Miltenyi Biotec

Mouse TPO
research grade

Contents

1. Description

Products Mouse TPO, research grade.

Recombinant mouse thrombopoietin.

Content in µg	Order no.
2	130-094-082
10	130-094-083
100	130-096-301
1000	130-108-958

Biological activity The ED_{50} is ≤1 ng/mL corresponding to an activity of ≥1×10^6 U/mg.

▲ **Note:** The ED_{50} is determined by proliferation assay using MO7e cells.

Primary structure Single, non-glycosylated polypeptide chain (174 amino acid residues).

Molecular mass 18.7 kDa.

Source Produced in *E. coli*.

Product format Lyophilized from a filtered (0.2 µm) buffer solution.

Stabilizer None.

Purity >95% as determined by SDS-PAGE analysis.

Endotoxin level Low endotoxin (<1.0 EU/µg cytokine) as determined by Limulus Amebocyte Lysate (LAL) assay.

Storage Lyophilized Mouse TPO, research grade should be stored at –20 °C. The expiration date is indicated on the vial label. Upon reconstitution aliquots should be stored at –20 °C or below. Avoid repeated freeze-thaw cycles.

Reconstitution It is recommended to reconstitute lyophilized Mouse TPO, research grade with deionized sterile-filtered water to a final concentration of 0.05–1.0 mg/mL in a minimal volume of 40 µL. Further dilutions should be prepared with 0.1% bovine serum albumin (BSA) or human serum albumin (HSA) in phosphate-buffered saline.

1.1 Background information

Thrombopoietin (TPO), also known as thrombopoiesis stimulating factor (TSF), is a glycoprotein hormone and the major stimulator of megakaryopoiesis and platelet production. TPO is expressed in liver, kidney, spleen, lung, bone marrow, and brain. The TPO receptor is a product of the proto-oncogene *c-mpl* and displays homology with type I cytokine receptor superfamily members. Analogous to the effect of erythropoietin (EPO), the primary mode of action of TPO is inhibition of apoptosis of its target cells. By contrast, TPO is strongly proapoptotic in the brain and acts as a counterpart of EPO which has neuroprotective properties.

1.2 Applications

Mouse TPO may be used for a variety of applications, including:

- Megakaryocyte proliferation and differentiation *in vitro*.
- *In vitro* expansion of hematopoietic stem cells.
- *In vitro* platelet activation.
- Apoptosis assays.

Optimal concentration for a specific application should be determined by a dose-response experiment.

Refer to www.miltenyibiotec.com for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit www.miltenyibiotec.com for local Miltenyi Biotec Technical Support contact information.

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