

EpoR (H-194): sc-5624

BACKGROUND

Erythropoiesis is regulated through the interaction of erythropoietin (Epo) with its receptor, EpoR, a member of the cytokine superfamily of receptors. The human EpoR is a 507 amino acid transmembrane protein that forms homodimers following erythropoietin activation and is related to the interleukin 2 (IL-2) receptor β -chain subunit (IL-2R β). EpoR and IL-2R β share 45% amino acid identity within the box 1 and box 2 domains of their cytoplasmic regions, while their remaining cytoplasmic sequences are highly divergent. These conserved domains are both required and sufficient for mitogenesis and for coupling ligand binding to the induction of tyrosine phosphorylation. The membrane proximal region is also required for the association of JAK2 with EpoR. The existence of multiple cross-linked complexes and differential ligand affinities suggests that EpoR may exist as a multireceptor complex.

CHROMOSOMAL LOCATION

Genetic locus: EPOR (human) mapping to 19p13.2; EpOR (mouse) mapping to 9 A3.

SOURCE

EpoR (H-194) is a rabbit polyclonal antibody raised against amino acids 21-214 of EpoR of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

EpoR (H-194) is recommended for detection of erythropoietin (Epo) receptor of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with HSP70.

Suitable for use as control antibody for EpoR siRNA (h): sc-37092, EpoR siRNA (m): sc-39959, EpoR siRNA (r): sc-77364, EpoR shRNA Plasmid (h): sc-37092-SH, EpoR shRNA Plasmid (m): sc-39959-SH, EpoR shRNA Plasmid (r): sc-77364-SH, EpoR shRNA (h) Lentiviral Particles: sc-37092-V, EpoR shRNA (m) Lentiviral Particles: sc-39959-V and EpoR shRNA (r) Lentiviral Particles: sc-77364-V.

Molecular Weight of EpoR: 64-78 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

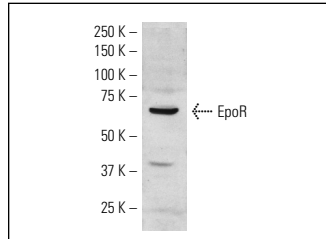
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

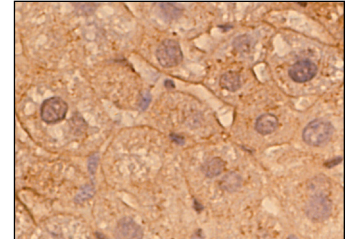
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



EpoR (H-194): sc-5624. Western blot analysis of EpoR expression in K-562 whole cell lysate.



EpoR (H-194): sc-5624. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse liver tissue showing membrane localization.

SELECT PRODUCT CITATIONS

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2. Ribatti, D., et al. 2009. Mast cells and macrophages in duodenal mucosa of mice overexpressing erythropoietin. *J. Anat.* 215: 548-554.
3. Li, H.G., et al. 2009. Prognostic significance of erythropoietin and erythropoietin receptor in tongue squamous cell carcinoma. *Br. J. Oral Maxillofac. Surg.* 47: 470-475.
4. Giatromanolaki, A., et al. 2009. Erythropoietin receptors in endometrial carcinoma as related to HIF1 α and VEGF expression. *In Vivo* 23: 699-703.
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6. Ribatti, D., et al. 2010. Erythropoietin is involved in angiogenesis in human primary melanoma. *Int. J. Exp. Pathol.* 91: 495-499.
7. Tug, N., et al. 2010. Erythropoietin receptor-like immunostaining on human spermatozoa. *Reprod. Biomed. Online* 21: 718-720.
8. Tezel, G., et al. 2010. Hemoglobin expression and regulation in glaucoma: insights into retinal ganglion cell oxygenation. *Invest. Ophthalmol. Vis. Sci.* 51: 907-919.
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