Mouse Erythropoietin R Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1390

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Erythropoietin R in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant human Erythropoietin R is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Erythropoietin R Ala25-Pro249 Accession # P14753
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

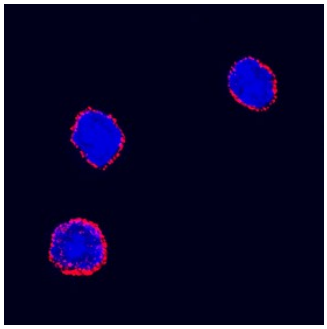
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse Erythropoietin R Fc Chimera (Catalog # 1390-ER)
Immunocytochemistry	5-15 µg/mL	See Below

DATA

Immunocytochemistry



Erythropoietin R in Mouse Bone Marrow Cells. Erythropoietin R was detected in immersion fixed mouse bone marrow cells using Goat Anti-Mouse Erythropoietin R Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1390) at 15 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cell surfaces. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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-spanning 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 gene, cDNA clones encoding a truncated form of the Epo R as well as a soluble form of Epo R has been found (2, 3). The presence of a soluble form of the Epo R has also been detected in human sera. Recombinant soluble Epo R binds Epo with high affinity and is a potent Epo antagonist (3).

References:

1. Spivak, J.L. (2001) in *Cytokine Reference*, Oppenhiem, J.J. and M. Feldmann, eds. Academic Press, New York, p. 941.
2. Kuramochi, S., Y. Ikawa and K. Todokoro (1990) J. Mol. Biol. **216**:567.
3. Baynes, R.D. *et al.* (1993) Blood **82**:2088.

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