

Rabbit Epo-R Polyclonal Antibody | anti-Epo-R antibody

Phospho-Epo-R (Tyr456) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329909	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Sheep (88%), Rabbit (100%), Dog (88%)	ELISA, Immunocytochemistry, Immunofluorescence, Western Blot

PRODUCT SYNONYMS

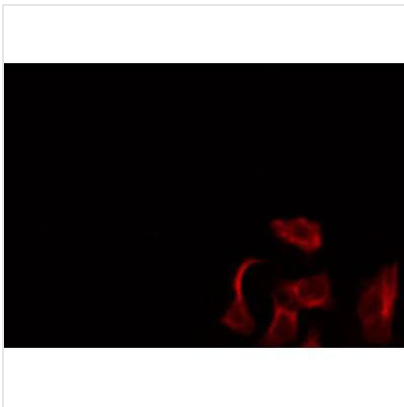
Epo-R; Polyclonal Antibody; Phospho-Epo-R (Tyr456) Antibody; EPO R; EPO-R; epor; EPOR_HUMAN; Erythropoietin receptor; Erythropoietin receptor precursor; MGC138358; anti-Epo-R antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Sheep (88%), Rabbit (100%), Dog (88%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-Epo-R (Tyr456) Antibody detects endogenous levels of Epo-R only when phosphorylated at Tyr456. Tissue Specificity: Erythroid cells and erythroid progenitor cells. Isoform EPOR-F is the most abundant form in EPO-dependent erythroleukemia cells and in late-stage erythroid progenitors. Isoform EPOR-S and isoform EPOR-T are the predominant forms in bone marrow. Isoform EPOR-T is the most abundant from in early-stage erythroid progenitor cells.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-Epo-R antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Epo-R around the phosphorylation site of Tyr456.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	On EPO stimulation, phosphorylated on C-terminal tyrosine residues by JAK2. The phosphotyrosine motifs are also recruitment sites for several SH2-containing proteins and adapter proteins which mediate cell proliferation. Phosphorylation on Tyr-454 is required for PTPN6 interaction, Tyr-426 for PTPN11. Tyr-426 is also required for SOCS3 binding, but Tyr-454/Tyr-456 motif is the preferred binding site. Ubiquitination at Lys-281 mediates receptor internalization, whereas ubiquitination at Lys-453 promotes trafficking of activated receptors to the lysosomes for degradation (By similarity). Ubiquitinated by NOSIP; appears to be either multi-monoubiquitinated or polyubiquitinated. Ubiquitination mediates proliferation and survival of EPO-dependent cells.

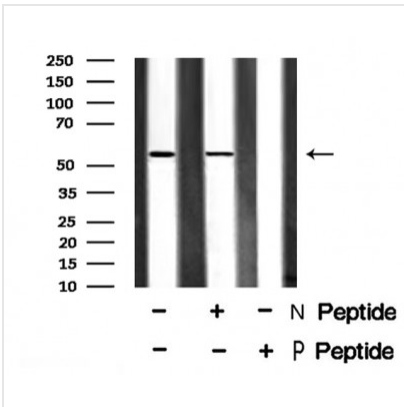
Subunit Structure	Forms homodimers on EPO stimulation. The tyrosine-phosphorylated form interacts with several SH2 domain-containing proteins including LYN (By similarity), the adapter protein APS, PTPN6 (By similarity), PTPN11, JAK2, PI3 kinases, STAT5A/B, SOCS3, CRKL (By similarity). Interacts with INPP5D/SHIP1 (By similarity). The N-terminal SH2 domain of PTPN6 binds Tyr-454 and inhibits signaling through dephosphorylation of JAK2 (By similarity). APS binding also inhibits the JAK-STAT signaling. Binding to PTPN11, preferentially through the N-terminal SH2 domain, promotes mitogenesis and phosphorylation of PTPN11 (By similarity). Binding of JAK2 (through its N-terminal) promotes cell-surface expression (By similarity). Interacts with RHEX; this interaction occurs in a erythropoietin (EPO)-dependent manner. Interaction with the ubiquitin ligase NOSIP mediates EPO-induced cell proliferation. Interacts with ATXN2L.
Similarity	The WSXWS motif appears to be necessary for proper protein folding and thereby efficient intracellular transport and cell-surface receptor binding.The box 1 motif is required for JAK interaction and/or activation.Contains 1 copy of a cytoplasmic motif that is referred to as the immunoreceptor tyrosine-based inhibitor motif (ITIM). This motif is involved in modulation of cellular responses. The phosphorylated ITIM motif can bind the SH2 domain of several SH2-containing phosphatases.Belongs to the type I cytokine receptor family. Type 1 subfamily.
Subcellular Location	Cell membrane>Single-pass type I membrane protein. Secreted. Note: Secreted and located to the cell surface.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)

Staining Hela by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100,then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



WB (Western Blot)

Western blot analysis of Epo-R (Phospho-Tyr456) using Jurkat whole cell lysates.-/+ means absence or presence of N peptide(1/4 non-phospho peptide) and P peptide(phospho peptide).

ADDITIONAL INFORMATION

Related Product Information for anti-Epo-R antibody	Receptor for erythropoietin. Mediates erythropoietin-induced erythroblast proliferation and differentiation. Upon EPO stimulation, EPOR dimerizes triggering the JAK2/STAT5 signaling cascade. In some cell types, can also activate STAT1 and STAT3. May also activate the LYN tyrosine kinase.Isoform EPOR-T acts as a dominant-negative receptor of EPOR-mediated signaling.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4503591
NCBI GeneID	2057
NCBI Accession #	NP_000112.1
NCBI GenBank Nucleotide #	NM_000121.3
UniProt Accession #	P19235; Q15443; Q2M205; B2RCG4
Molecular Weight	55,065 Da

NCBI Official Full Name	erythropoietin receptor
NCBI Official Synonym Full Names	erythropoietin receptor
NCBI Official Symbol	EPOR
NCBI Official Synonym Symbols	EPO-R
NCBI Protein Information	erythropoietin receptor
UniProt Protein Name	Erythropoietin receptor
UniProt Gene Name	EPOR
UniProt Synonym Gene Names	EPO-R
UniProt Entry Name	EPOR_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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