Human Erythropoietin R Alexa Fluor® 700-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 690710

Catalog Number: FAB6926N

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Phospho-Erythropoietin R (Y426) in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG_1 Clone # 690710
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Phosphopeptide containing the human Erythropoietin R Y426 site Accession # P19235
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 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.*

Western Blot	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), a glycoprotein produced primarily by the kidney, is the principal factor that regulates erythropoiesis by stimulating the proliferation and differentiation of erythroid progenitor cells. The biological effects of Epo are mediated by the erythropoietin receptor (Epo R). A member of the hematopoietic growth factor receptor superfamily which includes IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, GM-CSF, G-CSF, Thrombopoietin, LIF, CNTF, Growth Hormone, and Prolactin, Epo R is expressed not only by erythroid cells but also by embryonic stem cells, endothelial cells, and neural cells (1). Mouse Epo R cDNA encode a type I membrane protein with 507 amino acid (aa) residues. Mouse Epo R has a 24 aa hydrophobic signal peptide, a 225 aa extracellular domain, a 22 aa transmembrane domain, and a 236 aa intracellular domain. At the protein sequence level, the human Epo R is approximately 82% identical to the mouse protein (2). Mouse and human Epo R both contain 11 cysteine residues and an N-linked glycosylation site. Mouse Epo R, however, contains two disulfide bridges not found with human Epo R. In common with other hematopoietic growth factor receptor superfamily members, mouse Epo R has 4 positionally conserved cysteines in its extracellular domain, a tryptophan-serine-X-tryptophan-serine (WSXWS) motif or its homolog located near the transmembrane region, and lacks kinase motifs in its intracellular domain. Based on its amino acid composition the molecular weight of Epo R would be 55 kDa but after post translational modification including glycosylation and tyrosine and serine-threonine phosphorylation the molecular weight can be as high as 78 kDa (1). As a result of alternative splicing of the Epo R mRNA, cDNA clones encoding a truncated form of the Epo R as well as a soluble form of Epo R have been found (2, 3). The presence of a soluble form of the Epo R has also been detected in human serum. Recombinant soluble Epo R binds Epo with high affinity and is a potent Epo antagonist (3).

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