

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 α-chain and the common β-chain, β_c, which is also used by GM-CSF and IL-5. Binding of IL-3 can also involve substitution of the β_c by a β_{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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Form	Lyophilized from 0.22 µm filtered solution in PBS, pH 7.4. Normally Mannitol or Trehalose are added as protectants before lyophilization.
Bio-activity	The bio-activity was determined by its ability to induce IFN-γ production by NK-92 cells. The ED ₅₀ < 0.1 ng/ml, corresponding to a specific activity of > 1 × 10 ⁷ Unit/mg.
Molecular Mass	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.
Endotoxin	Less than 1.0 EU per µg of the rhIL3 by the LAL method.
Purity	>92% as determined by SDS-PAGE.
Storage	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

Gene Name	IL3 interleukin 3 (colony-stimulating factor, multiple) [Homo sapiens]
Official Symbol	IL3
Synonyms	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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Gene ID	3562
mRNA Refseq	NM_000588
Protein Refseq	NP_000579
MIM	147740
UniProt ID	P08700
Chromosome Location	5q23-q31
Pathway	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;
Function	cytokine activity; growth factor activity; interleukin-3 receptor binding;