

Recombinant Human Thrombopoietin/THPO Protein

Catalog No.: RP00174

Sequence Information

Species **Gene ID**
Human 7066

Swiss Prot **Tags**
P40225 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.

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.

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.

Shipping

Lyophilized proteins are shipped at ambient temperature. Liquid proteins are shipped at frozen temperature with dry ice. Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

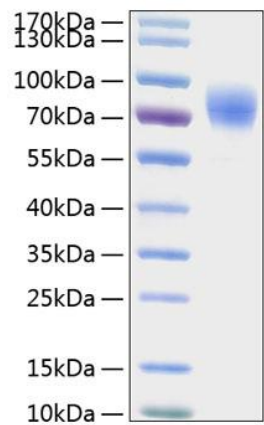
Contact

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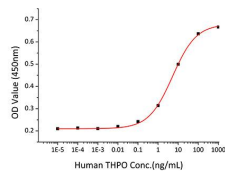
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Validation Data



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.