

EPO α

Erythropoietin α

human, recombinant, chinese hamster ovary cells (CHO cells)

Cat. No.	Amount
PR-402	50 μ g

For *in vitro* use only
Quality guaranteed for 12 months
Store at -80°C

Avoid freeze / thaw cycles

Form

Lyophilized.

Solubility

It is recommended to reconstitute the lyophilized EPO in sterile bidest H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Purity

\geq 98% by SDS-PAGE, RP-HPLC, and FPLC.

Activity

1.2 x 10⁵ IU/mg measured by Normocythaemic mice.

Endotoxin

Less than 0.1 ng/ μ g (IEU/ μ g) of Epo α .

Description

The glycoprotein hormone erythropoietin (EPO) is an essential viability and growth factor for the erythrocytic progenitors and is mainly produced in the kidneys. EPO and its receptor are also expressed in many other tissues, including brain, spinal cord, retina and testis.

The presence of a blood barrier suggests that EPO plays a local role in these organs.

EPO signalling involves tyrosine phosphorylation of the homodimeric EPO receptor and subsequent activation of intracellular anti-apoptotic proteins, kinases and transcription factors. Lack of EPO leads to anemia. Treatment with recombinant human EPO is efficient and safe in improving the management of the anemia associated with chronic renal failure.

Recombinant Human Erythropoietin α is produced in Chinese hamster ovary (CHO) cells by recombinant DNA technology is a single, polypeptide chain containing 165 amino acids and having a predicted molecular mass of 21 kDa and apparent glycosylated molecular mass of 30.4 kDa.

EPO α is purified by proprietary chromatographic techniques.

Selected References:

- Gassmann *et al.* (2003) Non-erythroid functions of erythropoietin. *Adv. Exp. Med. Biol.* **543**:323.
- Jelkmann W. (2004) Molecular biology of erythropoietin. *Intern. Med.* **43**:649.
- Maiese K. and Li F. (2005) New avenues of exploration for erythropoietin. *JAMA* **293**:90.
- Ford P.A. and Mastoris J. (2004) Strategies to optimize the use of erythropoietin and iron therapy in oncology patients. *Transfusion* **44**:15S.
- Li *et al.* (2004) Beneficial effect of erythropoietin on experimental allergic encephalomyelitis. *Ann. Neurol.* **56**:767.
- Wei X. and Swanson S.J. (2004) Development and validation of a cell-based bioassay for the detection of neutralizing antibodies against recombinant human erythropoietin in clinical studies. *J. Immunol. Methods* **293**:115.
- Kertesz *et al.* (2004) The role of erythropoietin in regulating angiogenesis. *Dev. Biol.* **276**:101.