THPO Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	THPO, Recombinant Protein
Full Product Name	Recombinant Human THPO
Product Gene Name	THPO recombinant protein
Product Synonym Names	MGDF Protein; Human; MKCSF Protein; Human; ML Protein; Human; MPLLG Protein; Human; THCYT1 Protein; Human; TPO Protein; Human
Host	HEK293 cells
Form/Format	Lyophilized from a 0.2 um filtered solution in 10 mM Hepes, 500 mM NaCl with 5% trehalose, pH7.4
Purity/Purification	Greater than 95% as determined by SDS-PAGE
Preparation and Storage	The lyophilized protein is stable at -20 degree C for up to 1 year, the protein solution can be stored at 2-8 degree C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing 0.1% BSA (make sure BSA will NOT interfere with your experiment) and store in working aliquots at -20 degree C to -80 degree C for 6 months. Avoid repeated freeze/thaw cycle.
Molecular Weight	37,823 Da
Sequence Positions	1-353
OMIM	187950
3D Structure	ModBase 3D Structure for P40225
Species	Human
Tag	C-terminal His
Reconstitution	Centrifuge the vial prior to opening, reconstitute in sterile distilled water or buffer of interest to concentration of 0.1-1mg/ml by gently pipetting 2-3 times, don't vortex
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for THPO recombinant protein	Western Blot (WB), ELISA (EIA)
Related Product Information for THPO recombinant protein	MBS7617203 is a recombinant protein targeting THPO. Also known as Recombinant Human THPO. Host: HEK293 cells.
Other Notes	Small volumes of THPO recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for THPO. It may not necessarily be applicable to this product.

NCBI GI #	730982
NCBI GeneID	7066
NCBI Accession #	P40225.1
UniProt Primary Accession #	P40225
UniProt Secondary Accession #	Q13020; Q15790; Q15791; Q15792; A1L3Y0; B7ZLR8; B9EGA8

UniProt Related Accession #	P40225
NCBI Official Full Name	Thrombopoietin
NCBI Official Synonym Full Names	thrombopoietin
NCBI Official Symbol	THPO
NCBI Official Synonym Symbols	ML; TPO; MGDF; MKCSF; MPLLG; THCYT1
UniProt Protein Name	Thrombopoietin
UniProt Synonym Protein Names	C-mpl ligand; ML; Megakaryocyte colony-stimulating factor; Megakaryocyte growth and development factor; MGDF; Myeloproliferative leukemia virus oncogene ligand
Protein Family	Thrombopoietin
UniProt Gene Name	THPO
UniProt Synonym Gene Names	MGDF; ML; MGDF
UniProt Entry Name	TPO_HUMAN
NCBI Protein Information	thrombopoietin; MPL ligand; c-mpl ligand; prepro-thrombopoietin; megakaryocyte stimulating factor; megakaryocyte colony-stimulating factor; megakaryocyte growth and development factor; myeloproliferative leukemia virus oncogene ligand
NCBI Summary for THPO	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. [provided by RefSeq, Feb 2014]
UniProt Comments for THPO	THPO: Lineage-specific cytokine affecting the proliferation and maturation of megakaryocytes from their committed progenitor cells. It acts at a late stage of megakaryocyte development. It may be the major physiological regulator of circulating platelets. Defects in THPO are the cause of thrombocythemia type 1 (THCYT1). A myeloproliferative disorder characterized by elevated platelet levels due to sustained proliferation of megakaryocytes, and frequently lead to thrombotic and haemorrhagic complications. Belongs to the EPO/TPO family. 3 isoforms of the human protein are produced by alternative splicing. Protein type: Cell cycle regulation; Secreted; Cytokine; Secreted, signal peptide Chromosomal Location of Human Ortholog: 3q27 Cellular Component: extracellular space Molecular Function: growth factor activity; hormone activity; cytokine activity Biological Process: positive regulation of protein kinase B signaling cascade; cell proliferation; platelet activation; multicellular organismal development; myeloid cell differentiation; positive regulation of megakaryocyte differentiation; positive regulation of protein amino acid phosphorylation; blood coagulation Disease: Thrombocythemia 1
Research Articles on THPO	**1.** An Arg->Cys substitution at residue 38 or residue 17 excluding the 21-AA signal peptide of the receptor binding domain was found in a family with aplastic anemia. Adding a 5th cysteine may disrupt normal disulfide bonding & receptor binding.
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