

EPO/Erythropoietin Protein, Human, Recombinant

General Information

Synonyms:	EPO;MVCD2;Epoetin;Erythropoietin;EP
Protein Construction:	Ala28-Arg193
Species:	Human
Expression Host:	HEK293 Cells
Accession:	G9JKG7
Molecular Weight:	18.39 kDa (predicted). Due to glycosylation, the protein migrates to 35-45 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Immobilized Human EPO, No Tag at 1 µg/mL (100 µL/well) on the plate. Dose response curve for Human EPO R, hFc Tag with the EC50 of 29.7 ng/mL determined by ELISA. Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED50 for this effect is 0.4 - 1 ng/mL (QC Test).
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
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, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:	Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.
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. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Erythropoietin (EPO) is a circulating hormone conventionally considered to be responsible for erythropoiesis. In addition to facilitating red blood cell production, EPO has pluripotent potential, such as for cognition improvement, neurogenesis, and anti-fibrotic, anti-apoptotic, anti-oxidative, and anti-inflammatory effects.

Reference

Lin TY, et al. The Latest Evidence of Erythropoietin in the Treatment of Glaucoma. Int J Mol Sci. 2022 Dec 16;23(24): 16038. doi: 10.3390/ijms232416038. PMID: 36555679; PMCID: PMC9784015.

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