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Human Recombinant EPO (HEK293-expressed)

Erythropoietin, Fc tag

Catalog #100-1716	100 µg
Catalog #100-1717	1000 µg

Product Description

Erythropoietin (EPO) is a glycoprotein growth factor that is produced primarily in the kidney in response to hypoxia or anemia. It is the principal physiological regulator of erythropoiesis. EPO promotes erythropoiesis by binding to a homodimeric cell surface receptor that activates JAK2/STAT5, PI3K/AKT, and MAPK pathways, and stimulates the proliferation and differentiation of erythroid progenitor cells (Jelkmann; Kuhrt & Wojchowski). At the carboxy terminus, Human Recombinant EPO (HEK293-expressed) contains a human IgG1 Fc tag.

Product Information

Alternative Names:	Epoetin, Erythropoietin, EP
Accession Number:	P01588
Amino Acid Sequence:	APPRLICDSR VLERYLLEAK EAENITTGCA EHCSLNENIT VPDTKVNFYA WKRMEVGQQA VEVWQGLALL SEAVLRGQAL LVNSSQPWEP LQLHVDKAVS GLRSLTTLLR ALGAQKEAIS PPDAASAAPL RTITADTFRK LFRVYSNFLR GKLKLYTGEA CRTGDRADDD DKEPKSSDKT HTCPPCPAPE LLGGPSVFLF PPKPKDTLMI SRTPEVTCVV VDVSHEDPEV KFNWYVDGVE VHNAKTKPRE EQYNSTYRVV SVLTVLHQDW LNGKEYKCKV SNKALPAPIE KTISKAKGQP REPQVYTLPP SRDELTKNQV SLTCLVKGFY PSDIAVEWES NGQPENNYKT TPPVLDSDGS FFLYSKLTVD KSRWQQGNVF SCSVMHEALH NHYTQKSLSL SPGK
Predicted Molecular Mass:	45.1 kDa
Species:	Human
Product Formulation:	Lyophilized from sterile phosphate-buffered saline, pH 7.4, 5% Trehalose, 5% Mannitol, 0.01% Tween®-80.
Source:	HEK293
Purity:	≥ 92%

Specifications

Activity:	The specific activity is ≥ 1 × 10^5 units/mg (EC50 ≤ 8 ng/mL), as determined by a cell proliferation assay using human TF-1 cells.
Endotoxin Level:	Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 10 EU/mg protein.

Preparation and Storage

Stability and Storage: Store at -20 to -80°C. Stable as supplied for 12 months from date of receipt.

Preparation: Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.25 mg/mL by pipetting the solution down the sides of the vial. Do not vortex.
As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months.
Avoid repeated freeze-thaw cycles.

Data

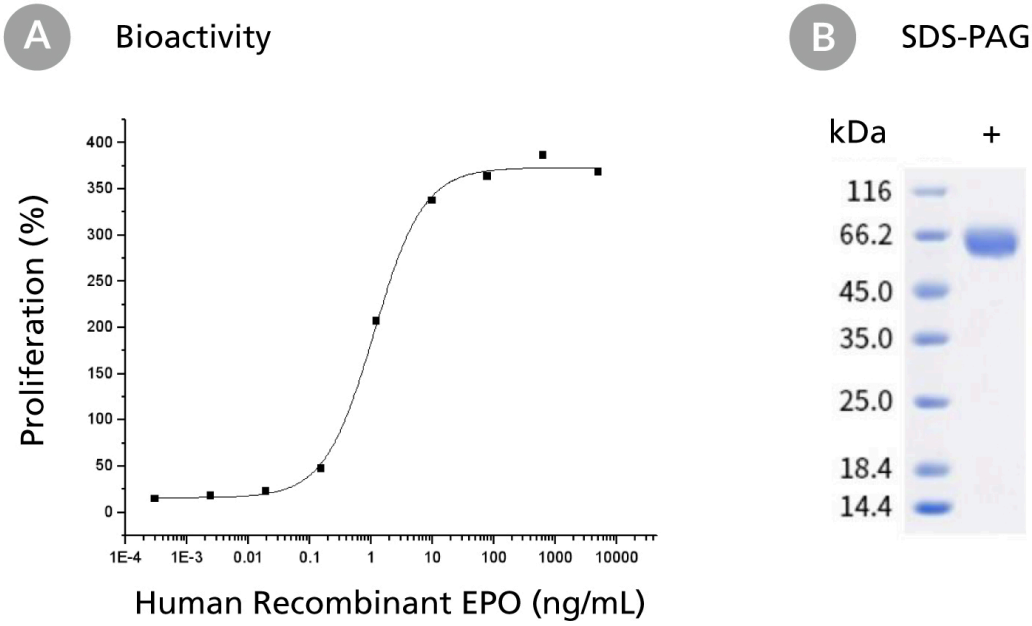

Figure 1. Biological Activity and Molecular Mass of Human Recombinant EPO (HEK293-expressed)

(A) The biological activity of Human Recombinant EPO (HEK293-expressed) was tested by its ability to promote the proliferation of TF-1 cells. The EC50 is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC50 in the above example is ≤ 8 ng/mL. (B) Human Recombinant EPO (HEK293-expressed) was resolved with SDS-PAGE under reducing conditions. Human Recombinant EPO has a predicted molecular mass of 45.1 kDa. The recombinant protein migrates with an apparent molecular mass of 60 - 65 kDa.

Related Products

For a complete list of cytokines or peptide pools, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

Jelkmann W. (2013) Physiology and pharmacology of erythropoietin. Transfus Med Hemother 40(5): 302–9.

Kuhrt D & Wojchowski DM. (2015) Emerging EPO and EPO receptor regulators and signal transducers. Blood 125(23): 3536–41.