# Recombinant Mouse Erythropoietin/EPO Protein

**Catalog No.: RP01775**

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## Sequence Information

**Species**
Mouse

**Gene ID**
13856

**Swiss Prot**
P07321

**Tags**
C-Avi&6His

**Synonyms**
Erythropoietin; EPO

## Product Information

**Source**
HEK293 cells

**Purification**
≥ 95 % as determined by SDS-PAGE.

**Calculated MW**
21.25 kDa

**Observed MW**
35-40 kDa

**Endotoxin**
< 0.1 EU/μg of the protein by LAL method.

**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 stablizer (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 susceptbility 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.

**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 5.78×104-2.33×105units/mg.

**Shipping**
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

**Storage**
Store at -20℃

**Operational Notes**
For your safety and health, please wear a lab coat and disposable gloves for handling.

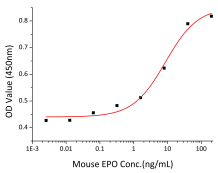
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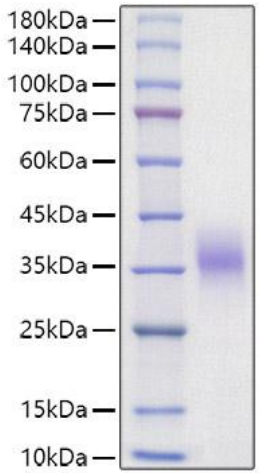


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## Validation Data




Recombinant Mouse EPO stimulates cell proliferation of the TF-1 human erythroleukemic cells. The $ED_{50}$ for this effect is 4.3-17.3 ng/mL.corresponding to a specific activity of $5.78\times10^4$-$2.33\times10^5$units/mg.




Recombinant Mouse Erythropoietin/EPO Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.