Datasheet for ABIN7505129

EPO Protein (AA 28-193) (His tag)

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Overview

Quantity:	100 µg
Target:	EPO
Protein Characteristics:	AA 28-193
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Purification tag / Conjugate:	This EPO protein is labelled with His tag.

Product Details

Sequence:	Ala 28-Arg 193
Characteristics:	A DNA sequence encoding the Human EPO protein (P01588) (Ala 28-Arg 193) was expressed with a C-His tag.
Purity:	> 95 % as determined by reducing SDS-PAGE.

Target Details

Target:	EPO
Alternative Name:	EPO (EPO Products)
Target Type:	Hormone
Background:	Abbreviation: EPO Target Synonym: Epoetin,EPO,Erythropoietin Background: Erythropoietin (EPO) is a 34 kDa glycoprotein hormone in the type I cytokine family

Target Details

	and is related to thrombopoietin. Its three N-glycosylation sites, four alpha helices, and N- to C-terminal disulfide bond are conserved across species. Glycosylation of the EPO protein is required for biological activities in vivo. The mature human EPO protein shares 75 % - 84 % amino acid sequence identity with bovine, canine, equine, feline, mouse, ovine, porcine, and rat EPO. EPO is primarily produced in the kidney by a population of fibroblast-like cortical interstitial cells adjacent to the proximal tubules. It is also produced in much lower, but functionally significant amounts by fetal hepatocytes and in adult liver and brain. EPO promotes erythrocyte formation by preventing the apoptosis of early erythroid precursors which express the erythropoietin receptor (EPO R). EPO R has also been described in brain, retina, heart, skeletal muscle, kidney, endothelial cells, and a variety of tumor cells. Ligand induced dimerization of EPO R triggers JAK2-mediated signaling pathways followed by receptor/ligand endocytosis and degradation. Rapid regulation of circulating EPO allows tight control of erythrocyte production and hemoglobin concentrations. Anemia or other causes of low tissue oxygen tension induce erythropoietin production by stabilizing the hypoxia-induceable transcription factors HIF-1 alpha and HIF-2 alpha. EPO additionally plays a tissue-protective role in ischemia by blocking apoptosis and inducing angiogenesis.
Molecular Weight:	Calculated MW: 18.15 kDa Observed MW: 20 kDa
UniProt:	P01588
Pathways:	JAK-STAT Signaling, Hormone Activity, Negative Regulation of intrinsic apoptotic Signaling, Negative Regulation of Transporter Activity

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Buffer:	Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization.
Storage:	4 °C,-20 °C,-80 °C
Storage Comment:	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted

Handling

	samples are stable at < -20°C for 3 months.
Expiry Date:	12 months

