Data Sheet (Cat.No.TMPY-04201)

TargetMol

Thrombopoietin Protein, Human, Recombinant (hFc)

General Information

Synonyms:	MPLLG;MKCSF;THCYT1;thrombopoietin;MGDF;ML;TPO
Protein Construction:	A DNA sequence encoding the human THPO (NP_000451.1) (Met1-Leu192) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Ser 22
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P40225-1
Molecular Weight:	45 kDa (predicted)

QC Testing

Biological Activity:	Recombinant Human TPO/Thrombopoietin Protein, hFc Tag (Cat#TMPY-04201) captured on Protein A chip can bind Recombinant Human TPO-R Protein, His Tag (Cat#TMPY-06797) with an affinity constant of 12.3 nM as determined in an SPR assay (Biacore 8K) (Routinely tested).
Purity:	> 70 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Thrombopoietin (TPO or THPO), also known as myeloproliferative leukemia virus ligand (c-Mpl), is a hematopoietic growth factor belonging to the EPO/TPO family. The thrombopoietin protein is produced mainly by the liver and the kidney that regulates the production of platelets by the bone marrow. Thrombopoietin protein stimulates both proliferation of progenitor megakaryocytes and their maturation to platelet-producing megakaryocytes, and also

accelerates the recovery of platelets. Thrombopoietin protein is involved in cardiovascular disease as it regulates megakaryocyte development and enhances platelet adhesion/aggregation. It has been identified that surface c-MPL, the receptor for thrombopoietin protein, binds to the ligand and mediates the action.

Reference

Ryu T,et al.(2003) Thrombopoietin-producing hepatocellular carcinoma. Intern Med. 42(8): 730-4.
Higashihara M,et al.(2003) Thrombopoietin-producing tumor. Intern Med. 42(8): 632-3?