

EPO/Erythropoietin Protein, Human, Recombinant (CHO)

General Information

Synonyms:	EPO;EPO-alpha;EPO alpha
Protein Construction:	Ala28-Arg193
Species:	Human
Expression Host:	CHO Cells
Accession:	P01588
Molecular Weight:	21 kDa (Predicted); 26-36 kDa (Reducing conditions)

QC Testing

Biological Activity:	ED 50 < 1.0 ng/ml, measured in a cell proliferation assay using TF-1 human erythroleukemic cells, corresponding to a specific activity of > 1.0 × 10 ⁶ units/mg
Purity:	> 95% as determined by SDS-PAGE; > 95% as determined by HPLC
Endotoxin:	< 0.2 EU/μg of protein as determined by the LAL method.
Formulation:	Lyophilized from a 0.2 μm filtered solution in PBS.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized 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:

Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Erythropoietin (EPO), a glycoprotein produced primarily by the kidney, is the principal factor that regulates erythropoiesis by stimulating the proliferation and differentiation of erythroid progenitor cells. The production of EPO by kidney cells is increased in response to hypoxia or anemia. Recombinant EPO has been approved for the treatment of anemia associated with chronic renal failure as well as for anemia of AZT treated AIDS patients. The cDNAs for EPO have been cloned from human, mouse, canine, etc. The mature proteins from the various species are highly conserved, exhibiting greater than 80% sequence identity at the amino acid level. Human EPO cDNA encodes a 193 amino acid residue precursor protein that is processed to yield a 165 amino acid residue mature

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protein. EPO contains one O-linked and three N-linked glycosylation sites. Glycosylation of EPO is required for EPO biological activities in vivo. EPO exhibits structural as well as amino sequence identity to the amino terminal 153 amino acid region of thrombopoietin.

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