

RP01775

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Recombinant Mouse Erythropoietin/EPO Protein

Catalog No.: RP01775 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Mouse	13856	P07321

Tags

Avi His Tag

Synonyms

Erythropoietin EPO

Product Information

Source Purification

HEK293 cells

Endotoxin

<0.001EU/μg

Formulation

Lyophilized from a 0.22 μm filtered solution of 20 mM NaAc pH 4.5

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

Erythropoietin is a member of the EPO / TPO family. It is a secreted, glycosylated cytokine composed of four alpha helical bundles. Erythropoietin can be found in the plasma and regulates red cell production by promoting erythroid differentiation and initiating hemoglobin synthesis. It also has neuroprotective activity against a variety of potential brain injuries and antiapoptotic functions in several tissue types.

Erythropoietin is the principal hormone involved in the regulation of erythrocyte differentiation and the maintenance of a physiological level of circulating erythrocyte mass. It is produced by kidney or liver of adult mammals and by liver of fetal or neonatal mammals. Genetic variation in erythropoietin is associated with susceptibility to microvascular complications of diabetes type 2. These are pathological conditions that develop in numerous tissues and organs as a consequence of diabetes mellitus. They include diabetic retinopathy, diabetic nephropathy leading to end-stage renal disease, and diabetic neuropathy. Diabetic retinopathy remains the major cause of new-onset blindness among diabetic adults. It is characterized by vascular permeability and increased tissue ischemia and angiogenesis. It has a longer circulating half-life in vivo. Erythropoietin is being much misused as a performance-enhancing drug in endurance athletes.

Basic Information

Description

Recombinant Mouse Erythropoietin/EPO Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Ala27-Arg192) of mouse Erythropoietin/EPO (Accession #) fused with a 6×His tag and Avi at the C-terminus.

Bio-Activity

Recombinant Mouse EPO stimulates cell proliferation of the TF-1 human erythroleukemic cells. The ED50 for this effect is 4.3-17.3 ng/mL corresponding to a specific activity of 5.78×10⁴-2.33×10⁵ units/mg.

Storage

Store the lyophilized protein at -20°C to -80°C for 12 months. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

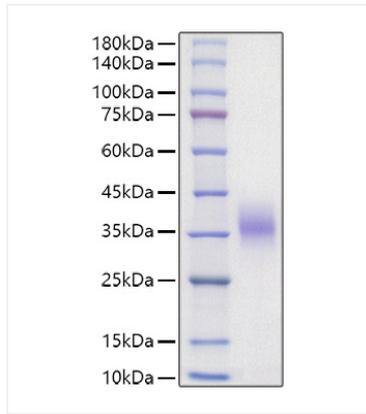
Avoid repeated freeze/thaw cycles.

Contact

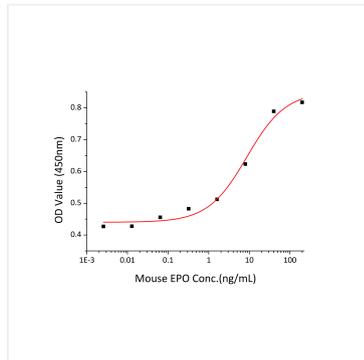


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Validation Data



Recombinant Mouse Erythropoietin/EPO Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 30-35 kDa.



Recombinant Mouse EPO stimulates cell proliferation of the TF-1 human erythroleukemic cells. The ED₅₀ for this effect is 4.3-17.3 ng/mL, corresponding to a specific activity of 5.78×10^4 - 2.33×10^5 units/mg.