Data Sheet (Cat.No.TMPY-01609)

TargetMol

Thrombopoietin Protein, Cynomolgus, Recombinant (His)

General Information

Synonyms:	thrombopoietin
Protein Construction:	A DNA sequence encoding the Cynomolgus (Macaca fascicularis) THPO (XP_005546625.1) (Met 1-Gly 353) precursor was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Ser 22
Species:	Cynomolgus
Expression Host:	HEK293 Cells
Accession:	XP_005546625.1
Molecular Weight:	36.8 kDa (predicted); 70-80 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured in a cell proliferation assay using MO7e human megakaryocytic leukemic cells. The ED50 for this effect is typically 4-20 ng/mL.
Purity:	> 86 % 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?