

IL3

Recombinant Rat Interleukin-3 beta

Catalog No.	CS276A	Quantity:	5 µg
	CS276B		20 µg
	CS276C		1 mg

Alternate Names: IL-3, MCGF, P-cell-stimulating factor, Hematopoietic growth factor, interleukin-3, Mast cell growth factor, Multipotential colony-stimulating factor

Description: Interleukin-3 (IL-3) is a hematopoietic growth factor that promotes the survival, differentiation and proliferation of committed progenitor cells of the megakaryocyte, granulocyte-macrophage, erythroid, eosinophil, basophil and mast cell lineages. Produced by T cells, mast cells and eosinophils, IL-3 enhances thrombopoieses, phagocytosis, and antibody-mediated cellular cytotoxicity. Its ability to activate monocytes suggests that IL-3 may have additional immunoregulatory roles. Many of the IL-3 activities depend upon co-stimulation with other cytokines. IL-3 is species-specific, variably glycosylated cytokine.

Rat IL-3 is a 26 kDa, variably glycosylated monomeric polypeptide that belongs to the α helix family of hematopoietic cytokines. IL-3 has pleiotrophic activities on a number of hematopoietic-related cells. The rat molecule has two alternate splice forms. The first form is IL3 β and is synthesized as a 169 aa precursor that contains a 27 aa signal sequence and a 142 aa mature segment. The second form is IL3 α and is identical to IL 3 β except for a three amino acid (Tyr-Pro-Gln) deletion at positions 56-58. The beta form is considered the most common. Each form has an α helical structure with two intrachain disulfide bonds and two potential N-linked glycosylation sites.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Gene ID: 24495

Source: *E. coli*

Molecular Weight: Approximately 16.3 kDa, a single non-glycosylated polypeptide chain containing 144 amino acids.

Formulation: Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.

Purity: >95% by SDS-PAGE and HPLC analyses.

Endotoxin Level: Less than 1 EU/µg of rRtIL-3 β as determined by LAL method.

Biological Activity: Fully biologically active when compared to standard. The ED₅₀ determined by a cell proliferation assay using murine M-NFS-60 cells is less than 10 ng/ml, corresponding to a specific activity of >1×10⁵ IU/mg.



Amino Acid Sequence: MISDRGSDAH HLLRTLDCRT IALEILVKLP YPQVSGLNNS DDKANLRNST
LRRVNLDEFL KSQEEFDSQD TTDIKSKLQK LKCCIPAAAS DSVLPGVYNK
DLDDFKKKLR FYVIHLKDLQ PVSVSRPPQP TSSSDNFRPM TVEC

Reconstitution: We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at $\leq -20^{\circ}\text{C}$. Further dilutions should be made in appropriate buffered solutions.

Storage & Stability: This lyophilized preparation is stable at $2-4^{\circ}\text{C}$, but should be kept desiccated at -20°C for long term storage. Upon reconstitution, the preparation is stable for up to one week at $2-4^{\circ}\text{C}$. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -80°C . **Avoid repeated freeze/thaw cycles.**

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

