**Cytokines**

**Mouse Recombinant TPO**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>78072.1</td>
<td>10 μg</td>
</tr>
<tr>
<td>78072</td>
<td>50 μg</td>
</tr>
<tr>
<td>78072.2</td>
<td>1000 μg</td>
</tr>
</tbody>
</table>

**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 progenitors and is commonly used with other cytokines such as stem cell factor 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:**

P40226PVAPACDPR LLNKLRRDSH LLHSRLSQCQ DVDPSSIPVL LPAVDFSGLG WKTQTEGSKA QDILGAVSLL LEGVMAARGQ LEPSCLSSLL GQLSOGVRILL LGALOGLLLGT QLPLQGRTTA HKDPNALFLS LOQLLRGKVR FLLLEVEGTL CVRRTPPTTA VPSSTSCQLTT LNKFNPRTSG LLETNFVSVT A TAPGGLLSR LGQFRVHTP GQLNOQSRSP VQISGYLNRT HGPVNGTHGL FAGTSLOTLE ASDISPQAFN KGSLAFNLQG GLPPSPLAP DHGTPFPSP ALPTTHGSPP QLHPLFPDPS TMPNSTAPH PVTMPHPHRN 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 ≥ 5 × 10^5 units/mg (EC50 ≤ 2 ng/mL) as determined by a cell proliferation assay using MO7e cells.

**Purity:** ≥ 95%

**Endotoxin Level:** Measured by kinetic limulus amebocyte 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.

**Reconstitution:** Centrifuge vial before opening. Resuspend the product in sterile water or phosphate-buffered saline to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. Store at 2 - 8°C for up to 1 week or at -20°C to -80°C for up to 2 months. Avoid repeated freeze-thaw cycles.
(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. Human 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.

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References