

Technical Data Sheet

Recombinant Mouse IL-1 β

Product Information

Material Number:	554577
Size:	5 μ g
Reactivity:	Mouse
Storage Buffer:	Lyophilized in an aqueous buffered solution containing BSA.

Description

Interleukin-1 (IL-1 β) is a potent immunomodulator which mediates a wide range of immune and inflammatory responses including the activation of B and T cells. Mouse IL-1 is a 17 kD protein containing 153 amino acid residues.

Formulation and Purity: Recombinant mouse IL-1 β is supplied lyophilized from a solution comprised of 0.22 μ m sterile-filtered aqueous buffered solution, pH 7.4, and containing 50 μ g bovine serum albumin, per μ g of cytokine. The product contains no preservatives. Recombinant mouse Interleukin-1 β is > 95% pure as determined by SDS-PAGE analysis, and an absorbance assay based on the Beers-Lambert law.

Preparation and Storage

Store product at -80°C prior to use or for long term storage of stock solutions.
Avoid multiple freeze-thaws of product.

The product can be reconstituted in sterile neutral buffer containing not less than 0.5 - 10 mg/ml carrier protein such as human or bovine albumin, aliquoted and stored at -80°C. For in vitro biological assay use, we recommend carrier-protein concentrations of 0.5 - 1.0 mg/ml. For use as an ELISA standard we recommend carrier-protein concentrations of 5-10 mg/ml. Failure to add carrier protein or store at indicated temperatures may result in a loss of activity.

Application Notes

Application

Bioassay	Routinely Tested
ELISA Standard	Tested During Development

Recommended Assay Procedure:

1. Biological Activity: As measured by proliferation of TF-1 indicator cells at 10⁵ cells/ml

Specific Activity: 0.06 - 2.5 x10⁸ Unit*/mg

ED50: 0.04-1.5 ng/ml; Observed dose response relationship: >50 fold

*Unit is defined as the amount of material required to stimulate a half-maximal response at cytokine saturation. Investigators are advised to determine optimal concentrations for individual applications.

2. ELISA Standard:

Recombinant mouse IL-1 β is useful as a quantitative standard for measuring mouse IL-1 β protein levels in an IL-1 β -specific sandwich ELISA. For specific methodology, please visit the online protocols or the chapter on ELISA in the BD Biosciences Immune Function Handbook, both of which are posted on our web site, www.bdbiosciences.com. To measure mouse IL-1 β in plasma or serum, we recommend the BD OptEIA™ Mouse IL-1 β ELISA Set (Cat. No. 559603), which is specially formulated for assay of cytokine in complex fluids.

Suggested Companion Products

Catalog Number	Name	Size	Clone
559603	Mouse IL-1 β ELISA Set	5 μ g	(none)

Product Notices

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

References

- Dinarello CA. Interleukin-1 and interleukin-1 antagonism. *Blood*. 1991; 77(8):1627-1652. (Biology)
- Gray PW, Glaister D, Chen E, Goeddel DV, Pennica D.. Two interleukin 1 genes in the mouse: cloning and expression of the cDNA for murine interleukin 1 beta.. *J Immunol*. 1986; 137(11):3644-3648. (Biology)
- Kitamura T, Takaku F, Miyajima A. IL-1 up-regulates the expression of cytokine receptors on a factor-dependent human hemopoietic cell line, TF-1. *Int Immunol*. 1991; 3(6):571-577. (Biology)
- Kitamura T, Tange T, Terasawa T, et al. Establishment and characterization of a unique human cell line that proliferates dependently on GM-CSF, IL-3, or erythropoietin. *J Cell Physiol*. 1989; 140(2):323-334. (Methodology)

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