

Overview

Synonyms	Thrombopoietin;C-mpl ligand; Megakaryocyte colony-stimulating factor; Megakaryocyte growthand development factor; Myeloproliferative leukemia virus oncogene ligand;THPO
Description	Thrombopoietin (TPO) is a glycoprotein hormone which belongs to the EPO/TPO family. It produced by the liver and kidney which regulates the production of platelets. TPO stimulates the production and differentiation of megakaryocytes, the bone marrow cells that bud off large numbers of platelets. Lineage-specific cytokine affects the proliferation and maturation of megakaryocytes from their committed progenitor cells. It acts at a late stage of megakaryocyte development. It may be the major physiological regulator of circulating platelets. Recombinant Human TPO produced by a mammalian expression system is a polypeptide chain containing 346 amino acids. A fully biologically active molecule; rhTPO a molecular mass of 75-90 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques.
Source	Human Cells
Biological Activity	Measured in a cell proliferation assay using MO7e human megakaryocytic leukemic cells .The ED50 for this effect is typically 0.5-5 ng/mL.
Sequence	Ser ²² -Gly ³⁵³ (Accession #: P40225); expressed with a 6His tag at the N-terminus, 6His tag at the C-terminus. HHHHHHSPAPPACDLRVLVSKLLRDSHVLHSRLSQ CPEVHPLPTPVLLPAVDFSLGEWKTQMEETKAQD ILGAVTLLLEGVMAARGQLGPTCLSSLLGQLSGQ VRLLLGALQSLLTQLPPQGRRTTAHKDPNAIFLS FQHLLRGKVRFLMLVGGSTLCVRRAPPTTAVPSR TSLVLTNLNLPNRTSGLLETNFTASARTTGSGLL KWQQGFRAKIPGLLNQTSRSLDQIPGYLNR IHEL LNGTRGLFPGPSRRTLGA PDISSGTS DGTGSLPPN LQPGYSPSPTHPPTGQYTLFPLPPTLPTPVVQLH PLLDPDSAPTPTPTSPLLNTSYTHSQNLSQEGVD HHHHHH

Properties

Measured Molecular Weight	75-90 kDa; observed by reducing SDS-PAGE.
Purity	> 95% as analyzed by reducing SDS-PAGE.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20mM Tris, 150mM NaCl, pH 8.0.
Reconstitution	Reconstituted in ddH ₂ O at 100 µg/ml.
Endotoxin Level	< 1 EU/µg; determined by LAL method.
Storage	Lyophilized recombinant TPO, His, Human remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution; Human TPO should be stable up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

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