

Recombinant Human IL1B protein, low endotoxin

Cat. No. IL1B-39H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human IL1B (Ala117-Ser269) protein (low endotoxin) carried no tag and was expressed in E.coli.

Species Human

Source E.coli

ProteinLength Ala117-Ser269

Description

Interleukin-1 beta (IL-1 β) is also known as catabolin, is a cytokine protein that in humans is encoded by the IL1B gene. IL-1 β precursor is cleaved by caspase 1 (interleukin 1 beta convertase). Cytosolic thiol protease cleaves the product to form mature IL-1 beta.

IL1 β 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 IL1 α and IL1 β are regulated independently, they bind to the same receptor and exert identical biological effects.

IL-1 β is a member of the interleukin 1 cytokine family. This cytokine is produced by activated macrophages as a proprotein, which is proteolytically processed to its active form by caspase 1 (CASP1/ICE). This cytokine is an important mediator of the inflammatory response, and is involved in a variety of cellular activities, including cell proliferation, differentiation, and apoptosis. The induction of cyclooxygenase-2 (PTGS2/COX2) by this cytokine in the central nervous system (CNS) is found to

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contribute to inflammatory pain hypersensitivity. This gene and eight other interleukin 1 family genes form a cytokine gene cluster on chromosome 2.

Predicted N Terminal Ala117

Form Lyophilized from 0.22 µm filtered solution in PBS, pH7.4, 10% trehalose.

Molecular Mass The protein has a calculated MW of 17.5 kDa. The protein migrates as 18 kDa under reducing (R) condition (SDS-PAGE).

Endotoxin Less than 0.1 EU per µg by the LAL method.

Purity >95% as determined by SDS-PAGE.

Storage

For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- 20 to -70 centigrade for 12 months in lyophilized state;
- 70 centigrade for 3 months under sterile conditions after reconstitution.

Reconstitution It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

Gene Name IL1B

Official Symbol IL1B

Synonyms IL1B; interleukin 1, beta; interleukin-1 beta; IL 1B; IL1 BETA; IL1F2; IL-1 beta;

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catabolin; preinterleukin 1 beta; pro-interleukin-1-beta; IL-1; IL1-BETA

Gene ID [3553](#)

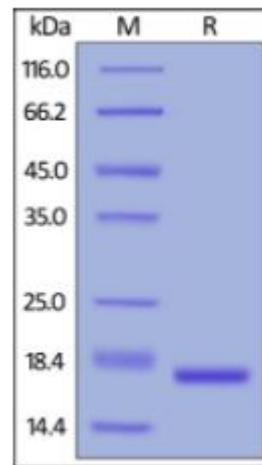
mRNA Refseq [NM_000576](#)

Protein Refseq [NP_000567](#)

MIM [147720](#)

UniProt ID [P01584](#)

SDS-PAGE of IL1B-39H



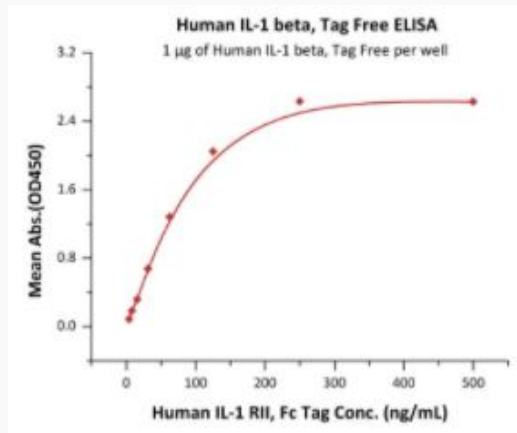
Human IL-1 beta, Tag Free on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

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**Bioactivity-ELISA of
II1B-39H**



Immobilized Human IL-1 beta, Tag Free at 10 µg/mL (100 µL/well) can bind Human IL-1 RII, Fc Tag with a linear range of 4-125 ng/mL (QC tested).

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