Recombinant Mouse IL-1β

Product Information

**Material Number:** 554577  
**Size:** 5 µg  
**Reactivity:** QC Testing: Mouse  
**Storage Buffer:** Lyophilized in an aqueous buffered solution containing BSA.

**Description**

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

**Formulation and Purity:** Recombinant mouse IL-1β is supplied lyophilized from a solution comprised of 0.22 µm sterile-filtered aqueous buffered solution, pH 7.4, and containing 50 µg bovine serum albumin, per µg of cytokine. The product contains no preservatives. Recombinant mouse Interleukin-1β 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**

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<th>Routinely Tested</th>
<th>Tested During Development</th>
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<tr>
<td>ELISA Standard</td>
<td>Mouse IL-1β</td>
<td>ELISPOT</td>
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<tr>
<td>Bioassay</td>
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**Recommended Assay Procedure:**

1. **Biological Activity:** As measured by proliferation of TF-1 indicator cells at 10^5 cells/ml  
   **Specific Activity:** 0.06 - 2.5 x10^8 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-1β is useful as a quantitative standard for measuring mouse IL-1β protein levels in an IL-1β-specific sandwich ELISA. For specific methodology, please visit the online protocols under "ELISA and ELISPOT" at our website, http://www.bdbiosciences.com/us/s/resources. To measure mouse IL-1β in plasma or serum, we recommend the BD OptEIA™ Mouse IL-1β ELISA Set (Cat. No. 559603), which is specially formulated for assay of cytokine in complex fluids.

**Suggested Companion Products**

<table>
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<tr>
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<tr>
<td>559603</td>
<td>Mouse IL-1β ELISA Set</td>
<td>20 Plate(s)</td>
<td>(none)</td>
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**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.  

**References**

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(9):571-577. (Biology)  