

Recombinant human TPO protein (Qk098)



Type: Stem cells

Available for purchase: unit size (µg): 25, 50, 100, 500, 1000

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Product Information

Thrombopoietin (TPO) is a cytokine which stimulates the production and differentiation of megakaryocytes, regulating platelet production. Recombinant TPO can be used to support the self-renewal and maintenance of [hematopoietic stem cells](#).

Qkine TPO is a 16 kDa protein, [animal origin-free](#), tag-free and carrier-free it has been manufactured to be highly pure and bioactive for reproducible hematopoietic stem cell culture.

Qkine TPO is also available as [cell therapy grade](#) with extended quality testing and documentation - [Qk098-CTG](#)

Alternative protein names

Thyroid Peroxidase, TPX, Thyroid Microsomal Antigen, Thyroperoxidase, TDH2A, Thrombopoietin, THPO, MPL ligand, megakaryocyte colony-stimulating factor, MGDF, Qk98

Molecular weight

16 kDa (monomer)

Protein Uniprot number

High purity human protein (Uniprot: P40225)

Species reactivity

- human

- species similarity:
- mouse - 92%
- rat - 91%
- bovine - 85%
- porcine - 91%

Product Information

- >98%, by SDS-PAGE quantitative densitometry
- Expressed in *E. coli*
- Animal origin-free (AOF) and carrier protein-free
- Manufactured in our Cambridge, UK laboratories
- Lyophilized from acetonitrile, TFA

Reconstitution instructions

- Resuspend in 10 mM HCl (Reconstitution solution A) at >50 µg/ml

Featured applications

- Differentiation of myeloid progenitors into erythrocytes and megakaryocytes
- Differentiation of stem cells into erythrocytes and megakaryocytes
- Maintenance and differentiation of hematopoietic stem cells

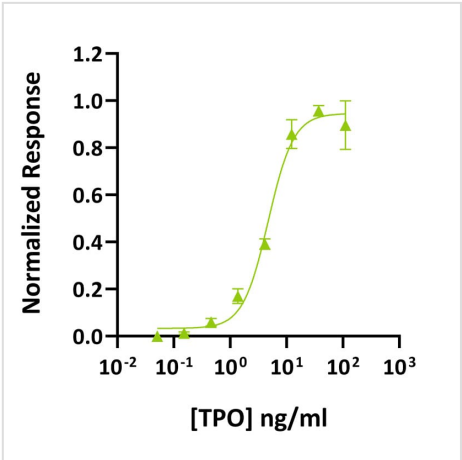
Further quality assays

- Mass spectrometry: single species with expected mass
- Recovery from stock vial: >95%
- Endotoxin: <0.05 EU/µg protein

Scientific Information

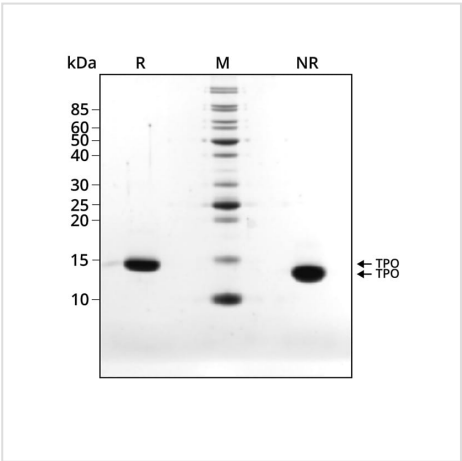
Bioactivity

Recombinant TPO activity was determined using a Promega serum response element luciferase reporter assay in HEK293T cells co-transfected with TPOR. Cells were treated in triplicate with a serial dilution of TPO for 3 hours. Firefly activity was measured and normalized to the control Renilla luciferase activity. Data from Qk098 lot 204752. EC50 = 4.72 ng/ml (0.30 pM).



Purity

Recombinant TPO migrates at approximately 14 kDa (monomer) in reduced (R) and non-reduced (NR) conditions. No contaminating protein bands are present. The purified recombinant protein (3 µg) was resolved using 15% w/v SDS-PAGE in reduced (+β-mercaptoethanol, R) and non-reduced (NR) conditions and stained with Coomassie Brilliant Blue R250. Data from Qk098 lot #204752.



Original product page: <https://qkine.com/product/recombinant-human-tpo-protein-qk098/>

PDF generated: 21 June 2026

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