



Synonym

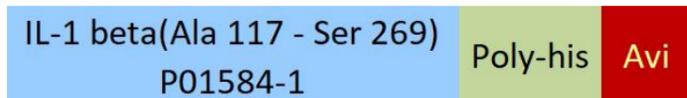
IL1B,IL-1BETA,IL1F2,IL-1β

Source

Biotinylated Human IL-1 beta, His,Avitag(ILB-H82E9) is expressed from human 293 cells (HEK293). It contains AA Ala 117 - Ser 269 (Accession # [P01584-1](#)).

Predicted N-terminus: Ala 117

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 21.0 kDa. The protein migrates as 26-28 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 µm 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

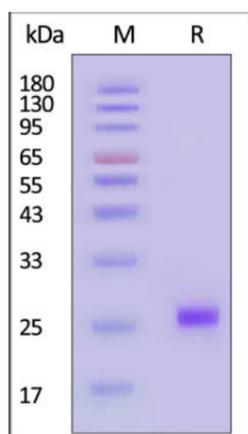
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

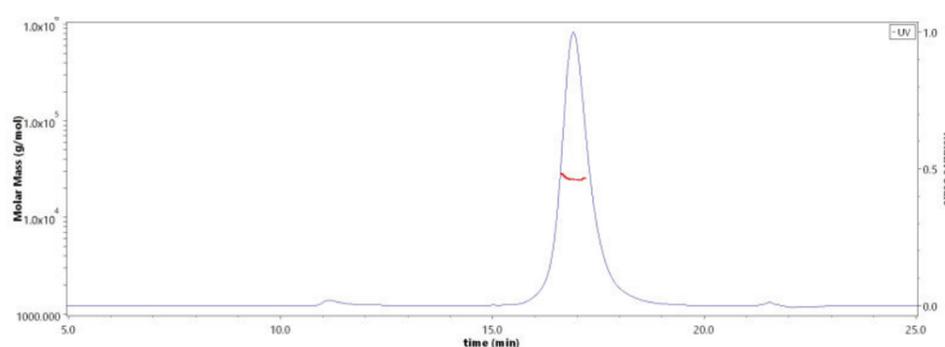
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Biotinylated Human IL-1 beta, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

SEC-MALS



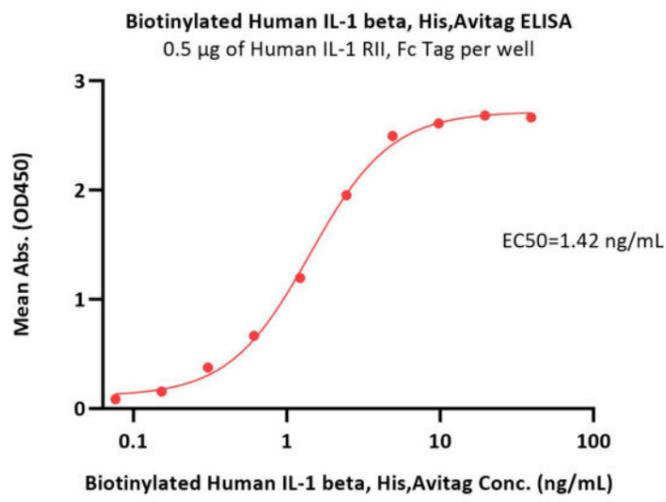
The purity of Biotinylated Human IL-1 beta, His,Avitag (Cat. No. ILB-H82E9) is more than 90% and the molecular weight of this protein is around 20-28 kDa verified by SEC-MALS.

[Report](#)

Bioactivity-ELISA

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Immobilized Human IL-1 RII, Fc Tag (Cat. No. IL2-H4256) at 5 µg/mL (100 µL/well) can bind Biotinylated Human IL-1 beta, His,Avitag (Cat. No. ILB-H82E9) with a linear range of 0.3-10 ng/mL (QC tested).

Background

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 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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