



Synonym

IL1B,IL-1BETA,IL1F2,IL-1 β

Source

Human IL-1 beta, His Tag(ILB-H51H3) is expressed from E. coli cells. It contains AA Ala 117 - Ser 269 (Accession # [P01584-1](#)).

Predicted N-terminus: Met

Molecular Characterization

Poly-his IL-1 beta(Ala 117 - Ser 269)
P01584-1

This protein carries a polyhistidine tag at the N-terminus.

The protein has a calculated MW of 19.3 kDa. The protein migrates as 19-20 kDa under reducing (R) condition (SDS-PAGE).

Endotoxin

Less than 1.0 EU per μ g by the LAL method.

Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μ m filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

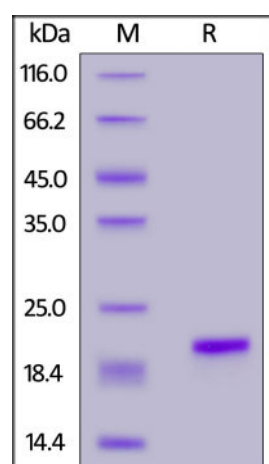
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

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

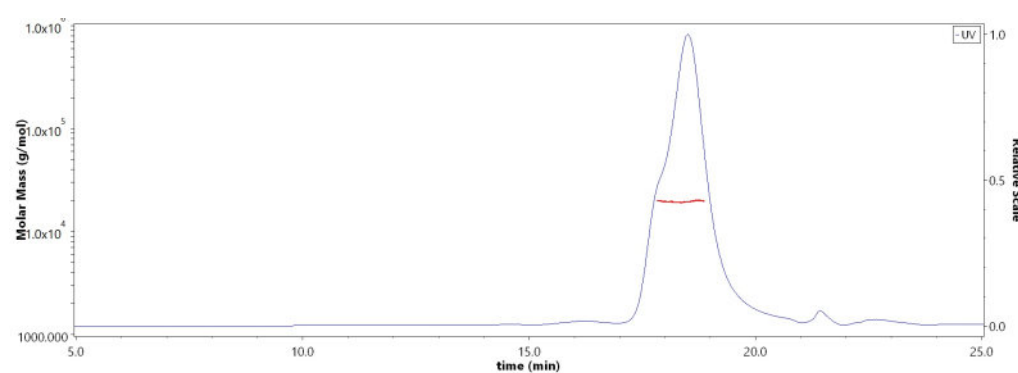
SDS-PAGE



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

Bioactivity-ELISA

SEC-MALS

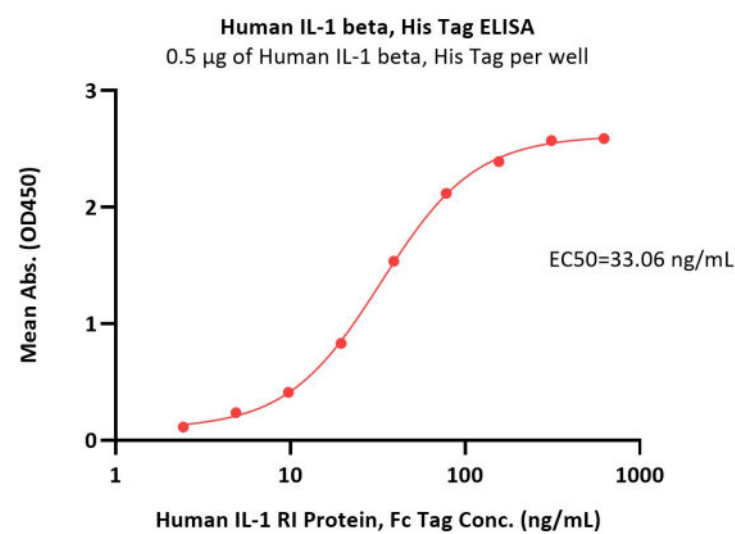
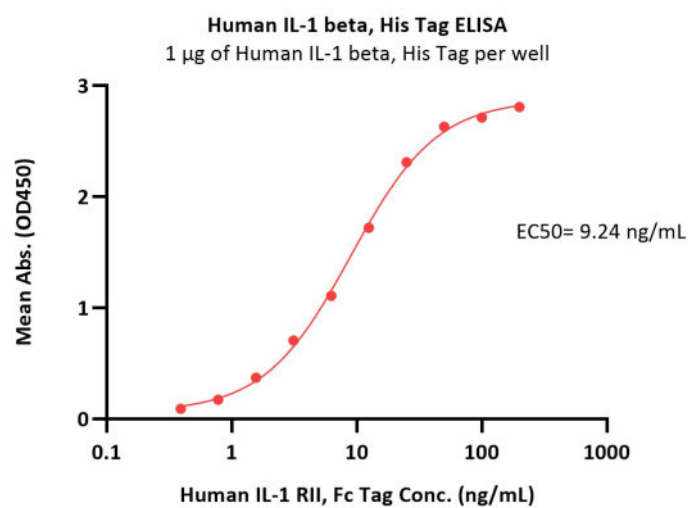


