

Thrombopoietin /THPO/TPO Recombinant Protein | THPO recombinant protein

Recombinant Rat Thrombopoietin /THPO/TPO Protein

CATALOG #
AAA283409

HOST
HEK293 cells

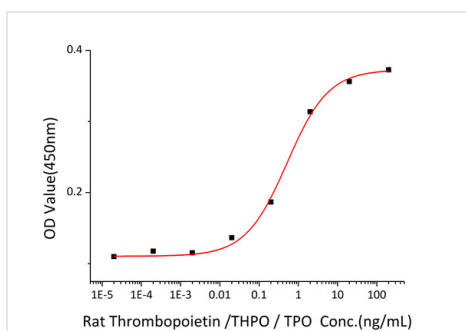
PRODUCT SYNONYMS

Thrombopoietin /THPO/TPO; Recombinant Rat Thrombopoietin /THPO/TPO Protein; Megakaryocyte colony-stimulating factor; Megakaryocyte growth and development factor; megakaryocyte stimulating factor; MGDF; MGDFC-mpl ligand; MKCSF; MK-CSF; ML; MPL ligand; MPLLG; MPLLMGC163194; Myeloproliferative leukemia virus oncogene ligand; THCYT1; THPO; thrombopoietin nirs variant 1; Thrombopoietin; Tpo; TPOMKCSF; THPO recombinant protein

PRODUCT SPECIFICATIONS

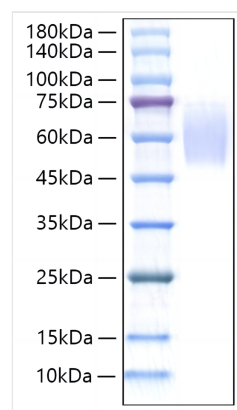
Host	HEK293 cells
Form/Format	Lyophilized from a 0.22 um filtered solution of PBS, pH7.4.
Sequence	SPVPPACDPR LLNKLLRDSY LLHSRLSQCP DVNPLSIPVL LPAVDFSLGE WKTQTEQSKA QDILGAVSLL LEGVMAARGQ LEPSCLSSLL GQLSGQVRL LGALQGLLGT QLPPQGRTTA HKDPSALFLS LQQLRGKVR FLLLVGPAL CVRRTLPTTA VPSRTSLLT LNKFPNRTSG LLETNFSVVA RTAGPGLLNR LQGFRKIIP GQLNQTSGSL DQIPGYLNGT HEPVNGTHGL FAGTSLQTLE APDVVPGAFN KGSLLPLNLS GLPPIPSLAA DGYTLFPSP TFPTPGSPQ LPPVS
Species	Rat
Tag	C-His
Endotoxin	<0.01EU/ug of the protein by LAL method.
Bio-Activity	Measured in a cell proliferation assay using M07e human megakaryocytic leukemic cells. The ED50 for this effect is 0.26-1.02ng/mL, corresponding to a specific activity of $9.8 \times 10^5 \sim 3.8 \times 10^6$ units/mg.
Preparation and Storage	Store at -20 degree C. Store the lyophilized protein at -20 degree C to -80 degree C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20 degree C for 3 months, at 2-8 degree C for up to 1 week.

IMAGES



Application Data

Recombinant Rat Thrombopoietin /THPO / TPO Protein promote the proliferation of M07e human megakaryocytic leukemic cells. The ED50 for this effect is 0.26-1.02 ng/mL, corresponding to a specific activity of $9.8 \times 10^5 \sim 3.8 \times 10^6$ units/mg.



SDS-PAGE

Recombinant Rat Thrombopoietin /THPO / TPO Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 50-75 KD.

ADDITIONAL INFORMATION

Related Product Information for THPO recombinant protein	Thrombopoietin (Tpo), is a key regulator of megakaryocytopoiesis and thrombopoiesis. It is principally produced in the liver and is bound and internalized by the receptor Tpo R/cmpl. Defects in the TpoTpo R signaling pathway are associated with a variety of platelet disorders. Mature rat Tpo shares 68% and 81% aa sequence homology with human and mouse Tpo, respectively. It is an 8085 kDa protein that consists of an Nterminal domain with homology to Erythropoietin (Epo) and a Cterminal domain that contains multiple Nlinked and Olinked glycosylation sites. Tpo promotes the differentiation, proliferation, and maturation of megakaryocytes (MK) and their progenitors. Several other cytokines can also promote these functions but only in cooperation with Tpo. Notably, IL3 independently induces MK development, although its effects are restricted to early in the MK lineage. Tpo additionally promotes platelet production, aggregation, ECM adhesion, and activation. These actions, in combination with direct effects on cardiomyocytes, can aid in the recovery of heart function following myocardial infarction. Tpo is cleaved by plateletderived thrombin following Arg191 within the Cterminal domain and subsequently at other sites upon extended digestion. The Cterminal domain is not required for binding to Tpo R or inducing MK growth and differentiation. Aside from its hematopoietic effects, Tpo is expressed in the brain where it promotes the apoptosis of hypoxiasensitized neurons and inhibits neuronal differentiation by blocking NGFInduced signaling.
Product Categories/Family for THPO recombinant protein	Cytokines & Cytokine receptors; Proteins

NCBI AND UNIPROT INFORMATION

NCBI GI #	13592113
NCBI GeneID	81811
NCBI Accession #	NP_112395.1
NCBI GenBank Nucleotide #	NM_031133.2
UniProt Accession #	P49745
UniProt Protein Name	Thrombopoietin
UniProt Gene Name	Thpo

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/thpo-recombinant-protein-hek293-cells/283409>