

Recombinant Human MPL protein, His & T7-tagged

Cat. No. MPL-7001H Lot. No. (See product label)

SPECIFICATION

Product Overview

Recombinant Human MPL aa. (Ser311~Gln460 (Accession # P40238)) fused with N-terminal His & T7 tag was produced in E. coli cells.

Species

Human

Source

E.coli

ProteinLength

Ser311~Gln460

Description

In 1990 an oncogene, v-mpl, was identified from the murine myeloproliferative leukemia virus that was capable of immortalizing bone marrow hematopoietic cells from different lineages. In 1992 the human homologue, named, c-mpl, was cloned. Sequence data revealed that c-mpl encoded a protein that was homologous with members of the hematopoietic receptor superfamily. Presence of anti-sense oligodeoxynucleotides of c-mpl inhibited megakaryocyte colony formation. The ligand for c-mpl, thrombopoietin, was cloned in 1994. Thrombopoietin was shown to be the major regulator of megakaryocytopoiesis and platelet formation. The protein encoded by the c-mpl gene, CD110, is a 635 amino acid transmembrane domain, with two extracellular cytokine receptor domains and two intracellular cytokine receptor box motifs. TPO-R deficient mice were severely thrombocytopenic, emphasizing the important role of CD110 and thrombopoietin in megakaryocyte and platelet formation. Upon binding of thrombopoietin CD110 is dimerized and the JAK family of non-receptor tyrosine kinases, as well as the STAT family, the MAPK family, the adaptor protein Shc and the receptors themselves become tyrosine phosphorylated.

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Form	Freeze-dried powder
Molecular Mass	Predicted Molecular Mass: 21.4kDa
Endotoxin	<1.0EU per 1ug (determined by the LAL method)
Purity	>95%
Characteristic	The isoelectric point is 8.4.
Applications	SDS-PAGE; WB; ELISA; IP
Stability	The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.
Storage buffer	Supplied as lyophilized form in PBS, pH7.4, containing 5% sucrose, 0.01% sarcosyl.
Reconstitution	Reconstitute in sterile PBS, pH7.2-pH7.4.

GENE INFORMATION

Gene Name	MPL MPL proto-oncogene, thrombopoietin receptor [Homo sapiens (human)]
Official Symbol	MPL
Synonyms	MPL; MPL proto-oncogene, thrombopoietin receptor; MPLV; TPOR; C-MPL; CD110;

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THCYT2; thrombopoietin receptor; TPO-R; myeloproliferative leukemia protein;
myeloproliferative leukemia virus oncogene; proto-oncogene c-Mpl

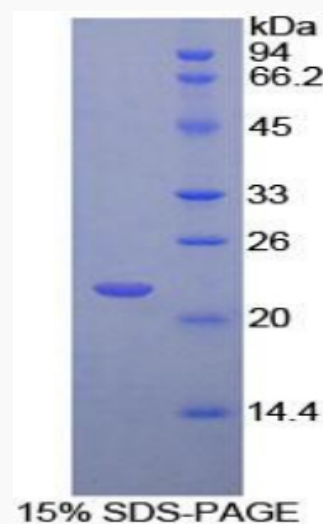
Gene ID 4352

mRNA Refseq NM_005373.2

Protein Refseq NP_005364.1

UniProt ID P40238

SDS-PAGE



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