

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/μg 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 stabilizer (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 ED₅₀ for this effect is 2.61-10.44 ng/mL.

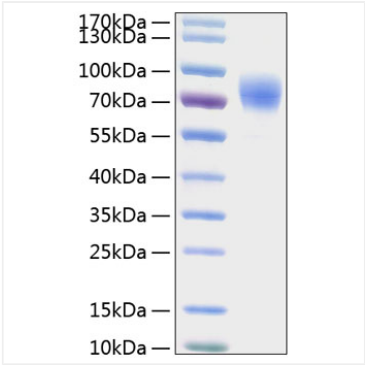
Storage

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

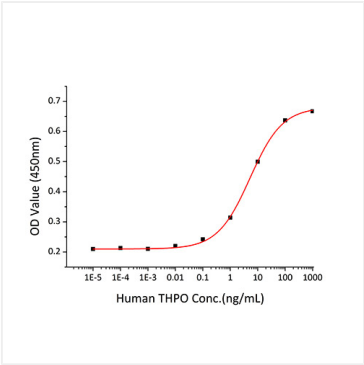
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

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 ED₅₀ for this effect is 2.61-10.44 ng/mL.