

Interleukin-3

Human, Recombinant (rHuIL-3)

Expressed in *E. coli*

Cat. No. CRP0886

Lot. No. (See product label)

PRODUCT INFORMATION

Description: IL3 is a pleiotropic factor produced primarily by activated T cells that can stimulate the proliferation and differentiation of pluripotent hematopoietic stem cells as well as various lineage committed progenitors. In addition, IL-3 also affects the functional activity of mature mast cells, basophils, eosinophils and macrophages. Because of its multiple functions and targets, it was originally studied under different names, including mast cell growth factor P-cell stimulating factor, burst promoting activity, multiclonal stimulating factor, thy-1 inducing factor and WEHI-3 growth factor. In addition to activated T cells, other cell types such as human thymic epithelial cells, activated murine mast cells, murine keratinocytes and neurons/astrocytes can also produce IL-3. At the amino acid sequence level, mature human and murine IL-3 share only 29% sequence identity. Consistent with this lack of homology, IL-3 activity is highly species-specific and human IL-3 does not show activity on murine cells.

Amino-Acid Sequence: 133aa, non-glycosylated

M. W. : approximately 15 kDa

Recombinant: Expressed in *E. coli*

Purity: >97% by SDS-PAGE and HPLC analyses.

Formulation: Lyophilized from a 0.2mm filtered concentrated (1mg/ml) solution in PBS, pH 7.4.

Specific Activity: Fully biologically active when compared to standard. The ED50 as determined by the dose-dependent stimulation of the proliferation of human TF-1 cells is less than 0.1 ng/ml, corresponding to a Specific Activity of 1.0×10^7 IU/mg.

Endotoxin: Less than 1EU/mg of rHuIL-3 as determined by LAL method.

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: This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

GENE INFORMATION

Gene Name: [IL3](#)

Synonyms: IL-3; MCGF; MGC79398; MGC79399; MULTI-CSF; Hematopoietic growth factor; Interleukin-3 precursor; Mast cell growth factor; Multipotential colony-stimulating factor; P-cell stimulating factor; P-cell-stimulating factor; interleukin 3; interleukin 3 (colony-stimulating factor, multiple); mast-cell growth factor; multilineage-colony-stimulating factor; IL3_HUMAN

mRNA Refseq: [NM_000588](#)

Protein Refseq: [NP_000579](#)

MIM: [147740](#)

GeneID: [3562](#)

UniProt ID: P08700

Chromosome Location: 5q31.1

Pathway: Apoptosis; Cytokine-cytokine receptor interaction; Fc epsilon RI signaling pathway; Hematopoietic cell lineage; Jak-STAT signaling pathway

Function: cytokine activity; interleukin-3 receptor binding

REFERENCES

1. Wagemaker G. et al. (1991). Interleukin-3.. Biotherapy (Dordrecht, Netherlands) **2** (4): 337-45.
2. Martinez-Moczygamba Met al. (2003). Biology of common beta receptor-signaling cytokines: IL-3, IL-5, and GM-CSF. J. Allergy Clin. Immunol. **112** (4): 653-65; quiz 666.
3. Mroczko B, Szmitkowski M (2005). Hematopoietic cytokines as tumor markers. Clin. Chem. Lab. Med. **42**

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