Erythropoietin/EPO Protein, Human (CHO)

Cat. No.:	HY-P7164
Synonyms:	rHuEPO; Epoetin; EPO
Species:	Human
Source:	CHO
Accession:	P01588 (A28-R193)
Gene ID:	2056
Molecular Weight:	The protein migrates as an approximately 26-38 kDa band under reducing SDS-PAGE due to glycosylation.

PROPERTIES

AA Sequence	A P P R L I C D S R V L E R Y L L E A K E A E N I T T G C A E H C S L N E N I T V P D T K V N F Y A W K R M E V G Q Q A V E V W Q G L A L L S E A V L R G Q A L L V N S S Q P W E P L Q L H V D K A V S G L R S L T T L L R A L G A Q K E A I S P P D A A S A A P L R T I T A D T F R K L F R V Y S N F L R G K L K L Y T G E A C R T G D R
Biological Activity	The ED_{50} is ≤2.299 ng/mL as measured in a cell proliferation assay using TF-1 human erythroleukemic cells, corresponding to a specific activity of ≥4.350× 10^5 units/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<0.2 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Erythropoietin (EPO), originally identified for its critical hormonal role in promoting erythrocyte survival and differentiation,

is a member of the large and diverse cytokine superfamily. EPO and EPOR function as the primary mediators of a general protective response to tissue hypoxia, which acts to maintain adequate tissue oxygenation through adjustments of circulating red cell mass by using a hormonal feedback-control system involving the kidney and the bone marrow. EPO and EPORs are also expressed by other tissues and organs, including the brain and heart. EPO has also been shown to stimulate mitosis and signaling in astrocytes, endothelial cells, cardiomyoblasts, and cardiomyocytes maintained in vitro[1].

REFERENCES

[1]. Calvillo L, et al. Recombinant human erythropoietin protects the myocardium from ischemia-reperfusion injury and promotes beneficial remodeling. Proc Natl Acad Sci U S A. 2003 Apr 15;100(8):4802-6.

Caution: Product has not been fully validated for medical applications. For research use only.

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