EPOR Cell Lysate – Tissue Lysate

PRODUCT OVERVIEW

Product Name	EPOR, Cell Lysate
Full Product Name	Mouse EPOR HEK293 Overexpression Lysate
Product Gene Name	EPOR cell lysate
Product Synonym Names	Mouse EPOR HEK293 Cell Lysate (WB positive control); erythropoietin receptor
Sequence	Met1-Pro24 9
Host	HEK293 Cells
Form/Format	1x Sample Buffer (1x modified RIPA buffer+1x SDS loading buffer). Modified RIPA Lysis Buffer: 50 mM Tris-HCl pH 7.4, 150 mM NaCl, 1mM EDTA, 1% Triton X-100, 0.1% SDS, 1% Sodium deoxycholate, 1mM PMSF.
Preparation and Storage	Store at 4 degree C for up to twelve months from date of receipt. After re-dissolution, aliquot and store at -80 degree C for up to twelve months. Avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt.
Molecular Weight	55,194 Da
Sequence Positions	236aa
3D Structure	ModBase 3D Structure for P14753
Species	Mouse
Recommend Usage	1. Centrifuge the tube for a few seconds and ensure the pellet at the bottom of the tube.**2. Re-dissolve the pellet using 200uL pure water and boil for 2-5 min.**
Sequence 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.
Preparation Method	Cell lysate was prepared by homogenization of the over-expressed cells in ice-cold modified RIPA Lysis Buffer with cocktail of protease inhibitors. Cell debris was removed by centrifugation. Protein concentration was determined by Bradford assay (protein assay, Microplate Standard assay). The cell lysate was boiled for 5 min in 1 x SDS loading buffer (50mM Tris-HCl pH 6.8, 12.5% glycerol, 1% sodium dodecylsulfate, 0.01% bromophenol blue) containing 5% b-mercaptoethanol, and lyophilized.
Applications Tested/Suitable for EPOR cell lysate	Western Blot (WB)
Application Notes for EPOR cell lysate	WB: Use at an assay dependent dilution.
Related Product Information for EPOR cell lysate	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 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. This Mouse EPOR overexpression lysate was created in HEK293 Cells and intented for use as a Western blot (WB) positive control. Purification of EPOR protein from the overexpression lysate was verified.

Product References and Citations for EPOR cell lysate	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.
Other Notes	Small volumes of EPOR cell lysate vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for EPOR purchase	MBS8116311 is a cell lysate targeting EPOR. Also known as Mouse EPOR HEK293 Overexpression Lysate. Host: HEK293 Cells.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for EPOR. It may not necessarily be applicable to this product.

NCBI GI #	116292186
NCBI GeneID	13857
NCBI Accession #	NP_034279.3
UniProt Primary Accession #	P14753
UniProt Secondary Accession #	Q63852
GenBank Nucleotide #	NM_010149.3
NCBI Official Full Name	erythropoietin receptor
UniProt Protein Name	Erythropoietin receptor
Protein Family	Erythropoietin receptor
UniProt Gene Name	Epor
UniProt Synonym Gene Names	EPO-R
UniProt Entry Name	EPOR_MOUSE
UniProt Comments for EPOR	EPOR: erythropoietin receptor: a member of the cytokine receptor family. Mediates erythropoietin-induced erythroblast proliferation, differentiation and survival. Upon EPO stimulation, EPOR dimerizes triggering the JAK2/STAT5 signaling cascade. In some cell types, can also activate STAT1 and STAT3. Forms homodimers on EPO stimulation. Tyrosine-phosphorylated EpoR may bind several SH2 domain-containing proteins including LYN, the adapter protein APS, SHP-1, SHP-2, JAK2, PI3 kinases, STAT5A/B, SOCS3, and CRKL. Defects in the erythropoietin receptor may produce erythroleukemia and familial erythrocytosis. Three alternatively-spliced isoforms have been described. Isoform EPOR-T, missing the cytoplasmic tail, acts as a dominant-negative receptor of EPOR-mediated signaling. Protein type: Receptor, cytokine; Membrane protein, integral Cellular Component: membrane; cell; extracellular region; integral to membrane; plasma membrane; cytosol Molecular Function: hematopoietin/interferon-class (D200-domain) cytokine receptor activity; identical protein binding; protein binding; transmembrane receptor activity; erythropoietin receptor activity Biological Process: heart morphogenesis; elevation of cytosolic calcium ion concentration; embryonic development; viral reproduction; heart development; cardiac muscle morphogensis; ventricular cardiac muscle morphogenesis; negative regulation of neuron apoptosis; brain development; decidualization; signal transduction
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