

Active Recombinant Human EPO Protein (166 aa)

Cat. No. EPO-289E Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human EPO Protein without tag was expressed in CHO.
Species	Human
Source	CHO
ProteinLength	166
Description	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 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.
Form	Sterile Filtered White lyophilized (freeze-dried) powder.
Bio-activity	ED50< 1 ng/mL, measured in a cell proliferation assay using TF-1 human

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	erythroleukemic cells, corresponding to a specific activity of $>1 \times 10^6$ units/mg
Molecular Mass	Mature human EPO, containing 166 amino acid residues, has a predicted molecular mass of approximately 21 kDa. As a result of glycosylation, the recombinant protein migrates with an apparent molecular mass of 26-36 kDa in SDS-PAGE.
AA Sequence	APPRLICDSRVLERYLLEAKEAEENITGCAEHCSLNENITVPDTKVNIFYAWKRMEVG QQAVEVWQGLALLSEAVLRGQALLVNSSQPWEPLQLHVDKAVSGLRSLTLLRALG AQKEAISPPDAASAAPLRITADTFRKLFRVYSNFLRGKCLKLYTGEACRTGDR
Endotoxin	< 0.2 EU/μg, determined by LAL method.
Purity	> 95% as analyzed by SDS-PAGE and HPLC.
Storage	Lyophilized recombinant human EPO remains stable up to 6 months at -80 centigrade from date of receipt. Upon reconstitution, rhEPO should be stable up to 1 week at 4 centigrade or up to 2 months at -20 centigrade.
Storage Buffer	Lyophilized after extensive dialysis against PBS.
Reconstitution	Reconstituted in ddH ₂ O or PBS at 100 μg/mL.

GENE INFORMATION

Gene Name	EPO erythropoietin [Homo sapiens]
Official Symbol	EPO
Synonyms	EPO; erythropoietin; EP; epoetin; MVCD2; MGC138142;
Gene ID	2056

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mRNA Refseq	NM_000799
Protein Refseq	NP_000790
MIM	133170
UniProt ID	P01588

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