

Overview

Synonyms	Catabolin, Lymphocyte-activating factor (LAF), Endogenous Pyrogen (EP), Leukocyte Endogenous Mediator (LEM), Mononuclear Cell Factor (MCF), IL1F2, IL-1 beta.
Description	Interleukin-1 beta (rhIL-1²) is a proinflammatory cytokine produced in a variety of cells including monocytes, tissue macrophages, keratinocytes and other epithelial cells. Both IL-1 alpha and IL-1 beta binds to the same receptor and has similar if not identical biological properties. These cytokines have a broad range of activities including, stimulation of thymocyte proliferation, by inducing IL-2 release, B-cell maturation and proliferation, mitogenic FGF-like activity and the ability to stimulate the release of prostaglandin and collagenase from synovial cells. However, whereas IL-1 beta is a secreted cytokine, IL-1 alpha is predominantly a cell-associated cytokine. Recombinant human Interleukin-1 beta (rhIL-1²) produced in <i>E. coli</i> is a single non-glycosylated polypeptide chain containing 153 amino acids. A fully biologically active molecule, rhIL-1 ² has a molecular mass of 17.3kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques.
Species Source	Human <i>E. coli</i>
Biological Activity	ED ₅₀ < 10 pg/ml, measured by the dose-dependent stimulation of mouse D10.G4.1 helper T cells, corresponding to a specific activity of 1.0×10 ⁸ IU/mg.
Sequence	APVRSLNCTL RDSQQKSLVM SGPYELKALH LQGQDMEQQV VFSMSFVQGE ESNDKIPVAL GLKEKNLYLS CVLKDDKPTL QLESVDPKNY PKKKMEKRFV FNKIEINNKL EFESAQFPNW YISTSQAENM PVFLGGTKGG QDITDFTMQF VSS

Properties

Measured Molecular Weight	17.3 kDa, observed by reducing SDS-PAGE.
Purity	> 95% by SDS-PAGE and HPLC analyses.
Formulation	Lyophilized after extensive dialysis against PBS.
Reconstitution	Reconstituted in ddH ₂ O or PBS at 100 µg/ml.
Endotoxin Level	<0.2 EU/µg, determined by LAL method.
Storage	Lyophilized recombinant human Interleukin-1 beta (rhIL-1²) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhIL-1 ² should be stable up to 2 weeks at 4°C or up to 3 months at -20°C.

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