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Product Data Sheet

Cat # SB-001-10	Recombinant Human Erythropoietin-alpha (EPO-a)	Size: 10 ug
Cat # SB-001-50	Recombinant Human Erythropoietin-alpha (EPO-a)	Size: 50 ug

Background:

Erythropoietin is a member of the hematopoietic growth factor family and is one of the few hematopoietic growth factors which behave like a hormone. The principal function of erythropoietin is to couple oxygen delivery by circulating red cells to long-term tissue oxygen needs. Produced primarily in the kidneys and to a small extent in the liver in adults, erythropoietin interacts in the bone marrow with specific receptors on the surface of erythroid progenitor cells to initiate their entry into cell cycle if dormant or to maintain their viability while differentiating, if they are already in active cell cycle. Erythropoietin achieves its effects by causing homodimerization of its receptor with the resultant autophosphorylation of the tyrosine kinase JAK2 and phosphorylation of the receptor itself, as well as various substrate proteins leading to the upregulation of a number of signaling pathways and the activation of gene transcription.

Description:

Recombinant Human Erythropoietin-alpha is produced in Chinese hamster ovary (CHO) cells by recombinant DNA technology is a single, polypeptide chain containing 166 amino acids and having a predicted molecular mass of 21,000 Dalton and apparent glycosylated molecular mass of 30,400 Dalton.

Quality Control:

Biological activity: The specific activity was 1.2×10^5 IU/ mg.

Purity: Greater than 98% as determined by

(a) Analysis by SEC-HPLC.

(b) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.

Isoelectric Point: the main zone between 3.3~4.3 analysis by IEF.

Amino-Acid Sequence: The sequence of the first fifteen N-terminal amino acids was determined and was found to be Ala-Pro-Pro-Arg-Leu-Ile-Cys-Asp-Ser-Arg-Val-Leu-Glu- Arg-Tyr.

Endotoxin: Less than 0.02ng/ μ g (0.02IEU/ μ g) determined by LAL test.

Formulation: Each mg of lyophilized powder contains 5.8mg sodium citrate, 5.8mg sodium chloride and 0.06mg citric acid.

Storage: Lyophilized rHuEPO-alpha although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution rHuEPO-alpha should be stored at 4°C between 2-7 days and for future use below -18°C . For long-term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Please avoid freeze-thaw cycles.

Reconstitution: It is recommended to reconstitute the lyophilized rHuEPO-alpha in sterile $18\text{M}\Omega$, -cm H_2O not less than $100\mu\text{g}/\text{ml}$, which can then be further diluted to other aqueous solutions

Usage:

This item is for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals. If supplied in powder then reconstitute it in 100 ul water for 1 mg/ml stock and store in liquid at 4°C for ~1 week or aliquots in suitable size and store at -20°C for long term storage..

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