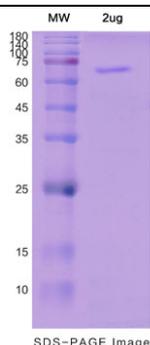


Product Details

Summary

English name	Recombinant Human MPL protein ,C- His Tag
Purity	>90% as determined by SDS-PAGE
Endotoxin level	<1.0 EU per µg of the protein as determined by the LAL method.
Construction	A DNA sequence encoding the human MPL(Met1-Trp491) was fused with the C-terminal His Tag
Accession #	P40238
Host	Mammalian cells
Species	Homo sapiens (Human)
Predicted Molecular Mass	54.01kDa
Formulation	Supplied as solution form in PBS or lyophilized from PBS .
Shipping	In general, proteins are provided as lyophilized powder/frozen liquid. They are shipped out with dry ice/blue ice unless customers require otherwise.
Stability &Storage	Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 °C for one week . Store at -20 to -80 °C for twelve months from the date of receipt.
Reconstitution	Reconstitute in sterile water for a stock solution.A copy of datasheet will be provided with the products, please refer to it for details.

SDS-PAGE image



Background

Background	Thrombopoietin receptor (Tpo R), also known as myeloproliferative leukemia protein (c-mpl), is a 95 kDa type I transmembrane protein that is a member of the
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Recombinant Human MPL protein ,C- His Tag

type I cytokine receptor family within the hematopoietin/cytokine receptor superfamily. The 635 amino acid (aa) full-length human Tpo R contains a 25 aa signal sequence, a 466 aa extracellular domain with a ligand binding domain and two fibronectin type III domains, a transmembrane (TM) domain and a cytoplasmic domain. The extracellular domain of human Tpo R shares 78%, 76%, 81%, 82% and 80% aa identity with mouse, rat, bovine, canine and equine Tpo R, respectively. Humans produce three distinct mRNA species; a P-form, a K-form, and a truncated form (Mpl-tr) lacking a TM domain. The P-form encodes the full-length receptor. The Mpl-tr form, which is expressed in both human and mouse, is intracellular and targets the P-form for degradation. The 579 aa K-form has an alternate cytoplasmic domain, but does not dimerize with, or inhibit, the P-form. Thrombopoietin (Tpo) is a key regulator of megakaryocytopoiesis, thrombopoiesis and hematopoietic stem cell self-renewal, as reflected by expression of the Tpo R on megakaryocytes, platelets and hematopoietic progenitors. Receptor dimerization occurs upon Tpo binding and initiates signaling through the Ras/MAP and JAK/STAT pathways. Internalization and degradation of Tpo following Tpo R binding serves to downregulate circulating Tpo. Tpo R expressed at low levels on endothelial cells does not appear to contribute to regulation of Tpo. Inactivating mutations of Tpo R cause thrombocytopenia, and absence of functional Tpo R is lethal in humans, but not mice. Other mutations, including an activating change in the TM domain, can cause thrombocytosis.

Alternative Names

CD110 antigen; CD110; c-Mpl; MPL; MPLV; Myeloproliferative leukemia protein; myeloproliferative leukemia virus oncogene; Proto-oncogene c-Mpl;

Thrombopoietin R; thrombopoietin receptor; TpoR; TPO-R; TPORMPLV

References

Kaushansky, K. (2005) J. Clin. Invest. 115:3339.

