



## User Manual

**Interleukin-1 beta (IL-1 $\beta$ ) (Rat)**

**Cat. No. REILP-01021**

**Description:**

Interleukin-1 beta (IL-1 $\beta$ ) is a proinflammatory cytokine produced in a variety of cells including monocytes, tissue macrophages, keratinocytes and other epithelial cells. Both IL-1 $\alpha$  and IL-1 $\beta$  bind to the same receptor and have similar if not identical biological properties. These cytokines have a broad range of activities including, stimulation of thymocyte proliferation, by inducing IL-2 release, B-cell maturation and proliferation, mitogenic FGF-like activity and the ability to stimulate the release of prostaglandin and collagenase from synovial cells. However, whereas IL-1 $\beta$  is a secreted cytokine, IL-1 $\alpha$  is predominantly a cell-associated cytokine.

**Source:**

*Escherichia coli*

**Unit:**

2  $\mu$ g

**Reconstitution:**

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at  $< -20^{\circ}\text{C}$ . Further dilutions should be made in appropriate buffered solutions.

**Formulation:**

Lyophilized from a 0.2  $\mu\text{m}$  filtered concentrated solution in PBS, pH 7.4.

**Storage:**

This lyophilized preparation is stable at 2-8 $^{\circ}\text{C}$ , but should be kept at -20 $^{\circ}\text{C}$  for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 $^{\circ}\text{C}$ . For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 $^{\circ}\text{C}$  to -70 $^{\circ}\text{C}$ . Avoid repeated freeze/thaw cycles.

**Molecular Weight:**

Approximately 17.3 kDa, a single non-glycosylated polypeptide chain containing 153 amino acids.

**Endotoxin:**

Less than 1 EU/ $\mu$ g of IL-1 $\beta$  as determined by LAL method.

**Usage:**

This material is offered by Cyagen Biosciences for research, laboratory or further evaluation purposes. FOR RESEARCH USE ONLY. NOT INTENDED FOR ANY ANIMAL OR HUMAN THERAP EUTIC OR DIAGNOSTIC USE.

**Biological Activity:**

The ED50 determined by a cell proliferation assay using murine D10S cells is less than 1.0 ng/mL, corresponding to a specific activity of  $> 1.0 \times 10^6$  IU/mg.

**Physical Appearance:**

Sterile filtered white lyophilized (freeze-dried) powder.

**AA Sequence:**

MVPIRQLHCR LRDEQQKCLV LSDPCELKAL HLNGQNISQQ VVFSMSFVQG  
ETSNDKIPVA LGLKGLNLYL SCVMKDGTPPT LQLESVDPKQ YPKKKMEKRF  
VFNKIEVGTK VEFESAQFPN WYISTSQAEH RPVFLGNSNG RDIVDFTMEP VSS

**Purity:**

$> 96\%$  by SDS-PAGE and HPLC analyses.

Material Safety Data Sheets (MSDSs) are available upon request.

The Certificate of Analysis (COA), which provides detailed quality control information for each product, is also available at the Cyagen website.

Cyagen Biosciences reserves all rights on the technical documents of its culture products. No part of this document may be reproduced or adapted for other purposes without written permission from Cyagen Biosciences.