

## Active Recombinant Human IL3

Cat. No. IL3-503H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant Human IL3 /Interleukin-3 Protein, HEK293 Expressed (rhIL3) Ala20-Phe152 (Accession # NP\_000579) was produced in human 293 cells (HEK293).

**Species** Human

**Source** HEK293

**ProteinLength** 20-152 a.a.

#### Description

Interleukin 3, also known as IL-3, is a protein that in humans is encoded by the IL3 gene. Interleukin-3 (IL-3) is an interleukin, a type of biological signal (cytokine) that can improve the body's natural response to disease as part of the immune system. It acts by binding to the interleukin-3 receptor. The IL-3 receptor is a heterodimer of the IL-3 specific  $\alpha$ -chain and the common  $\beta$ -chain,  $\beta_c$ , which is also used by GM-CSF and IL-5. Binding of IL-3 can also involve substitution of the  $\beta_c$  by a  $\beta_{IL-3}$ -chain that appears to be specific for IL-3. Binding of IL-3 to its cognate receptor(s) induces activation of Jak2, phosphorylation of multiple Stats, and the PI3K/Akt pathway. IL-3 may play an important role in the development of airway inflammation associated with asthma. The human IL-3 gene encodes a protein 152 amino acids long, and the naturally occurring IL-3 is glycosylated. The human IL-3 gene is located on chromosome 5, only 9 kilobases from the GM-CSF gene, and its function is quite similar to GM-CSF.

**Predicted N Terminal** Ala20

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<b>Form</b>	Lyophilized from 0.22 µm filtered solution in PBS, pH 7.4. Normally Mannitol or Trehalose are added as protectants before lyophilization.
<b>Bio-activity</b>	The bio-activity was determined by its ability to induce IFN-γ production by NK-92 cells. The ED50 < 0.1 ng/ml, corresponding to a specific activity of > 1X10 <sup>7</sup> Unit/mg.
<b>Molecular Mass</b>	rhIL3, a 133 amino acids protein, and has a calculated MW of 15 kDa. DTT-reduced protein migrates as 30 and 38 kDa monomer due to glycosylation.
<b>Endotoxin</b>	Less than 1.0 EU per µg of the rhIL3 by the LAL method.
<b>Purity</b>	>92% as determined by SDS-PAGE.
<b>Storage</b>	Avoid repeated freeze-thaw cycles. No activity loss was observed after storage at: In lyophilized state for 1 year (4 centigrade-8 centigrade); After reconstitution under sterile conditions for 1 month (4 centigrade-8 centigrade) or 3 months (-20 centigrade to -70 centigrade).

## GENE INFORMATION

<b>Gene Name</b>	IL3 interleukin 3 (colony-stimulating factor, multiple) [ Homo sapiens ]
<b>Official Symbol</b>	IL3
<b>Synonyms</b>	IL3; interleukin 3 (colony-stimulating factor, multiple); interleukin-3; hematopoietic growth factor; IL 3; mast cell growth factor; MCGF; MGC79398; MGC79399; MULTI CSF; multilineage colony stimulating factor; P cell stimulating factor; mast-cell growth factor; P-cell stimulating factor; P-cell-stimulating factor; multilineage-colony-stimulating factor; multipotential colony-stimulating factor; IL-3; MULTI-CSF;

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<b>Gene ID</b>	3562
<b>mRNA Refseq</b>	NM_000588
<b>Protein Refseq</b>	NP_000579
<b>MIM</b>	147740
<b>UniProt ID</b>	P08700
<b>Chromosome Location</b>	5q23-q31
<b>Pathway</b>	Apoptosis, organism-specific biosystem; Apoptosis, conserved biosystem; Asthma, organism-specific biosystem; Asthma, conserved biosystem; Calcineurin-regulated NFAT-dependent transcription in lymphocytes, organism-specific biosystem; Calcium signaling in the CD4+ TCR pathway, organism-specific biosystem; Cytokine Signaling in Immune system, organism-specific biosystem;
<b>Function</b>	cytokine activity; growth factor activity; interleukin-3 receptor binding;

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