, the induction of CD41/42+ megakaryocytes was successful. [2.Measured in a cell proliferation assay using MO7e human megakaryocytic leukemic cells. Avanzi, G. et al. (1988) Br. J. Haematol. 69:359. The ED $_{50}$  for this effect is 2.61-10.44 ng/mL.

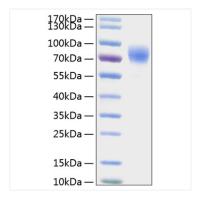
#### Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

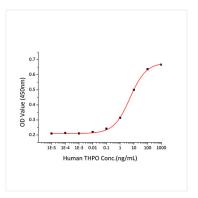
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

## **Validation Data**



Recombinant Human Thrombopoietin/THPO Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



Recombinant Human THPO stimulates cell proliferation of the MO7e human megakaryocytic leukemic cells. The  $ED_{50}$  for this effect is 2.61-10.44 ng/mL.