9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

IL 1 beta Human

Interleukin-1 beta Human Recombinant
CYK0229

Product Overview

Name	IL 1 beta Human
Description	
Interleukin-1 beta Human Recombinant	
Accession (Primary)	P01584
Synonyms	
Catabolin, Lymphocyte-activating factor (LAF), Endogenous Pyrogen (EP), Leukocyte Endogenous Mediator (LEM), Mononuclear Cell Factor (MCF), IL1F2, IL-1 beta.	
Introduction	
Interleukin-1b is produced by activated macrophages, IL-1 Beta stimulates thymocyte proliferation by inducing il-2 release, b-cell maturation and proliferation, and fibroblast growth factor activity. IL1B proteins are involved in the inflammatory response, being identified as endogenous pyrogens, and are reported to stimulate the release of prostaglandin from synovial cells.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile Filtered White lyophilized (freeze-dried) powder.	
Formulation	
IL-1 Beta was lyophilized from a concentrated (1mg/ml) sterile solution containing 50mM Phosphate buffer pH=7.1 and 150mM NaCl.	
Stability	
Lyophilized Interleukin-1b although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL-1 Beta should be stored at 4°C between 2-7 days and for future use below -18°C.For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.	
Purity	
Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.	
Amino acid sequence	
The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Pro-Val-Arg-Ser.	
Biological Activity	

9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

The specific activity as determined in the test of augmentation of lymphocyte proliferation assay using mouse thymus was found to be 200,000,000 IU/mg.

Solubility

It is recommended to reconstitute the lyophilized Interleukin-1b in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

References

Title: Proinflammatory Cytokine IL-1b Stimulates IL-8 Synthesis in Mast Cells via a Leukotriene B4 Receptor 2-Linked Pathway, Contributing to Angiogenesis.Publication: Published online before print March 1, 2010, doi: 10.4049/jimmunol.0901735 The Journal of Immunology April 1, 2010 vol. 184 no. 7 3946-3954.Link: IL 1 beta prospec publication Application: Level of IL-8 mRNA was dramatically enhanced by IL-1b,HMC-1 cells were stimulated with IL-1b. 2.Title:Contribution of IL-1 to resistance to Streptococcus pneumoniae infection . Publication: Int. Immunol. (2008) 20 (9): 1139-1146. doi: 10.1093/intimm/dxn071 First published online: July 1, 2008 Link: IL 1 beta Human prospec publication 3.Title: Hydrogen sulphide decreases IL-1b induced activation of fibroblast?like synoviocytes from patients with osteoarthritis Publications: journal of cellular and molecular medicine 19.1 (2015): 187-197 Link: Interleukin-1 beta prospec publication 4. Title: Riampin Augments Cytokine-Induced Nitric Oxide Production in Human Alveolar Epithelial Cells Publications: Antimicrobial agents and chemotherapy 50.1 (2006): 396-398 Link: Interleukin-1 beta Human prospec publication 5. Title: Adiponectin may contribute to synovitis and joint destruction in rheumatoid arthritis by stimulating vascular endothelial growth factor, matrix metalloproteinase-1, and matrix metalloproteinase-13 expression in fibroblast-like synoviocytes more than proinflammatory mediators Publication: Arthritis Res Ther 11.6 (2009): R161. Link: IL-1 beta prospec publication

Protein content

Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 0.631 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics). 2. Analysis by RP-HPLC, using a calibrated solution of IL-1 beta Recombinant as a Reference Standard.

Precautions

IL 1 beta Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P01584)