

**IL-3**  
**Catalog # PVGS1330**

**Specification**

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**IL-3 - Product Information**

Primary Accession [P01586](#)  
**Species**  
Mouse

**Sequence**  
Asp33-Cys166, expressed with an N-terminal Met

**Purity**  
> 95% as analyzed by SDS-PAGE

**Endotoxin Level**  
< 0.2 EU/ µg of protein by gel clotting method

**Biological Activity**  
ED<sub>50</sub> < 0.05 ng/ml, measured by a cell proliferation assay using M-NFS-60 cells, corresponding to a specific activity of > 2.0 × 10<sup>7</sup> units/mg.

**Expression System**  
E. coli

Formulation **Lyophilized after extensive dialysis against PBS.**

**Reconstitution**  
It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH<sub>2</sub>O up to 100 µg/ml.

**Storage & Stability**  
Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

**IL-3 - Additional Information**

**Gene ID** 16187

**Other Names**  
Interleukin-3, IL-3, Hematopoietic growth factor, Mast cell growth factor, MCGF, Multipotential colony-stimulating factor, P-cell-stimulating factor, Il3, Csfmu, Il-3

**Target Background**  
Interleukin-3 (IL-3) is a pleiotropic cytokine belonging to the interleukin family. IL-3 shares similarities with Granulocyte-Macrophage Colony-Stimulating Factor (GM-CSF) and IL-5: they all have a four-helix bundle structure, are located on the same chromosomes in both human and

mouse, are produced by activated T cells, and share receptors. The IL-3/IL-5/GM-CSF receptor family members are all heterodimeric, composed of a receptor-specific  $\alpha$  chain and a common  $\beta$  chain. IL-3 is also called multi-colony stimulating factor since it stimulates the development and colony formation of multiple lineages of hematopoietic cells by activating intracellular pathways such as Ras-Raf-ERK and JAK/STAT. IL-3 inhibits apoptosis and promotes cell survival by targeting the anti-apoptotic bcl-2 gene family.

## IL-3 - Protein Information

**Name** IL3

**Synonyms** Csfmu, Il-3

### Function

Cytokine secreted predominantly by activated T-lymphocytes as well as mast cells and osteoblastic cells that controls the production and differentiation of hematopoietic progenitor cells into lineage- restricted cells. Stimulates also mature basophils, eosinophils, and monocytes to become functionally activated. In addition, plays an important role in neural cell proliferation and survival. Participates as well in bone homeostasis and inhibits osteoclast differentiation by preventing NF-kappa-B nuclear translocation and activation. Mechanistically, exerts its biological effects through a receptor composed of IL3RA subunit and a signal transducing subunit IL3RB (By similarity). Receptor stimulation results in the rapid activation of JAK2 kinase activity leading to STAT5-mediated transcriptional program (PubMed:<a href="http://www.uniprot.org/citations/10376805" target="\_blank">10376805</a>, PubMed:<a href="http://www.uniprot.org/citations/31990690" target="\_blank">31990690</a>, PubMed:<a href="http://www.uniprot.org/citations/8378315" target="\_blank">8378315</a>). Alternatively, contributes to cell survival under oxidative stress in non- hematopoietic systems by activating pathways mediated by PI3K/AKT and ERK (By similarity).

### Cellular Location

Secreted.

### Tissue Location

Activated T-cells, mast cells, natural killer cells

## IL-3 - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## IL-3 - Images