Mouse Erythropoietin/EPO Alexa Fluor® 647-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 148436

Catalog Number: FAB9591R

100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Erythropoietin/EPO in direct ELISAs. In direct ELISAs, approximately 25-50% cross-reactivity with recombinant rat Erythropoietin/EPO, 5-15% cross-reactivity with recombinant human Erythropoietin/EPO, and no cross-reactivity with recombinant
Source	Monoclonal Rat IgG_{2A} Clone # 148436
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse Erythropoietin/EPO Ala27-Arg192 Accession # P07321
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

ELISA Capture (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
ELISA Detection (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
Neutralization	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Erythropoietin (EPO) is a 34 kDa glycoprotein hormone in the type I cytokine family and is related to thrombopoietin (1). Its three N-glycosylation sites, four alpha helices, and N- to C-terminal disulfide bond are conserved across species (2, 3). Glycosylation of EPO is required for biological activities *in vivo* (4). Mature mouse EPO shares 95% amino acid sequence identity with rat EPO and 73%-82% with bovine, canine, equine, feline, human, ovine, and porcine EPO. EPO is primarily produced in the kidney by a population of fibroblast-like cortical interstitial cells adjacent to the proximal tubules (5). It is also produced in much lower, but functionally significant amounts by fetal hepatocytes and in adult liver and brain (6-8). EPO promotes erythrocyte formation by preventing the apoptosis of early erythroid precursors which express the EPO receptor (EPO R) (8, 9). EPO R has also been described in brain, retina, heart, skeletal muscle, kidney, endothelial cells, and a variety of tumor cells (7, 8, 10, 11). Ligand induced dimerization of EPO R triggers JAK2-mediated signaling pathways followed by receptor/ligand endocytosis and degradation (1, 12). Rapid regulation of circulating EPO allows tight control of erythrocyte production and hemoglobin concentrations. Anemia or other causes of low tissue oxygen tension induce EPO production by stabilizing the hypoxia-inducible transcription factors HIF-1α and HIF-2α (1, 6). EPO additionally plays a tissue-protective role in ischemia by blocking apoptosis and inducing angiogenesis (7, 8, 13).

PRODUCT SPECIFIC NOTICES

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