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## Human Erythropoietin (EPO) Recombinant Protein


**Catalog Number:** 14-8992

**RUO: For Research Use Only. Not for use in diagnostic procedures.**

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### Product Information

**Contents:** Human Erythropoietin (EPO) Recombinant Protein

 **Catalog Number:** 14-8992

**Concentration:** 0.1 mg/mL

**Handling Conditions:** For best recovery, always quick-spin vial prior to opening. For dilution of current stock, always include carrier protein (1% BSA or 10% FBS) in the buffered saline diluent.

**Source:** CHO expressed amino acids Ala28-Arg193 accession number P01588

**Molecular Mass:** The predicted molecular mass of this protein is 20.6 kDa. It migrates at 34 kDa by SDS-PAGE due to glycosylation.

**Purity:** > 96% as determined by SDS-PAGE

**Endotoxin:** Less than 0.1 ng/ug cytokine as determined by the LAL assay.

**Bioactivity:** The specific activity of Human EPO Recombinant protein, as measured in Normocyth-aemic mice, is 120,000 Units/mg.

**Formulation:** Sterile liquid; phosphate buffered saline with 1% BSA, pH 7.2 0.22 um filtered.

**Temperature Limitation:** For greatest stability, keep concentration of primary stock at or above 10 µg/ml. For long term storage, aliquot into polypropylene vials (volumes of 20 µl or greater) and store at or below -80°C. Avoid repeated freeze/thaw cycles.

 **Batch Code:** Refer to vial

 **Use By:** Refer to vial

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### Description

Erythropoietin (EPO) protein is a growth factor essential for the survival, proliferation, and differentiation of erythroid precursors. EPO is not responsible for early commitment to the lineage, and instead induces the final maturation of partially differentiated erythroid cells and the production of red cell-specific proteins, such as hemoglobin. The EPO receptor (EPOR) is present in higher levels on precursor cells, and expression diminishes with cell maturation.

Hepatocytes are the main source of EPO in the fetus, followed by interstitial cells of the kidney after birth and through adulthood. EPO expression is upregulated during hypoxia, and low levels of transcription have also been detected in lung and brain tissue under these conditions. Recent data suggest that EPO may also play a role in the protection of neuronal tissue from damage and initiation of repair.

### Applications Reported

Human EPO Recombinant Protein is biologically active.

### Applications Tested

The specific activity of Human EPO Recombinant Protein, as measured in Normocyth-aemic mice, is 120,000 Units/mg.

### References

Bunn HF. Erythropoietin: current status. *Yale J Biol Med.* 1990 Sep-Oct; 63(5): 381-6

Lacombe C, Mayeux P. Biology of erythropoietin. *Haematologica*, 1998 Aug; 83(8): 724-32.

Sanchez PE, Fares RP, Risso JJ, Bonnet C, Bouvard S, Le-Cavorsin M, Georges B, Moulin C, Belmenquenai A, Bodennec J, Morales A, Pequignot JM, Baulieu EE, Levine RA, Bezin L. Optimal neuroprotection by erythropoietin requires elevated expression of its receptor in neurons. *Proc Natl Acad Sci USA.* 2009 Jun 16; 106(24): 9848-53.

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