Technical Data Sheet

Recombinant Mouse IL-3

Product Information

Material Number:	**554579**
Size:	10 µg
Concentration:	200 µg/ml
Reactivity:	QC Testing: Mouse
Storage Buffer:	Frozen aqueous buffered solution containing BSA and glycerol.

Description

Interleukin-3 (IL-3) is a species-specific cytokine which acts on hematopoietic progenitors of every lineage, with the probable exception of cells committed to the lymphoid lineage. It has been referred to as CSF-2 , BPA, megakaryocyte CSF, HCGF and hemopoietin 2. Mouse IL-3 is a 17.2 kD protein containing 140 amino acid residues. Recombinant mouse IL-3 (Cat. No. 554579) is supplied as a frozen liquid comprised of 0.22 µm sterile-filtered aqueous buffered solution, glycerol and bovine serum albumin, with no preservatives. Recombinant mouse IL-3 is ≥ 95% pure as determined by SDS-PAGE, and an absorbance assay based on the Beers-Lambert law. The endotoxin level is ≤ 0.1 ng per µg of mouse IL-3, as measured in a chromogenic LAL assay.

Preparation and Storage

Store product at -80°C prior to use or for long term storage of stock solutions.
Rapidly thaw and quick-spin product prior to use.
Avoid multiple freeze-thaws of product.
This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Application Notes

Application

ELISA Standard	Routinely Tested
Bioassay	Tested During Development
Blocking	Tested During Development

Recommended Assay Procedure:

Upon initial thawing, recombinant mouse IL-3 (Cat. No. 554579) should be aliquoted into polypropylene microtubes and frozen at -80°C for future use. Alternatively, the product can be diluted in sterile neutral buffer containing not less than 0.5-10 mg/mL carrier protein, such as human or bovine serum albumin, aliquoted and stored at -80°C. For *in vitro* biological assay use, carrier-protein concentrations of 1-2 mg/mL are recommended. For use as an ELISA standard, carrier-protein concentrations of 5– 10 mg/mL are recommended. Failure to add carrier protein or store at indicated temperatures may result in a loss of activity. This product should not be diluted to less than 2 µg/mL for long term storage. Carrier proteins should be pre-screened for possible effects in each investigator's experimental system. Carrier proteins may have an undesired influence on experimental results due to toxicity, high endotoxin levels or possible blocking activity.

ELISA Standard: Recombinant mouse IL-3 (Cat. No. 554579) can be useful as a quantitative standard for measuring mouse IL-3 protein levels using sandwich ELISA with the purified MP2-8F8 antibody (Cat. No. 554381) as a capture antibody and biotinylated MP2-43D11 (Cat. No. 554384) as the detection antibody. To obtain linear standard curves, investigators may want to consider using doubling dilutions of recombinant mouse IL-3 from 2000-15 pg/mL to be included for each ELISA plate. For measuring mouse IL-3 in serum or plasma, investigators are highly encouraged to use the BD OptEIA™ Mouse IL-3 ELISA Set (Cat. No. 555228).

Bioassay: Investigators are advised that the Bioassay application is not routinely tested for this material and are highly encouraged to both titrate this material and include appropriate controls in relevant experiments. An activity range of 0.5-5.0x10^9 units/mg, encompassing an ED50= 2-20 pg/mL, has previously been reported using NFS-60 indicator cells for proliferation, with a unit defined as the amount of material needed to stimulate a half-maximal response at cytokine saturation.

Blocking: Recombinant mouse IL-3 (Cat. No. 554579) can be useful as a blocking control for flow cytometric analysis when used with PE-conjugated MP2-8F8 antibody (Cat. No. 554383). Investigators are advised that the blocking application is not routinely tested for this material. Intracellular cytokine staining techniques and the use of blocking controls are described in detail by C. Prussin and D. Metcalfe.

BD Biosciences
bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit **bdbiosciences.com/contact**

Suggested Companion Products

Catalog Number	Name	Size	Clone
554381	Purified Rat Anti-Mouse IL-3	0.5 mg	MP2-8F8
554384	Biotin Rat Anti-Mouse IL-3	0.5 mg	MP2-43D11
555228	Mouse IL-3 ELISA Set	20 plates	(none)
554383	PE Rat Anti-Mouse IL-3	0.1 mg	MP2-8F8

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Frendl G. Interleukin 3: from colony-stimulating factor to pluripotent immunoregulatory cytokine. *Int J Immunopharmacol.* 1992; 14:421-430. (Biology: IC/FCM Block)

Fung MC, Hapel AJ, Ymer S, Cohen DR, Johnson RM, Campbell HD, Young IG. Molecular cloning of cDNA for murine interleukin-3. *Nature.* 1984; 307(5948):233-237. (Biology)

Prussin C, Metcalfe DD. Detection of intracytoplasmic cytokine using flow cytometry and directly conjugated anti-cytokine antibodies. *J Immunol Methods.* 1995; 188(1):117-128. (Methodology)

Urdal DL, Mochizuki D, Conlon PJ, March CJ, Remerowski ML, Eisenman J, Ramthun C, Gillis S. Lymphokine purification by reversed-phase high-performance liquid chromatography. *J Chromatogr.* 1984; 296:171-179. (Biology)

Weinstein Y, Ihle JN, Lavu S, Reddy EP. Truncation of the c-myb gene by a retroviral integration in an interleukin 3-dependent myeloid leukemia cell line. *Proc Natl Acad Sci U S A.* 1986; 83(14):5010-5014. (Biology)

Yokota T, Lee F, Rennick D, Hall C, Arai N, Mosmann T, Nabel G, Cantor H, Arai K. Isolation and characterization of a mouse cDNA clone that expresses mast-cell growth-factor activity in monkey cells. *Proc Natl Acad Sci U S A.* 1984; 81(4):1070-1074. (Biology)

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit **bdbiosciences.com/contact**