

Technical Data Sheet

Recombinant Human IL-1 β

Product Information

Material Number:	554602
Size:	5 μ g
Reactivity:	QC Testing: Human
Storage Buffer:	Lyophilized in an aqueous buffered solution containing BSA.

Description

Interleukin-1 β (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. This is the mature form of human IL-1 β , a 17 kD protein containing 153 amino acid residues, representing amino acids A117 through S269 of the IL-1 β precursor protein, expressed in *E. coli*.

Formulation and Purity

Recombinant human IL-1 β is lyophilized from a solution comprised of 0.22 μ m sterile-filtered aqueous buffered solution with no preservatives. Each vial contains 250 μ g of bovine serum albumin, for a final ratio of carrier protein to human IL-1 β of 50:1. The recombinant human IL-1 β is \geq 95% pure as determined by SDS-PAGE analysis, and an absorbance assay based on the Beers-Lambert law. The endotoxin level is \leq 1.0 EU per μ g of human IL-1 β as determined by the LAL method.

Preparation and Storage

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

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

The product can be reconstituted in sterile neutral buffer containing 0.5 - 10 mg/ml carrier protein such as human or bovine serum albumin, aliquoted and stored at -80°C. For in vitro biological assay use, we recommend carrier-protein concentrations of 0.5 - 1 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. Carrier proteins should be pre-screened for possible effects in an appropriate experimental system. Carrier proteins may affect experimental results due to toxicity, high endotoxin levels or possible blocking activity.

Application Notes

Application

Bioassay	Routinely Tested
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Recommended Assay Procedure:

Biological Activity: The activity range is measured in a proliferation assay using TF-1 indicator cells.

Specific Activity Range: 1.0-4.0x10⁸ Units*/mg

ED50: 25-100 pg/ml

Observed dose response: 100 fold

* The Unit is defined as the amount of material required to stimulate a half-maximal response at cytokine saturation.

Product Notices

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

References

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 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. (Methodology)
 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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