

Active Recombinant Human THPO Protein (Ser22-Leu195), GMP Grade, Animal-Free

Cat. No. THPO-12HG Lot. No. (See product label)

SPECIFICATION

Product Overview	GMP recombinant human Thrombopoietin protein (Ser22-Leu195) without tag was expressed in E. coli, produced in an Animal-Free laboratory and manufactured and tested under cGMP guidelines.
Species	Human
Source	E.coli
ProteinLength	Ser22-Leu195
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.
Bio-activity	Measured in a cell proliferation assay using MO7e human megakaryocytic leukemic cells. The ED50 for this effect is 0.05-0.5 ng/mL. The specific activity of Recombinant Human Thrombopoietin is >1 x 10 ⁷ units/mg,

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	which is calibrated against the human Thrombopoietin reference standard.
Molecular Mass	Predicted Molecular Mass: 18.7 kDa SDS-PAGE: 19 kDa, reducing conditions
N-terminal Sequence Analysis	Ala-Ser22-Pro-Ala-Pro-Pro-Ala-(Cys)-Asp-Leu
Endotoxin	<0.10 EU/ µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. A minimum of 6 months when stored at ≤ -20 centigrade as supplied. Refer to lot specific COA for the Use by Date. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, ≤ -20 centigrade under sterile conditions after reconstitution.
Storage Buffer	Lyophilized from a 0.2 µm filtered solution in Sodium Acetate.
Reconstitution	Reconstitute at 100-200 µg/mL in sterile, deionized water.
Shipping	The product is shipped with polar packs.

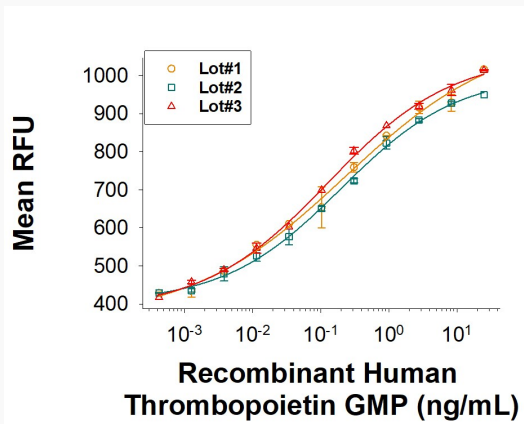
GENE INFORMATION

Gene Name	THPO thrombopoietin [Homo sapiens (human)]
Official Symbol	THPO

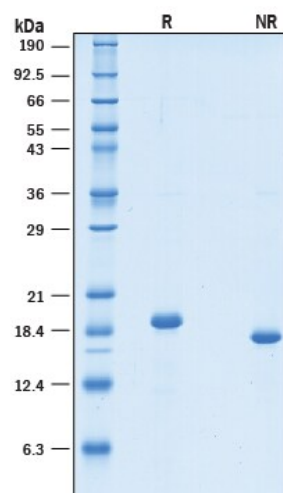
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Synonyms	THPO; thrombopoietin; ML; TPO; MGDF; MKCSF; MPLLG; THCYT1;
Gene ID	7066
mRNA Refseq	NM_000460
Protein Refseq	NP_000451
MIM	600044
UniProt ID	P40225
Bioactivity	 The graph displays the bioactivity of Recombinant Human Thrombopoietin GMP across three different lots. The x-axis represents the concentration in ng/mL on a logarithmic scale, ranging from 10⁻³ to 10¹. The y-axis represents the Mean RFU (Relative Fluorescence Units), ranging from 400 to 1000. Lot#1 (orange circles), Lot#2 (blue squares), and Lot#3 (red triangles) all show a consistent sigmoidal increase in RFU as the concentration increases, indicating high bioactivity and reproducibility across the different batches.

SDS-PAGE



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