

CTGrade rh IL-3

Catalog #	Product	Size
500-04	CTGrade rh IL-3	50µg, 100µg, 1mg lyophilized

Intended Use

This product is for research or further manufacturing use only. Not for injection or diagnostic procedures. The safety and efficacy of this product in diagnostic or other clinical procedures has not been established.

Product Description

This product is produced from *E. coli* and is manufactured in a facility that does not use or process beta-lactam containing materials. No animal- or human-derived materials were used during manufacturing or as ingredients. This product is manufactured, tested, and released in an ISO 9001:2015 certified facility and follows cGMP practices. USP chapter <1043> for ancillary materials has been considered in the manufacture of this product. Vial may appear empty but contains protein at the stated quantity.

Synonyms: MCGF, Multi-CSF, HCGF, P-cell stimulating factor

NIH Accession Number: P08700

Background: Interleukin 3 (IL-3) is a hematopoietic growth factor produced by T cells (1) and to a lesser extent, by mast cells (2), eosinophils (3) and innate response activator B cells (4) and plays a key role in inflammatory diseases. IL-3 has broad structural similarities with other interleukins and hemopoietic growth factors. Mouse IL-3 consists of 140 amino acids (5, 6) while human IL-3 consists of 133 (7). While there are no marked amino acid sequence homologies with other cytokines, the human genes for GM-CSF and IL-3 are closely linked on chromosome 5 at 5q23-q31 (7). The amino acid sequences of mouse and human IL-3 exhibit only 30% identity, reflecting the lack of cross-species biological activity (7).

Specifications

Formulation:	CTGrade rh IL-3 lyophilized at 1mg/ml in 10 mM Sodium Phosphate, 150 mM Sodium Chloride, pH 7.5, 0.2µm filtered.
Protein Purity:	≥97% determined by reducing and non-reducing SDS-PAGE analysis.
Endotoxin:	<0.05 EU/µg using USP <85>/ EP 2.6.14
Bioactivity:	ED50 is determined by the dose-dependent Proliferation of TF-1 cells. The ED50 is typically less than 2 ng/mL. The international units of CTGrade rh IL-3 is approximately 4.2 x10 ³ IU/µg, which is calibrated against recombinant Human Interleukin 3 WHO International Standard (NIBSC code 91/510).
Quality:	Carrier-free and no animal or human-derived materials were used during manufacturing.

Quality Assurance

All quality control test results are reported on a lot specific Certificate of Analysis, which is available at www.irvinesci.com or upon request.

Shipping

This product is shipped at ambient temperature. Immediately upon receipt, store at the recommended temperature below.

Storage Instructions and Stability

Upon receipt, store the lyophilized protein at -20°C in a manual defrost freezer. Unopened vials are stable for 36 months from the date of manufacturer. Reconstituted material should be apportioned in working volumes and stored at or below -20°C in manual defrost freezer.

For short term storage reconstituted material is stable for 4-6 weeks when stored at 2-8°C. Stability can be increased by adding at least 0.1% carrier protein.

Precautions

For *ex vivo* use only. Not for injection or diagnostic procedures. The safety and efficacy of this product in diagnostic or other clinical uses has not been established. Please refer to the Safety Data Sheet for information regarding hazards and safe handling practices.

Directions for Use

1. Reconstitution

Allow the vial and sterile water (e.g. FUJIFILM Irvine Scientific, Inc. P/N 9309 Water for Injection) to equilibrate to room temperature. Draw up desired volume of reconstitution buffer. Aseptically puncturing through rubber stopper with sterile needle, inject the buffer to achieve the desired concentration (0.1-0.5 mg/mL). Swirl the vial gently, **do not vortex**. Allow protein to rehydrate for 10-15 minutes at room temperature with occasional gentle mixing.

2. Optimum Concentration

The optimum concentration varies depending on cell type and culture conditions. Working concentration should be determined for each specific application.

Related Products

Catalog #	Product	Size
91211	PRIME-XV Hematopoietic Cell Basal XSFM	500mL
9309	Water for Injection	1L

References

1. Niemeyer CM, *et al.* (1989). *Blood* 73, 945. PMID: 2645952
2. Lorentz A, *et al.* (2000). *J. Immunol.* 164, 43. PMID: 10604991
3. Kita H, *et al.* (1991) *J. Exp. Med.* 174, 745. PMID: 1875171
4. Weber GF, *et al.* (2015) *Science* 347, 1260. PMID: 25766237
5. Yokota T, *et al.* (1984) *Proc Natl Acad Sci* 81:1070. PMID: 6322187
6. Fung, *et al.* (1984) *Nature* 307:233. PMID: 6420702
7. Yang *et al.* (1986) *Cell* 47:3. PMID: 3489530

Technical Support

CONTACT US

For more information or assistance contact Customer Service at:

- Email: fisitmrequest@fujifilm.com
- Direct line: +1 800 577 6097

WEBSITE RESOURCES

Visit the website at www.shenandoah-bt.com and www.irvinesci.com for technical resources and information including:

- Safety Data Sheets (SDS)
- Certificate of Analysis (CoA) (when available)
- FAQs
- Product literature

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