

Recombinant Human Erythropoietin

#R00607

Size: 5 µg/100 µg/500 µg

Stability & Storage

Please use a manual defrost freezer and avoid repeated freeze-thaw cycles.

-Lyophilized protein should be stored at ≤ -20°C, stable for 12 months after receipt.

-Reconstituted protein solution can be stored at 2-8°C for 1-2 weeks.

-Aliquots of reconstituted samples are stable at ≤ -20°C for 3 months.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Human Erythropoietin (EPO) is also known as EP, erythropoetin or erthropoyetin, and is a glycoprotein hormone that controls erythropoiesis, or red blood cell production. EPO is a cytokine for erythrocyte (red blood cell) precursors in the bone marrow. is synthesized by renal peritubular cells in adults, with a small amount being produced in the liver. Regulation is believed to rely on a feed-back mechanism measuring blood oxygenation. Constitutively synthesized transcription factors for EPO, known as hypoxia-inducible factors (HIFs), are hydroxylated and proteosomally digested in the presence of oxygen. It binds to the erythropoietin receptor (EpoR) on the red cell surface and activates a JAK2 cascade. Erythropoietin has its primary effect on red blood cells by promoting red blood cell survival through protecting these cells from apoptosis. It also cooperates with various growth factors involved in the development of precursor red cells. EPO has a range of

actions including vasoconstriction-dependent hypertension, stimulating angiogenesis, and inducing proliferation of smooth muscle fibers. It has also been shown that erythropoietin can increase iron absorption by suppressing the hormone hepcidin. Erythropoietin has been shown to interact with the Erythropoietin receptor as its mechanism of action within the body. erythropoietin plays an important role in the brain's response to neuronal injury. EPO is also involved in the wound healing process.

AA Sequence

Ala 28 - Asp 192, Accession # P01588

Reconstitution

Always centrifuge tubes before opening. Do not mix by vortex or pipetting. Reconstitute in sterile distilled water to a concentration of 0.1-1.0 mg/mL. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

Product Specification

Species	Human
Source	CHO Cells
Molecular Weight	Recombinant Human EPO Protein, a monomer, containing 165 amino acid residues, has a predicted molecular mass of approximately 18.2 kDa. As a result of glycosylation, the recombinant protein migrates with an apparent molecular mass ranging from 31 to 41 kDa in SDS-PAGE under reducing conditions.
Purity	> 95% by SDS-PAGE gel and HPLC analyses.
Biological Activity	Determined by a cell proliferation assay using TF-1 cells. The expected ED ₅₀ for this effect is

	0.8-1.0 ng/ml.
Formulation	Lyophilized from a 0.22 µm filtered solution of in PBS. See CoA for details.
Endotoxin	Less than 0.1 EU/µg of rHuEPO as determined by LAL test.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.
