

Product Information

Interleukin-3, mouse recombinant, expressed in *Escherichia coli*

Catalog Number **I4144**, with BSA as carrier

Catalog Number **I5286**, carrier free

Storage Temperature $-20\text{ }^{\circ}\text{C}$

Synonyms: IL-3, mIL-3, Mast cell growth factor, Multipotential colony-stimulating factor, MULTI-CSF, Hematopoietic growth factor

Product Description

Interleukin-3 (IL-3) is a species-specific, variably glycosylated, multifunctional protein produced by activated T lymphocytes.^{1,2} IL-3 appears to support the formation of multilineage colonies in the early development of multipotent hematopoietic progenitor cells. It has been shown to induce colony formation of macrophages, neutrophils, mast cells, and megakaryocytes from agar-suspended bone marrow cells.³ IL-3 interacts with IL-2 to simulate growth of T lymphocytes⁴ and induce IgG secretion from activated B cells.⁵ Other synonyms or activities attributed to IL-3 include multicolony stimulating factor, mast cell growth factor, burst promoting activity, histamine-producing cell stimulating factor, and WEHI-II-3 factor.⁶

Recently it has been shown IL-3 in conjunction with FGF-2, SDF-1 α , and SCF promote human EC tube morphogenesis in 3D collagen matrices under serum-free defined conditions.⁷ It has also been shown IL-3 is strongly associated with brain volume variation in four genetically divergent human populations and could promote proliferation and survival of neural progenitors.⁸

The products are sterile filtered through a 0.2 μm filter and lyophilized either with 500 μg BSA (Catalog Number I4144) or without a carrier (Catalog Number I5286).

Recombinant mouse IL-3 contains 135 amino acid residues (Predicted molecular mass: 15,233 Da).

Purity: $\geq 98\%$ (SDS-PAGE)

Endotoxin: ≤ 1 EU/ μg -P

ED₅₀: ≤ 0.05 ng/ml

The biological activity is measured by the dose-dependent stimulation of the proliferation of mouse M-NFS-60 cells.⁹ The ED₅₀ is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Reconstitute the contents of the vial using water to a concentration of 0.1–1.0 mg/ml. This solution can then be diluted into other aqueous buffers and stored at 2–8 $^{\circ}\text{C}$ for up to 1 week. For extended storage, freeze in working aliquots at $-20\text{ }^{\circ}\text{C}$.

Storage/Stability

The lyophilized protein is best stored at $-20\text{ }^{\circ}\text{C}$.

Reconstituted IL-3 should be stored in working aliquots at $-20\text{ }^{\circ}\text{C}$. Repeated freezing and thawing is not recommended.

References

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4. Santoli, D. et al., Amplification of IL-2-driven T cell proliferation by recombinant human IL-3 and granulocyte-macrophage colony-stimulating factor. *J. Immunol.*, **141**, 519-526 (1988).
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