abcam

ab180791

Anti-EPO-R antibody [VP2E8]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	VP2E8
Purification technique	Affinity purification Protein G
Concentration	2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	ab180791 was purified by protein G affinity chromatography from cell culture supernatants and verified by CGE

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1.2 µg for 10^6 Cells

Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target data

See full target information EPOR

Function	Receptor for erythropoietin, which mediates erythropoietin-induced erythroblast proliferation and differentiation (PubMed:10388848, PubMed:2163695, PubMed:2163696, PubMed:8662939, PubMed:9774108). Upon EPO stimulation, EPOR dimerizes triggering the JAK2/STAT5 signaling cascade (By similarity). In some cell types, can also activate STAT1 and STAT3 (PubMed:11756159). May also activate the LYN tyrosine kinase (By similarity). Isoform EPOR-T. Acts as a dominant-negative receptor of EPOR-mediated signaling.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Erythropoietin receptor (EPO-R) also known as EPOR plays an important role in erythropoiesis by mediating the effects of erythropoietin (EPO). EPO-R is a member of the cytokine receptor family with a mass of approximately 55 kDa. This receptor can primarily be found on the surface of erythroid progenitor cells in the bone marrow. Its presence is important for the final differentiation of these cells into mature erythrocytes.
Biological function summary	EPO-R functions by dimerizing upon EPO binding subsequently activating intracellular signaling pathways. It is a component of a larger signaling complex that recruits and activates various molecules initiating a cascade of events critical for cell survival and proliferation. This receptor signaling prevents apoptosis in

	erythroid progenitor cells promoting their growth and differentiation into red blood cells.
Pathways	EPO-R's activity falls within the JAK-STAT and PI3K-AKT signaling pathways. These pathways are pivotal in regulating hematopoiesis and cell survival. JAK2 acts as a direct partner to EPO-R and transduces the signal downstream while molecules like STAT5 get phosphorylated and mediate transcription of target genes. The PI3K-AKT pathway also contributes to the anti-apoptotic effect essential for erythrocyte development.
Associated diseases and disorders	Altered EPO-R signaling associates with anemia of chronic disease and polycythemia vera. Anemic conditions often show reduced sensitivity or expression of EPO-R while mutations leading to EPO-R hypersensitivity link to polycythemia vera. Dysregulation of related proteins such as JAK2 also contributes to these conditions indicating the interconnected roles of these proteins in blood-related diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

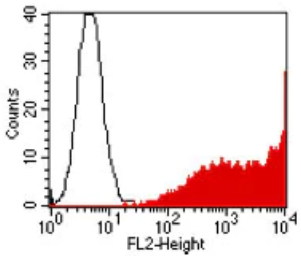
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

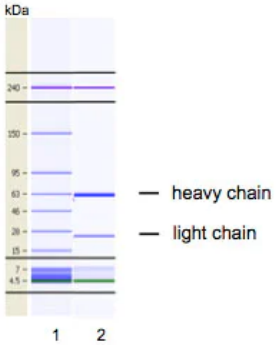
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2 product images



Flow Cytometry - Anti-EPO-R antibody [VP2E8] (ab180791)

Flow cytometric staining of BOSC23 cells transiently transfected with an expression vector encoding either EPO-R (red curve) or an irrelevant protein black curve (control transfectant) labeling EPO-R with ab180791 at 1/200 dilution. A PE conjugated secondary antibody was used. A positive signal was obtained only with EPO-R transfected cells.



Capillary Gel Electrophoresis - Anti-EPO-R antibody [VP2E8] (ab180791)

Capillary Gel Electrophoresis (CGE) analysis of purified ab180791 monoclonal antibody. Lane 1: molecular weight marker, Lane 2: 2 µg of purified ab180791. Internal control bands (240 kDa / 7 kDa / 4,5 kDa).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.