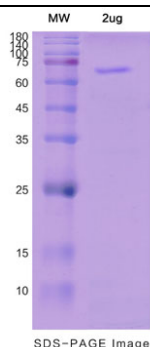


## Product Details

### 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.<br><br>Store at 2 to 8 °C for one week .<br><br>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 |
|------------|--|



## **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.

