Erythropoietin Protein, Cynomolgus (HEK293, His)

Cat. No.:	HY-P75222
Synonyms:	ECYT5; EP; EPO; epoetin; Erythropoietin; MVCD2
Species:	Cynomolgus
Source:	HEK293
Accession:	XP_005549312.1 (A28-R192)
Gene ID:	101925524
Molecular Weight:	Approximately 19.7 kDa

PROPERTIES

AA Sequence	APPRLICDSR VLERYLLEAK EAENVTMGCS ESCSLNENIT VPDTKVNFYA WKRMEVGQQA VEVWQGLALL SEAVLRGQAV LANSSQPFEP LQLHMDKAIS GLRSITTLLR ALGAQEAISL PDAASAAPLR TITADTFCKL FRVYSNFLRG KLKLYTGEAC RRGDR
Biological Activity	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells and the ED_{50} is typically 1-5 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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) is a glycoprotein cytokine secreted mainly by the kidneys in response to cellular hypoxia. EPO plays a crucial role in regulating the growth and maturation of red blood cells, as well as maintaining the appropriate balance of circulating erythrocytes in the body. When EPO binds to its receptor (EPOR), it triggers EPOR dimerization, which in turn activates JAK2, initiating a cascade of events that involve specific downstream effectors such as STAT1 and STAT3. These molecular pathways are essential for ensuring the proper proliferation and differentiation of erythrocytes, as well as

maintaining the optimal level of red blood cells in circulation. In addition, EPO has a range of actions beyond stimulation of erythropoiesis, including vasoconstriction-dependent hypertension, stimulating angiogenesis, and promoting cell survival via activation of EPO receptors resulting in anti-apoptotic effects on ischemic tissues[1].

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