Recombinant mouse EPO

Catalog No: #AG0045

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Description

Product Name	Recombinant mouse EPO
Host Species	HEK293
Purification	> 95% by Tris-Bis PAGE;> 95% by SEC-HPLC
Immunogen Description	Ala27-Arg192
Target Name	EPO
Other Names	ECYT5; EP; EPO; epoetin; Erythropoietin; MGC138142; MVCD2
Accession No.	Uniprot:P07321Gene ID:13856
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GeneID	13856
Target Species	mouse
Calculated MW	18.6 KDa
Tag Info	addtional amino acid free
Formulation	0.22 μm filtered solution of PBS, pH 7.4.
Storage	Aliquot and store at -80°C. Avoid repeated freeze/thaw cycles.

Background

Erythropoietin (EPO) is a 34 kDa glycoprotein hormone in the type I cytokine family and is related to thrombopoietin (1). Its three N-glycosylation sites, four alpha helices, and N- to C-terminal disulfide bond are conserved across species (2, 3). Glycosylation of (EPO is required for biological activities in vivo (4). Mature mouse (EPO shares 95% amino acid sequence identity with rat (EPO and 73%-82% with bovine, canine, equine, feline, human, ovine, and porcine EPO. Epo is primarily produced in the kidney by a population of fibroblast-like cortical interstitial cells adjacent to the proximal tubules (5). It is also produced in much lower, but functionally significant amounts by fetal hepatocytes and in adult liver and brain (6-8). (EPO promotes erythrocyte formation by preventing the apoptosis of early erythroid precursors which express the (EPO receptor (EPO R) (8, 9). (EPO R has also been described in brain, retina, heart, skeletal muscle, kidney, endothelial cells, and a variety of tumor cells (7, 8, 10, 11). Ligand induced dimerization of (EPO R triggers JAK2-mediated signaling pathways followed by receptor/ligand endocytosis and degradation (1, 12). Rapid regulation of circulating (EPO allows tight control of erythrocyte production and hemoglobin concentrations. Anemia or other causes of low tissue oxygen tension induce (EPO production by stabilizing the hypoxia-induceable transcription factors HIF-1 alpha and HIF-2 alpha (1, 6). (EPO additionally plays a tissue-protective role in ischemia by blocking apoptosis and inducing angiogenesis (7, 8, 13).

Note: This product is for in vitro research use only