

Cytokines

Mouse Recombinant TPO



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Thrombopoietin

Catalog #	78072.1	10 µg
	78072	50 µg
	78072.2	1000 µg

Product Description

Thrombopoietin (TPO) is a key regulator of megakaryocytopoiesis and thrombopoiesis in vitro and in vivo. TPO stimulates the proliferation and maturation of megakaryocytes and has an important role in regulating the level of circulating platelets in vivo. TPO also promotes the survival, self-renewal, and expansion of hematopoietic stem cells and primitive multilineage progenitor cells. It is commonly used with other cytokines such as stem cell factor (SCF) and Flt3/Flk-2 Ligand to promote expansion of primitive hematopoietic cells in culture (Hitchcock & Kaushansky). The TPO receptor, c-Mpl, is expressed at all stages of megakaryopoiesis, from hematopoietic stem and progenitor cells to mature platelets.

Product Information

Alternative Names:	c-MPL ligand, Megakaryocyte colony-stimulating factor, MGDF
Accession Number:	P40226
Amino Acid Sequence:	SPVAPACDPR LLNKLLRDSH LLHSRLSQCP DVDPLSIPVL LPAVDFSLGE WKTQTEQSKA QDILGAVSLL LEGVMAARGQ LEPSCLSLL GQLSGQVRL LGALQGLLGT QLPLQGRRTA HKDPNALFLS LQQLLRGKVR FLLLVEGPTL CVRRTLPTTA VPSSTSQLLT LNKFPNRTSG LLETNFSVTA RTAGPGLLSR LQGFRVKITP GQLNQTSRSP VQISGYLNRT HGPVNGTHGL FAGTSLQTLE ASDISPGAFN KGSLAFNLQG GLPPSPSLAP DGHTPFPPSP ALPTTHGSPP QLHPLFPDPS TTMPNSTAPH PVTMYPHPRN LSQET
Predicted Molecular Mass:	35 kDa
Species:	Mouse
Cross Reactivity:	Human
Formulation:	Lyophilized after dialysis against phosphate-buffered saline.
Source:	CHO

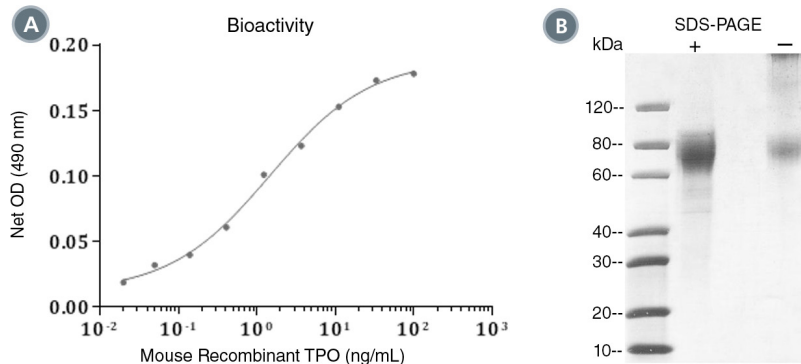
Specifications

Activity:	The specific activity is $\geq 5 \times 10^5$ units/mg ($EC_{50} \leq 2$ ng/mL) as determined by a cell proliferation assay using MO7e cells.
Purity:	$\geq 95\%$
Endotoxin Level:	Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 0.2 EU/µg protein.

Preparation and Storage

Storage:	Store at -80°C .
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. As a general guide, do not store at $2 - 8^\circ\text{C}$ for more than 1 week or at -20°C for more than 2 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Mouse Recombinant TPO was tested by its ability to promote the proliferation of MO7e cells. Cell proliferation was measured using a fluorometric assay method. The EC₅₀ is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC₅₀ in the above example is 0.92 ng/mL.

(B) 5 µg of Mouse Recombinant TPO was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Mouse Recombinant TPO has a predicted molecular mass of 35 kDa but as a result of glycosylation has an apparent molecular mass of approximately 75 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

Hitchcock IS & Kaushansky K. (2014) Thrombopoietin from beginning to end. *Br J Haematol* 165(2): 259-68.

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