Technical Data Sheet

Recombinant human/mouse TPO protein

bioxcell.com

Attention: Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at https://bioxcell.com/terms-and-conditions.

Lot Specific Information

Lot Number: **Lot Specific***

Total Protein: **Lot Specific***

*This information will be noted on the certificate of analysis that ships with this product.

Shelf Life

This product has a guaranteed shelf-life of one year from the date of customer receipt when stored as recommended.

Product Information

Catalog Number:	**RP090**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Differentiation of myeloid progenitors into erythrocytes and megakaryocytes Differentiation of stem cells into erythrocytes and megakaryocytes Maintenance and differentiation of hematopoietic stem cells
Formulation:	Lyophilized, white powder
Endotoxin:	≤0.5 EU/mg, LAL assay
Purity:	≥95%; SDS-PAGE
Reconstitution:	Resuspend in 10 mM HCl (Reconstitution Buffer A) at >50 µg/ml. Once reconstituted, store in single-use aliquots to avoid freeze-thaw cycles. Store reconstituted protein at -20 °C to -80 °C for a maximum of 12 months or until the expiry date if sooner.
Sterility:	Sterile
Production:	Microbial. Expressed in E. coli
Molecular Weight:	16 kDa (monomer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human/mouse TPO protein (thrombopoietin) is a class I hematopoietic cytokine of 355 amino acids, the first 155 of which are homologous to erythropoietin (EPO), that binds its receptor Mpl, expressed primarily on megakaryocytes and platelets, to regulate megakaryocyte proliferation and maturation and platelet production. TPO binding induces Mpl dimerization and JAK2 phosphorylation, activating STAT, MAPK and PI3K signaling. TPO is synthesized primarily and constitutively in the liver, and also in the kidney, spleen and bone marrow, and unlike EPO its production is not linked to anemia. Reduced platelet production causes thrombocytopenia, a common hematological disorder and frequent side effect of cancer treatment, and recombinant TPO has been investigated as a treatment shown to increase platelet counts. In culture, TPO supports ex vivo expansion of hematopoietic stem cells (HSCs) in combination with Flt3L and SCF and, in synergy with SCF and IL-3, increases the number of erythroid and myeloid progenitors, making it a key reagent for hematopoietic stem cell research and therapeutic development. This protein is optimized for in vivo and functional applications: low-endotoxin, tag-free, and carrier-free, supporting reproducible performance in demanding preclinical and bioactivity studies. A GMP-grade version of this protein is available for cell and gene therapy manufacturing. Contact us at customerservice@bioxcell.com for details. Species reactivity: human. Species similarity: mouse - 92%, rat - 91%, bovine - 85%, porcine - 91%.

Storage

Store at the stock concentration at 4°C . **Do not freeze.**

It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at

https://bioxcell.com/faqs.

Store lyophilized protein between -20 °C and -80 °C until the date of expiry. Avoid freeze-thaw cycles

Bio X Cell, LLC
https://bioxcell.com
+1-866-787-3444
customerservice@bioxcell.com

Conditions: For research use only. Not for use in diagnostic or therapeutic procedures.
Not for resale.
Bio X Cell, Bio X Cell logo, and all other trademarks are the property of Bio X Cell, LLC © Bio X Cell, LLC