Data Sheet (Cat.No.TMPY-01224)

TargetMol

EPOR Protein, Mouse, Recombinant (His)

General Information

Synonyms: erythropoietin receptor

Protein Construction: A DNA sequence encoding the extracellular domain of mouse EPOR (NP_034279.3) (Met 1-Pro 249) was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Ala 25

Species: Mouse

Expression Host: HEK293 Cells

Accession: P14753-1

Molecular Weight: 26.2 kDa (predicted); 30-35 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity: 1. Measured by its ability to inhibit EPO-dependent proliferation of TF-1 human erythroleukemic cells. The ED50 for this effect is typically 0.1-0.5 μg/mL in the presence of 16 ng/mL Recombinant mouse EPO.
2. Measured by its binding ability in a functional ELISA.3. Immobilized mouse EPOR-His at 10μg/mL (100μL/well) can bind biotinylated mouse EPO-His . The EC50 of biotinylated mouse EPO-His is 34.5-80.6ng/mL.

Purity: > 95 % as determined by SDS-PAGE

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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.

Reference

Divoky V, et al. (2002) Mouse surviving solely on human erythropoietin receptor (EpoR): model of human EpoR-linked disease. Blood 99(10): 3873-4.

Carruthers SG. (2009) A truncated erythropoietin receptor EPOR-T is associated with hypertension susceptibility. Clin Pharmacol Ther. 86(2): 134-6.

Baltaziak M, et al. (2009) Relationships of P53 and Bak with EPO and EPOR in human colorectal cancer. Anticancer Res. 29(10):4151-6.

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