

# Recombinant human Thrombopoietin protein

Catalog Number: ATGP3970

## PRODUCT INFORMATION

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### Expression system

HEK293

### Domain

22-353aa

### UniProt No.

P40225

### NCBI Accession No.

NP\_000451.1

### Alternative Names

THPO, MGDF, MKCSF, ML, MPLLG, THCYT1, TPO, thrombopoietin isoform 1 precursor, C-mpl ligand, Megakaryocyte colony-stimulating factor, Megakaryocyte growth and development factor, Myeloproliferative leukemia virus oncogene ligand, ATGP3057

## PRODUCT SPECIFICATION

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### Molecular Weight

36.8kDa (343aa)

### Concentration

0.25mg/ml (determined by Absorbance at 280nm)

### Formulation

Liquid. In Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

### Purity

> 90% by SDS-PAGE

### Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

### Biological Activity

Measured in a cell proliferation assay using MO7e human megakaryocytic leukemic cells. The ED50 range  $\leq$ 10 ng/ml.

### Tag

His-Tag

### Application

SDS-PAGE, Bioactivity

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

# Recombinant human Thrombopoietin protein

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## BACKGROUND

### Description

Thrombopoietin, also known as megakaryocyte growth and development factor (MGDF), is a member of EPO/TPO family. It is produced in the liver by both parenchymal cells and sinusoidal endothelial cells, as well as in the kidney by proximal convoluted tubule cells. It acts as a key regulator of megakaryocytopoiesis and thrombopoiesis that leads to platelet production. Also, this protein is the ligand for MLP/C\_MPL, the product of myeloproliferative leukemia virus oncogene. Thrombopoietin, like EPO, plays a role in brain development. It promotes apoptosis of newly generated neurons, an effect counteracted by EPO and neurotrophins. Recombinant human Thrombopoietin fused to His-tag at C-terminus, was expressed in HEK293 cell and purified by using conventional chromatography techniques.

### Amino acid Sequence

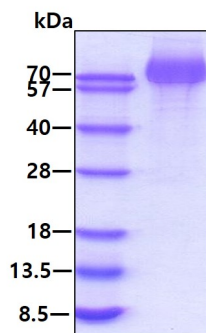
<DGSHM>SPAPP ACDLRVLSKL LRDSHVLHSR LSQCPEVHPL PTPVLLPAVD FSLGEWKTQM EETKAQDILG AVTLLLEGVM AARGQLGPTC LSSLLGQLSG QVRLLLGALQ SLLGTQLPPQ GRRTAHKDPN AIFLSFQHLL RGKVRFLMLV GGSTLCVRRRA PPTTAVPSRT SLVLTNLNLP NRTSGLLETN FTASARTTGS GLLKWQQGFR AKIPGLLNQT SRSLDQIPGY LNRIHELLNG TRGLFPGPSR RTLGAPDISS GTSDTGSLPP NLQPGYSPSP THPPTGQYTL FPLPPTLPTP VVQLHPLLDP PSAPTPTPTS PLLNTSYTHS QNLSQEG<HHH HHH>

### General References

Fishley B, et al, (2004) Growth Factors. 22:151-155.  
Chou FS, et al, (2011) J Cell Biochem. 112:1491-1498.  
Kong Z, et al, (2017) Blood. 130:1097-1103.

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain

### Biological Activity

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Human Thrombopoietin stimulates cell proliferation of the MO7e human megakaryocytic leukemic cells. The ED50 range  $\leq 10$  ng/ml.

