

Epo (N-19): sc-1310

BACKGROUND

Erythropoietin (Epo) is the primary factor responsible for regulating erythropoiesis during steady-state conditions and in response to blood loss and hemorrhage in the adult organism. In addition, Epo has been shown to play a role in primitive embryonic erythropoiesis. It is synthesized by the kidney and stimulates the proliferation and maturation of bone marrow erythroid precursor cells. Circulating Epo is a 165 amino acid glycoprotein. The Epo receptor, EpoR, is a glycoprotein expressed on megakaryocytes, erythroid progenitors and endothelial cells. Overexpression of Epo is associated with several pathophysiological conditions, such as polycythemia vera, which is caused by the Epo-independent growth of erythrocytic progenitors from abnormal stem cells. A deficiency in Epo expression has been associated with afflictions such as anemia of chronic disease (ACD), frequently found in rheumatoid arthritis (RA) patients.

CHROMOSOMAL LOCATION

Genetic locus: EPO (human) mapping to 7q22.1; Epo (mouse) mapping to 5 G2.

SOURCE

Epo (N-19) is available as either goat (sc-1310) or rabbit (sc-1310-R) affinity purified polyclonal antibody raised against a peptide mapping at the N-terminus of Epo of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-1310 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-1310 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

Epo (N-19) is recommended for detection of Epo of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Suitable for use as control antibody for Epo siRNA (h): sc-37220, Epo siRNA (m): sc-37221, Epo siRNA (r): sc-270111, Epo shRNA Plasmid (h): sc-37220-SH, Epo shRNA Plasmid (m): sc-37221-SH, Epo shRNA Plasmid (r): sc-270111-SH, Epo shRNA (h) Lentiviral Particles: sc-37220-V, Epo shRNA (m) Lentiviral Particles: sc-37221-V and Epo shRNA (r) Lentiviral Particles: sc-270111-V.

Molecular Weight of Epo: 37 kDa.

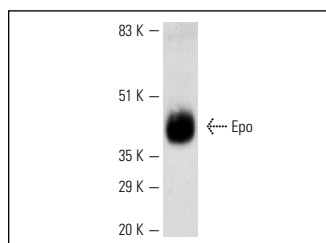
STORAGE

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

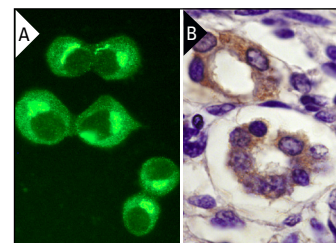
RESEARCH USE

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

DATA



Epo (N-19): sc-1310. Western blot analysis of human recombinant Epo.



Epo (N-19): sc-1310. Immunofluorescence staining of methanol-fixed KNRK cells (A), immunoperoxidase staining of formalin-fixed, paraffin-embedded human fetal kidney tissue showing cytoplasmic staining (B).

SELECT PRODUCT CITATIONS

1. Yan, Z., et al. 2000. *Trans*-splicing vectors expand the utility of adeno-associated virus for gene therapy. *Proc. Natl. Acad. Sci. USA* 97: 6716-6721.
2. Hirose, R., et al. 2008. Transient hyperglycemia affects the extent of ischemia-reperfusion-induced renal injury in rats. *Anesthesiology* 108: 402-414.
3. Munro, K., et al. 2009. Developmental profile of erythropoietin and its receptor in guinea-pig retina. *Cell Tissue Res.* 336: 21-29.
4. Wright, T.M., et al. 2009. Ror2, a developmentally regulated kinase, promotes tumor growth potential in renal cell carcinoma. *Oncogene* 28: 2513-2523.
5. 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.
6. De Spiegelaere, W., et al. 2010. Localization of erythropoietin in and around growing cartilage. *Mol. Cell. Biochem.* 337: 287-291.
7. Lu, K.Y., et al. 2010. Erythropoietin suppresses the formation of macrophage foam cells: role of liver X receptor α . *Circulation* 121: 1828-1837.
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.
9. Colella, P., et al. 2011. Non-erythropoietic erythropoietin derivatives protect from light-induced and genetic photoreceptor degeneration. *Hum. Mol. Genet.* 20: 2251-2262.



Try **Epo (7D10): sc-80995** or **Epo (B-4): sc-5290**, our highly recommended monoclonal alternatives to Epo (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Epo (7D10): sc-80995**.