

Recombinant Human THPO, Fc-tagged therapeutic protein(Romiplostim)

Cat. No. THPO-P02H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Recombinant Human endogenous thrombopoietin, Fc-tagged therapeutic protein is a fusion protein analog of thrombopoietin, a hormone that regulates platelet production. It is a thrombopoiesis stimulating dimer Fc-peptide fusion protein (peptibody) to increase platelet production through activation of the thrombopoietin receptor. The peptibody molecule has two identical single-chain subunits, each one is made up of 269 amino acid residues. Each subunit consists of an IgG1 Fc carrier domain that is covalently attached to a polypeptide sequence that contains two binding domains to interact with thrombopoietin receptor c-Mpl. Each domain consists of 14 amino acids. Interestingly, its amino acid sequence is not similar to that of endogenous thrombopoietin. It is produced by recombinant DNA technology in Escherichia coli.

Species Human

Source E.coli

Description

Megakaryocytopoiesis is the cellular development process that leads to platelet production. The main functional protein encoded by this gene is a humoral growth factor that is necessary for megakaryocyte proliferation and maturation, as well as for thrombopoiesis. This protein is the ligand for MLP/C_MPL, the product of myeloproliferative leukemia virus oncogene. Mutations in this gene are the cause of thrombocythemia 1. Alternative promoter usage and differential splicing result in multiple transcript variants differing in the 5' UTR and/or coding region. Multiple AUG codons upstream of the main open reading frame (ORF) have been identified, and

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these upstream AUGs inhibit translation of the main ORF at different extent.

Molecular Mass	59 kDa
AA Sequence	>Thrombopoietin receptor binding domain amino acid sequence IEGPTLRQWLAAR A>Amino acid sequence for Fc fusion compoundMDKTHTCPPCPAPELLGGPSVFLF PPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNST YRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSRD ELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSFFLYSKLTVD KSRWQQGNVFCFSVMHEALHNHYTQKSLSLSPGKGGGGGIEGPTLRQWLAARAG GGGGGGGIEGPTLRQWLAARA
Endotoxin	< 0.1 EU per µg of the protein
Purity	>95%
Alias	ML; TPO; MGDF; MKCSF; MPLLG; THCYT1; Romiplostim

GENE INFORMATION

Gene Name	THPO thrombopoietin [Homo sapiens]
Official Symbol	THPO
Synonyms	ML; TPO; MGDF; MKCSF; MPLLG; THCYT1; MPL ligand; c-mpl ligand; megakaryocyte colony-stimulating factor; megakaryocyte growth and development factor; megakaryocyte stimulating factor; myeloproliferative leukemia virus oncogene ligand; prepro-thrombopoietin
Gene ID	7066

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mRNA Refseq	NM_000460
Protein Refseq	NP_000451
MIM	600044
UniProt ID	P40225
Chromosome Location	3q27.1
Pathway	Cytokine-cytokine receptor interaction, organism-specific biosystem; Hematopoietic cell lineage, organism-specific biosystem; Platelet Aggregation (Plug Formation), organism-specific biosystem
Function	cytokine activity; growth factor activity; interleukin-11 receptor binding; hormone activity

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