The purity of Human IL-1 beta, His Tag (Cat. No. ILB-H51H3) is more than 90% and the molecular weight of this protein is around 17-22 kDa verified by SEC-MALS.

[Report](#)

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and more!

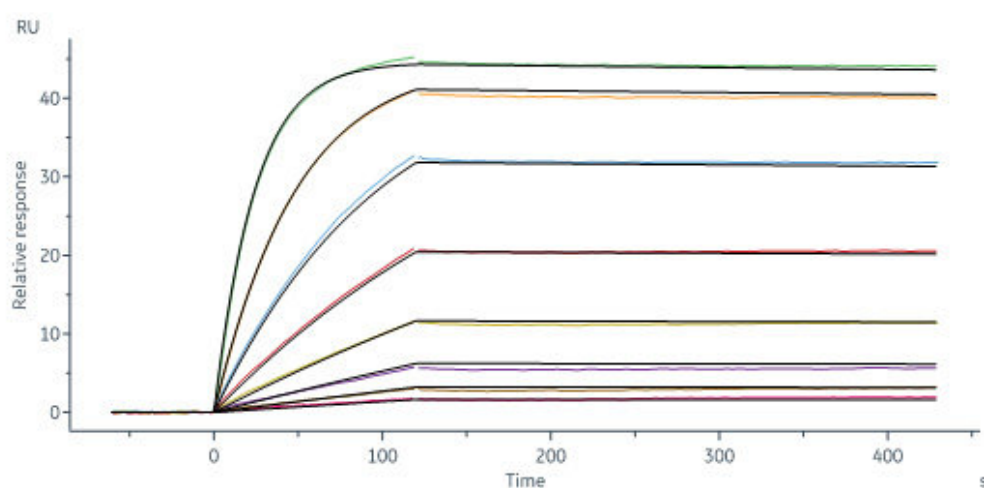




Immobilized Human IL-1 beta, His Tag (Cat. No. ILB-H51H3) at 10 µg/mL (100 µL/well) can bind Human IL-1 RII, Fc Tag (Cat. No. IL2-H4256) with a linear range of 2-13 ng/mL (QC tested).

Immobilized Human IL-1 beta, His Tag (Cat. No. ILB-H51H3) at 5 µg/mL (100 µL/well) can bind Human IL-1 RI Protein, Fc Tag (Cat. No. ILI-H5253) with a linear range of 2-78 ng/mL (Routinely tested).

Bioactivity-SPR



Human IL-1 RII, Fc Tag (Cat. No. IL2-H4256) captured on CM5 chip via Anti-human IgG Fc antibodies surface can bind Human IL-1 beta, His Tag (Cat. No. ILB-H51H3) with an affinity constant of 0.571 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Background

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

IL1β 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 IL1α and IL1β are regulated independently, they bind to the same receptor and exert identical biological effects.

IL-1β 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 (CASPI/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 contribute to inflammatory pain hypersensitivity. This gene and eight other interleukin 1 family genes form a cytokine gene cluster on chromosome 2.

Clinical and Translational Updates

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