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#86116**Human TPO Recombinant Protein  
(mammalian derived)**

25 µg

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**For Research Use Only. Not for Use in Diagnostic Procedures.****MW (kDa):**  
36**UniProt ID:**  
#P40225**Entrez-Gene Id:**  
7066**Background**

Thrombopoietin (TPO) is a 332-amino acid glycoprotein produced by the liver, kidney, marrow stroma, and several other tissues (1). This cytokine is responsible for the regulation of platelet production and promotes both the proliferation of megakaryocyte progenitors and their maturation into platelet-producing megakaryocytes by binding to the thrombopoietin receptor (TPOR, c-Mpl) (2-5). The concentration of TPO in the bloodstream is regulated by the TPOR on platelets and megakaryocytes (6). Binding of TPO to the TPOR induces receptor dimerization that leads to phosphorylation and activation of the tyrosine kinase Jak2 (7). Studies have suggested that TPO may be a useful cytokine for the prevention and treatment of thrombocytopenia in cancer patients and for developing new strategies to therapeutically intervene in hematopoiesis (1,5).

**Endotoxin**

Endotoxin levels are less than or equal to 1 EU / 1 µg hTPO.

**Purity**

A greater than or equal to 90% purity was determined by SDS-PAGE.

**Source / Purification**

Recombinant human TPO was expressed in genetically modified CHO cells and is supplied in a lyophilized form.

**Bioactivity**

The bioactivity of recombinant hTPO was determined in an M-O7e cell proliferation assay. The ED<sub>50</sub> of each lot is less than or equal to 15 ng/ml.

**Background References**

1. Kaushansky, K. (2003) *J Thromb Haemost* 1, 1587-92.
2. Lok, S. et al. (1994) *Nature* 369, 565-8.
3. Kaushansky, K. et al. (1994) *Nature* 369, 568-71.
4. Wendling, F. et al. (1994) *Nature* 369, 571-4.
5. Prow, D. and Vadhan-Raj, S. (1998) *Oncology (Williston Park)* 12, 1597-604, 1607-8; discussion 1611-4.
6. Kato, T. et al. (1998) *Stem Cells* 16, 322-8.
7. Gurney, A.L. and de Sauvage, F.J. (1996) *Stem Cells* 14 Suppl 1, 116-23.

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