

Recombinant Mouse Thrombopoietin (TPO) (Animal-Free)

Catalog# / Size	718102 / 10 µg
Regulatory Status	RUO
Other Names	Megakaryocyte Colony Stimulating Factor (MKCSF), Myeloproliferative leukemia virus oncogene ligand (Mpl-ligand), Megakaryocyte growth and development factor (MGDF), THPO
Description	Mouse Thrombopoietin (TPO) is a protein consisting of an N-terminus domain with homology to erythropoietin (EPO) and a C-terminus domain with multiple N-linked and O-linked glycosylation sites. TPO is a key regulator of megakaryocytopoiesis and thrombopoiesis. It signals through the c-mpl receptor and stimulates the proliferation and maturation of megakaryocytes; hence, TPO plays an important role in regulating the level of circulating platelets <i>in vivo</i> . It has also been shown that TPO is able to promote the survival, self-renewal, and expansion of hematopoietic stem cells and primitive multilineage progenitors. Besides its hematopoietic effects, TPO is expressed in the brain where it promotes apoptosis of hypoxia sensitized neurons and inhibits neuronal differentiation by blocking NGF induced signaling.

Product Details

Source	Mouse TPO, amino acids (Ser22-Phe195) (Accession# NP_001166976.1) was expressed in <i>E. coli</i> .
Molecular Mass	The 174 amino acid recombinant protein has a predicted molecular mass of 18.7 kD. The predicted N-terminal amino acid is Ser.
Purity	>98%, as determined by Coomassie stained SDS-PAGE and HPLC analysis.
Formulation	Lyophilized, carrier-free.
Endotoxin Level	Less than 0.1 ng per µg of protein.
Storage & Handling	Unopened vial can be stored at -20°C or -70°C. For maximum results, quick spin vial prior to opening. Reconstitute in water to a concentration of ≤0.5mg/ml. Do not vortex. It is recommended to further dilute in a buffer, such as 5% Trehalose, and store working aliquots at -20°C to -80°C. Avoid repeated freeze/thaw cycles.
Activity	The expected ED ₅₀ is ≤ 1 ng/ml, corresponding to a specific activity of ≥ 1 x 10 ⁶ units/mg, as determined by the dose-dependent stimulation of the proliferation of human MO7e cells.
Application	Bioassay
Application Notes	This product is reactive with mouse and human.

Antigen Details

Structure	Cytokine
Distribution	TPO is produced by liver and kidney.
Function	TPO regulates megakaryocytopoiesis and thrombopoiesis.
Cell Type	Mesenchymal Stem Cells, Hematopoietic stem and progenitors, Embryonic Stem Cells
Biology Area	Apoptosis/Tumor Suppressors/Cell Death, Cell Biology, Stem Cells
Molecular Family	Growth Factors, Cytokines/Chemokines
Antigen References	<ol style="list-style-type: none"> 1. Fitzgerald K, <i>et al.</i> Eds. 2001. The Cytokine FactsBook. Academic Press San Diego. 2. Beutler B, <i>et al.</i> 1988. <i>Annu. Rev. Biochem.</i> 57:505. 3. Beutler B, <i>et al.</i> 1989. <i>Annu. Rev. Immunol.</i> 7:625. 4. Tracey K, <i>et al.</i> 1993. <i>Crit. Care Med.</i> 21:S415.
Gene ID	21832

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