



PRODUCT DATA SHEET

Product: IL-1 β (recombinant human)

Cat. No.: BC-271 (10 μ g)

Synonyms:

Interleukin-1 beta precursor, Catabolin

Background:

IL-1 β 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 α and IL-1 β , which perform the same functions but are distinct proteins. The synthesis of IL-1 can be induced by other cytokines including TNF- α , IFN- α , IFN- β and IFN- γ and also by bacterial endotoxins, viruses, mitogens, and antigens. In human skin fibroblasts IL1- α and TNF- α induce the synthesis of IL1- β . In pheochromocytoma cells, NGF induces the synthesis of IL1.

Description:

Recombinant human 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 human IL-1 β is purified by proprietary chromatographic techniques.

Amino Acid Sequence:

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

Origin:

Produced in *E. Coli*.

Format:

Sterile filtered white powder. Lyophilized from a 1 mg/mL sterile solution containing 50 mM Phosphate buffer, pH 7.1, and 150 mM NaCl.

Purity:

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

Reconstitution:

Reconstitute in sterile 18 M Ω -cm H₂O at not less than 100 μ g/mL, which can then be further diluted to other aqueous solutions.

Biological Activity:

Recombinant human Interleukin-1 β is fully biologically active when compared to standards. The specific activity, as determined in the test of augmentation of lymphocyte proliferation assay using mouse thymus, was found to be 2.0 x 10⁸ IU/mg.

Storage:

Lyophilized recombinant human IL-1 β , although stable at room temperature for 3 weeks, should be stored desiccated below -18 $^{\circ}$ C. Upon reconstitution IL-1 β 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.