



## PRODUCT DATA SHEET

**Product:** IL-1 $\beta$  (recombinant mouse)

**Cat. No.:** BC-272 (10  $\mu$ g)

**Synonyms:**

Interleukin-1 beta precursor

**Background:**

IL-1 $\beta$  is a soluble factor produced by monocytes, macrophages, and other cells, which activates T-lymphocytes and potentiates their response to mitogens or antigens. IL-1 consists of two distinct forms, IL-1 $\alpha$  and IL-1 $\beta$ , which perform the same functions but are distinct proteins. The synthesis of IL-1 can be induced by other cytokines including TNF- $\alpha$ , IFN- $\alpha$ , IFN- $\beta$  and IFN- $\gamma$  and also by bacterial endotoxins, viruses, mitogens, and antigens. In human skin fibroblasts IL1- $\alpha$  and TNF- $\alpha$  induce the synthesis of IL1- $\beta$ . In pheochromocytoma cells, NGF induces the synthesis of IL1.

**Description:**

Recombinant mouse IL-1 produced in E.Coli is a non-glycosylated, polypeptide chain containing 153 amino acids and having a molecular mass of 17,500 Dalton. Recombinant mouse IL-1 $\beta$  is purified by proprietary chromatographic techniques.

**Amino Acid Sequence:**

The sequence of the first five N-terminal amino acids was determined to be Met-Val-Pro-Ile-Arg.

**Origin:**

Produced in *E. Coli*.

**Format:**

Sterile filtered white powder. Lyophilized from a 1 mg/mL sterile solution containing 5 mM Tris, pH 8.0, monobasic and 0.32 mg sodium phosphate dibasic.

**Purity:**

Greater than 98.0% as determined by RP-HPLC, anion-exchange FPLC, reducing and SDS-PAGE Silver Stained.

Dimers and aggregates:

Less than 1% as determined by silver-stained SDS-Page gel analysis.

**Endotoxin:**

Less than 0.1 ng/ug (IEU/ $\mu$ g) of recombinant mouse IL-1 $\beta$ .

**Reconstitution:**

Reconstitute in sterile 18 M $\Omega$ -cm H<sub>2</sub>O at not less than 100  $\mu$ g/mL, which can then be further diluted to other aqueous solutions.

**Biological Activity:**

Recombinant mouse Interleukin-1 $\beta$  is fully biologically active when compared to standard. The ED50 as determined by the dose-dependant stimulation of mouse D10S cells is less than 0.002 ng/mL, corresponding to a Specific Activity of 5 x 10<sup>9</sup> IU/mg.

**Storage:**

Lyophilized recombinant mouse IL-1 $\beta$ , although stable at room temperature for 3 weeks, should be stored desiccated below -18 $^{\circ}$ C. Upon reconstitution IL-1 $\beta$  should be stored at 4 $^{\circ}$ C between 2-7 days and for future use below -18 $^{\circ}$ C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

**Limitations:**

For *in vitro* research use only. Not for use in diagnostics or in humans.

**Warranty:**

No warranties, expressed or implied, are made regarding the use of this product. KAMIYA BIOMEDICAL COMPANY is not liable for any damage, personal injury, or economic loss caused by this product.