

IL-3 Protein, Human

Cat. No.:	HY-P7040
Synonyms:	rHuIL-3; Hematopoietic growth factor; Mast cell growth factor; MCGF; Multipotential colony-stimulating factor; P-cell-stimulating factor
Species:	Human
Source:	E. coli
Accession:	P08700 (A20-F152)
Gene ID:	3562
Molecular Weight:	Approximately 15.2 kDa

PROPERTIES

AA Sequence	<p>A P M T Q T T P L K T S W V N C S N M I D E I I T H L K Q P P L P L L D F N N L</p> <p>N G E D Q D I L M E N N L R R P N L E A F N R A V K S L Q N A S A I E S I L K N</p> <p>L L P C L P L A T A A P T R H P I H I K D G D W N E F R R K L T F Y L K T L E N</p> <p>A Q A Q Q T T L S L A I F</p>
Biological Activity	The ED ₅₀ is <0.6 ng/mL as measured by TF-1 cells, corresponding to a specific activity of >1.67 × 10 ⁷ units/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized after extensive dialysis against PBS or 50 mM Tris-HCL, 300 mM NaCl, 200 mM arginine, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>Interleukin-3 (IL-3) is a glycoprotein belonging to the hematopoietic growth factor family that in preclinical in vitro and in vivo studies has exhibited a multilineage activity. Recombinant human interleukin-3 (rhIL-3) enhances the mobilization of peripheral blood progenitor cells by recombinant human granulocyte colony-stimulating factor (rhG-CSF)^[1]. Human interleukin-3 (hIL-3) is a multipotent hematopoietic cytokine produced by mitogen and antigen-activated keratinocytes, T-lymphocytes, mast cells, NK cells, monocytes and endothelial cells. The hematopoietic progenitor cells are proliferated and differentiated with the help of hIL-3 protein into mature erythrocytes, mast cells, megakaryocytes and granulocytes. The</p>
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potential use of hIL-3 protein has been extensively tested in various clinical applications such as bone marrow transplantation, hematological malignancies, cytopenias, aplastic anemia and various types of cancer^[2].

REFERENCES

- [1]. Huhn RD, et al. Recombinant human interleukin-3 (rhIL-3) enhances the mobilization of peripheral blood progenitor cells by recombinant human granulocyte colony-stimulating factor (rhG-CSF) in normal volunteers. *Exp Hematol.* 1996 Jun;24(7):839-47.
- [2]. Dagar VK, et al. Combined effect of gene dosage and process optimization strategies on high-level production of recombinant human interleukin-3 (hIL-3) in *Pichia pastoris* fed-batch culture. *Int J Biol Macromol.* 2018 Mar;108:999-1009.
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Caution: Product has not been fully validated for medical applications. For research use only.

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