

Animal-Free IL-3 Protein, Mouse (His)

Cat. No.:	HY-P700205AF
Synonyms:	rMuL-3; Hematopoietic growth factor; Mast cell growth factor; MCGF; Multipotential colony-stimulating factor; P-cell-stimulating factor
Species:	Mouse
Source:	E. coli
Accession:	P01586 (D33-C166)
Gene ID:	16187
Molecular Weight:	Approximately 16.04 kDa

PROPERTIES

AA Sequence	<p>MDTHRLTRTL NCSSIVKEII GKLPEPELKT DDEGPSLRNK</p> <p>SFRRVNLSKF VESQGEVDPE DRYVIKSNLQ KLNCCCLPTSA</p> <p>NDSALPGVFI RDLDDFRKKL RFYMVHLNDL ETVLTSRPPQ</p> <p>PASGSVSPNR GTVEC</p>
Biological Activity	Measure by its ability to induce NFS-60 cells proliferation. The ED ₅₀ for this effect is <85 pg/mL. The specific activity of recombinant mouse IL-3 is approximately >1x10 ⁷ IU/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a solution containing 1X PBS, pH 7.4.
Endotoxin Level	<0.1 EU per 1 µg of the protein by the LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
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>The cytokine IL-3, predominantly secreted by activated T-lymphocytes, mast cells, and osteoblastic cells, plays a crucial role in controlling the production and differentiation of hematopoietic progenitor cells into lineage-restricted cells. Moreover, IL-3 stimulates mature basophils, eosinophils, and monocytes, promoting their functional activation. Beyond its hematopoietic functions, IL-3 contributes to neural cell proliferation and survival and participates in bone homeostasis by inhibiting osteoclast differentiation through the prevention of NF-kappa-B nuclear translocation and activation. Mechanistically, IL-3 exerts its biological effects through a receptor composed of the IL3RA subunit and a signal transducing</p>
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subunit IL3RB, leading to the rapid activation of JAK2 kinase activity and subsequent STAT5-mediated transcriptional programming. Additionally, IL-3, as a monomer, contributes to cell survival under oxidative stress in non-hematopoietic systems by activating pathways mediated by PI3K/AKT and ERK.

Caution: Product has not been fully validated for medical applications. For research use only.

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