

**DESCRIPTION**

**Source** Mouse myeloma cell line, NS0-derived human Erythropoietin R protein  
 Ala25-Pro250  
 Accession # P19235

**N-terminal Sequence Analysis** Ala25

**Predicted Molecular Mass** 25 kDa

**SPECIFICATIONS**

**SDS-PAGE** 26-34 kDa, reducing conditions

**Activity** Measured by its ability to inhibit Epo-dependent proliferation of TF-1 human erythroleukemic cells. Kitamura, T. *et al.* (1989) J. Cell Physiol. **140**:323.  
 The ED<sub>50</sub> for this effect is 60-300 ng/mL in the presence of 0.2 U/mL of rhEpo.

**Endotoxin Level** <0.10 EU per 1 µg of the protein by the LAL method.

**Purity** >90%, by SDS-PAGE under reducing conditions and visualized by silver stain.

**Formulation** Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose and with BSA as a carrier protein. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

**Reconstitution** Reconstitute at 100 µg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.

**Shipping** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

**BACKGROUND**

Erythropoietin (Epo), a glycoprotein produced primarily by the kidney, is the principal factor that regulates erythropoiesis by stimulating the proliferation and differentiation of erythroid progenitor cells. The biological effects of Epo are mediated by the erythropoietin receptor (Epo R). The genes for human and mouse Epo R have been cloned and characterized. The full-length human Epo R cDNA encodes a type I membrane-spanning protein with 508 amino acid (aa) residues (a 24 aa residue hydrophobic signal sequence, a 226 aa residue extracellular domain, a 22 aa residue transmembrane domain and a 236 aa residue cytoplasmic domain). At the protein sequence level, the human Epo R is approximately 82% identical to the mouse protein. As a result of alternative splicing of the Epo R gene, cDNA clones encoding a truncated form of the Epo R as well as the soluble form of Epo R has been found. The presence of a soluble form of the Epo R has also been detected on human sera. Recombinant soluble Epo R binds Epo with high affinity and is a potent Epo antagonist.

**References:**

1. Barber, D.L. and A.D. D'Andrea (1992) Seminars in Hematology **29**:293.
2. Youssoufian, H. *et al.* (1993) Blood **9**:2223.
3. Lodish, H.F. *et al.* (1995) Cold Spring Harbor Symposia on Quantitative Biology **LX**:93 - 104.
4. Baynes, R.D. *et al.* (1993) Blood **82**:2088.