

# Product Information

## **MemDX™ Membrane Protein Human MPL (MPL proto-oncogene, thrombopoietin receptor) with GST-tag for Antibody Discovery**

Cat. No.: **MP0703X**

This product is for research use only and is not intended for diagnostic use.

This product is a 97.6 kDa Human MPL membrane protein expressed in *in vitro* wheat germ expression system. The protein is for research use only and is not approved for use in humans or in clinical diagnosis.

### Product Specifications

#### Host Species

Human

#### Target Protein

MPL

#### Protein Length

Full-length

#### Molecular Weight

97.6 kDa

#### TMD

1

#### Sequence

MPSWALFMVTSCLLAPQNLAQVSSQDVSLASDSEPLKCFSRTFEDLTCFWDEEEAAPSGTYQLLYAYPREKPRACPLSSQSMPL

### Product Description

#### Application

Enzyme-linked Immunoabsorbent Assay, Western Blot (Recombinant protein), Antibody Production, Protein Array

#### Expression Systems

*in vitro* wheat germ expression system

#### Tag

GST-tag at N-terminal

#### Form

Liquid

#### Purification

Glutathione Sepharose 4 Fast Flow

**Buffer**

50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer

**Storage**

Store at +4°C for up to one week or several months at -80°C

**Target****Target Protein**

MPL

**Full Name**

MPL proto-oncogene, thrombopoietin receptor

**Introduction**

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

**Alternative Names**

MPLV; TPOR; C-MPL; CD110; THPOR; THCYT2

**Gene ID**

[4352](#)

**UniProt ID**

[P40238](#)