

## Recombinant human IL3, Active, His-tagged

Cat. No. IL3-1556H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant human Interleukin-3 is a glycosylated polypeptide chain containing 133 amino acids (20 – 152 of P08700 IL3\_HUMAN) and a His-tag at the N-terminal end. It has a predicted molecular mass of 16.2 KDa, however as result of glycosylation, the recombinant protein could migrate with an apparent molecular mass of 18-22 kDa in SDSPAGE.

**Species** Human

**Source** Nicotiana Benthamiana

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

**Description** Interleukin-3 is a potent growth factor involved in a variety of cell activities such as cell growth, differentiation and apoptosis. It takes part of several biological responses such as proliferation, and differentiation of a broad range of hematopoietic progenitor cells into erythrocytes, granulocytes, monocytes, megakaryocytic and mast cells. IL-3 also induces the production of several enzymes involved in cellular metabolism, differentiation, and DNA/RNA metabolism. IL-3 is produced by activated T-lymphocytes, keratinocytes, NK-cells, mast cells, endothelial cells and monocytes. The biological activity of IL-3 is mediated through specific cell surface receptor that is composed of alpha and beta subunits. Alpha subunit is responsible for the binding and beta subunit transmits signals across the plasma membrane; il-3 is known to activate three signalling pathways: JAK/STAT, RAS/RAF/MAP kinase, and the PI-3kinase/PKB pathways. IL-3 is also implicated in the pathogenesis of several diseases

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such as asthma, athero sclerosis and multiple sclerosis. Recombinant protein has been widely used in clinical practice, in the treatment of leukaemia and as therapy for patients with bone marrow deficiency function.

**Form** Recombinant human IL-3 is lyophilized from PBS 1X buffer pH 7.4.

**Molecular Mass** 16.2 KDa, apparent molecular mass of 18-22 kDa in SDS PAGE.

**AA Sequence** HHHHHHHHAPMTQTTSLKTSWVNCNMIIDEIITHLKQPPLPLDFNNLNGEDQDILM  
ENNLRRPNLEAFNRAVKS LQNASAIESILKNLLPCLPLATAAPTRHPIHIKGDWNEF  
RRKLTFFYLKTLNAQAQQTTLAIF

**Endotoxin** < 0.04 EU/μg protein (LAL)

**Purity** >97% by SDS-PAGE gel

**Storage** This lyophilized preparation is stable at 2-8o C for short term, long storage it should be kept at -20oC. Reconstituted protein should be stored in working aliquots at -20°C. Repeated freezing and thawing is not recommended.

**Reconstitution** Centrifuge vial before opening. Lyophilized protein should be reconstituted in water to a concentration of 50 ng/μl. Optimal concentration should be determined for specific application and cell lines.

## 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

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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;

**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;

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