Mouse Erythropoietin / EPO Protein

Catalog Number: **51099-MNAH**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

EPO

Protein Construction:

A DNA sequence encoding the mouse Epo (NP_031968.1) (Met1-Arg192) was expressed.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE.

Bio Activity:

Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED_{50} for this effect is typically 2-10 ng/mL.

Endotoxin:

< 1.0 EU per μg protein as determined by the LAL method.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Ala 27

Molecular Mass:

The recombinant mouse Epo consists 166 amino acids and predicts a molecular mass of 18.6 kDa.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

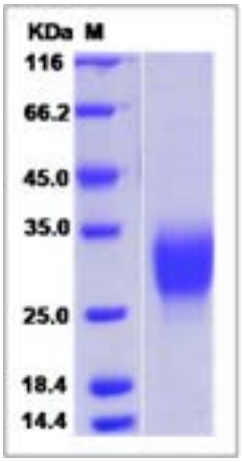
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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.

References

1.Jelkmann W, *et al.* (2007) Erythropoietin after a century of research: younger than ever. Eur J Haematol. 78 (3):183-205. 2.Miyake T, *et al.* (1997) Purification of human erythropoietin. J Biol Chem. 252(15):5558-64. 3.Haroon ZA, *et al.* (2003) A novel role for erythropoietin during fibrin-induced wound-healing response. Am J Pathol. 163(3):993-1000.