ACTIVE BIOSCIENCE
PROTEINS · CELLS · ANTIBODIES

Human IL-1 beta

Synonyms: IL1B, IL-1, IL1F2, IL1-BETA

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date
5 µg	1502.950.005		
10 µg	1502.950.010		
50 µg	1502.950.050		
100 µg	1502.950.100		
500 µg	1502.950.500		
1 mg	1502.950.199		

Please enquire for bulk quantities and other vial sizes

Description

Interleukin-1 beta (IL-1beta) is produced by activated macrophages. IL-1beta stimulates thymocyte proliferation by inducing IL-2 release, B-cell maturation and proliferation, and fibroblast growth factor activity. IL-1beta proteins are involved in the inflammatory response, being identified as endogenous pyrogens, and are reported to stimulate the release of prostaglandin and collagenase from synovial cells. IL-1 is a name that designates two pleiotropic cytokines, IL-1 alpha (IL1F1) and IL1 beta (IL1F2), which are the products of distinct genes. IL- 1 alpha and IL-1 beta are structurally related polypeptides that share approximately 21% amino acid (aa) identity in human. Both proteins are produced by a wide variety of cells in response to inflammatory agents, infections, or microbial endotoxins. While IL-1 alpha and IL-1 beta are regulated independently, they bind to the same receptor and exert identical biological effects. The human IL-1 beta cDNA encodes a 269 aa precursor. A 116 aa propeptide is cleaved intracellularly by the cysteine protease IL-1 beta converting enzyme (Caspase1/ICE) to generate the active cytokine. The mature human IL-1 beta shares 96% aa sequence identity with rhesus and 67% 78% with canine, cotton rat, equine, feline, mouse, porcine, and rat IL-1 beta. Human recombinant IL-1beta produced in *E.Coli* is a non-glycosylated, IL-1 beta polypeptide chain containing 153 amino acids and having a molecular mass of 17.0 kDa.

- **Source** *E. Coli*
- **Purity** ≥ 98 % (SDS-PAGE, silver stained)
- **Endotoxin level** < 0.1 ng per µg (IEU/µg) of rh IL-1ß

Biological Activity

Measured in a cell proliferation assay using murine D10G4.1 cells. The ED_{50} for this effect is typically 2-10 pg/ml.

Reconstitution

The lyophilized rh IL-1ß is soluble in water and most aqueous buffers and can be reconstituted in water to a concentration of 0.1 mg/ml. This solution can be diluted into other buffered solutions or stored at -20 °C for future use.

Amino Acid Sequence

APVRSLNCTL RDSQQKSLVM SGPYELKALH LQGQDMEQQV VFSMSFVQGE ESNDKIPVAL GLKEKNLYLS CVLKDDKPTL QLESVDPKNY PKKKMEKRFV FNKIEINNKL EFESAQFPNW YISTSQAENM PVFLGGTKGG QDITDFTMQF VSS

Usage: For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.

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