

# Human TPO/Thrombopoietin Protein

Cat. No. TPO-HM102



## Description

<b>Source</b>	Recombinant Human TPO/Thrombopoietin Protein is expressed from HEK293 with His tag at the N-terminus. It contains Ser22-Gly353.
<b>Accession</b>	NP_000451.1
<b>Molecular Weight</b>	The protein has a predicted MW of 36.56 kDa. Due to glycosylation, the protein migrates to 70-100 kDa based on Bis-Tris PAGE result.
<b>Endotoxin</b>	Less than 1EU per µg by the LAL method.
<b>Purity</b>	> 95% as determined by Bis-Tris PAGE > 95% as determined by HPLC

## Formulation and Storage

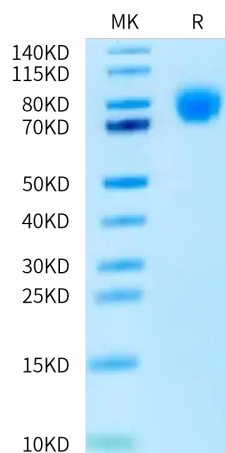
<b>Formulation</b>	Lyophilized from 0.22 µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
<b>Reconstitution</b>	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 µg/ml is recommended. Dissolve the lyophilized protein in distilled water.
<b>Storage</b>	-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

## Background

Thrombopoietin (TPO), the c-Mpl ligand, is produced constitutively in liver and other organs, circulates in the bloodstream, and is delivered to bone marrow, where it stimulates the early development of multiple hematopoietic lineages and megakaryocytopoiesis. The concentration of TPO in blood is regulated by c-Mpl mass on platelets and megakaryocytes.

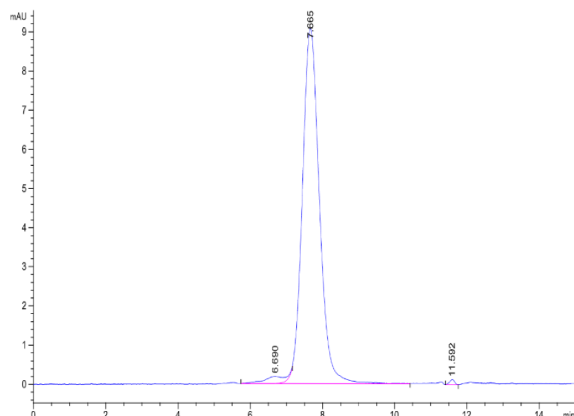
## Assay Data

### Bis-Tris PAGE



Human TPO on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

### SEC-HPLC

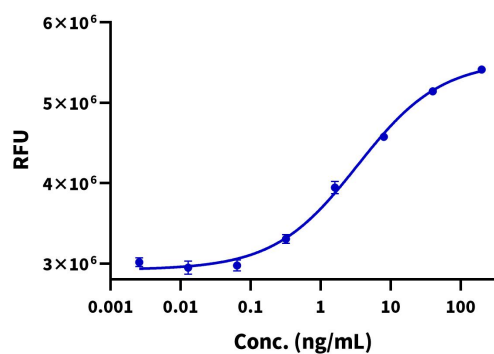


The purity of Human TPO is greater than 95% as determined by SEC-HPLC.

## Assay Data

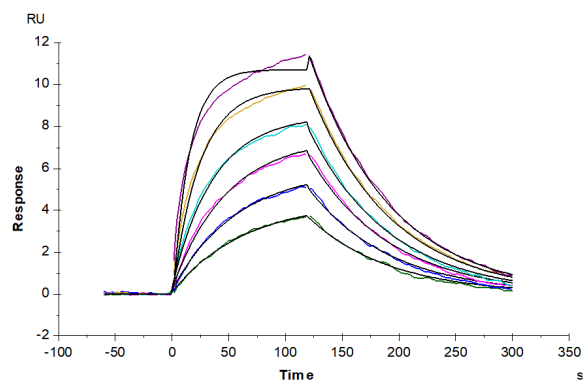
### Cell Based Assay

#### Recombinant Human TPO Bioactivity



Measured in a cell proliferation assay using MO7e human megakaryocytic leukemic cells. The ED50 for this effect is typically 0.5-5 ng/ml (QC Test).

### SPR Data



Human c-MPL, His Tag immobilized on CM5 Chip can bind Human Thrombopoietin, His Tag with an affinity constant of 25.54 nM as determined in SPR assay (Biacore T200).