Human EPO Receptor / EPOR Protein (ECD, His Tag)

Catalog Number: 10707-H08H

General Information

Gene Name Synonym:

EPO-R

Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Pro 250) of human erythropoietin receptor (NP_000112.1) precursor was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 98 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to inhibit EPO-dependent proliferation of TF-1 human erythroleukemic cells. The ED_{50} for this effect is typically 15-60 ng/mL in the presence of 0.1 U/mL Recombinant Human EPO.

Endotoxin:

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

Predicted N terminal: Ala 25

Molecular Mass:

The secreted recombinant human EPOR consists of 237 amino acids and has a predicted molecular mass of 26.3 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhEPOR is approximately 34 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, 0.05% CHAPS, 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

Stability & Storage:
Samples are stable for twelve months from date of receipt at -20℃ to -80℃.

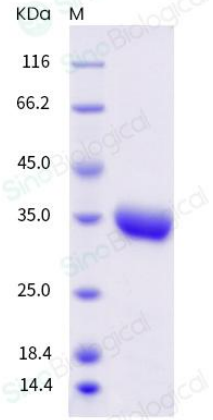
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Erythropoietin (EPO) is the major glycoprotein hormone regulator of mammalian erythropoiesis, and is produced by kidney and liver in an oxygen-dependent manner. The biological effects of EPO are mediated by the specific erythropoietin receptor (EPOR/EPO Receptor) on bone marrow erythroblasts, which transmits signals important for both proliferation and differentiation along the erythroid lineage. EPOR protein is a type â… single-transmembrane cytokine receptor, and belongs to the homodimerizing subclass which functions as ligand-induced or ligand-stabilized homodimers. EPOR signaling prevents neuronal death and ischemic injury. Recent studies have shown that EPO and EPOR protein may be involved in carcinogenesis, angiogenesis, and invasion.

References

1.Divoky V, *et al.* (2002) Mouse surviving solely on human erythropoietin receptor (EpoR): model of human EpoR-linked disease. Blood 99(10): 3873-4. 2.Carruthers SG. (2009) A truncated erythropoietin receptor EPOR-T is associated with hypertension susceptibility. Clin Pharmacol Ther. 86(2): 134-6. 3.Baltaziak M, *et al.* (2009) Relationships of P53 and Bak with EPO and EPOR in human colorectal cancer. Anticancer Res. 29(10):4151-6.