



### Synonym

IL1B,IL-1BETA,IL1F2,IL-1β

### Source

Mouse IL-1 beta, His Tag(ILB-M51H3) is expressed from E. coli cells. It contains AA Val 118 - Ser 269 (Accession # [P10749-1](#)).

Predicted N-terminus: Met

### Molecular Characterization

Poly-his IL-1 beta(Val 118 - Ser 269)  
P10749-1

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 when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE).

### Endotoxin

Less than 1.0 EU per μg by the LAL method.

### Purity

>95% as determined by SDS-PAGE.

### 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

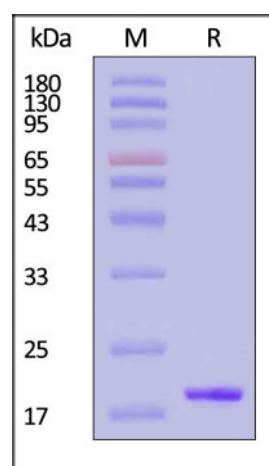
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*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.

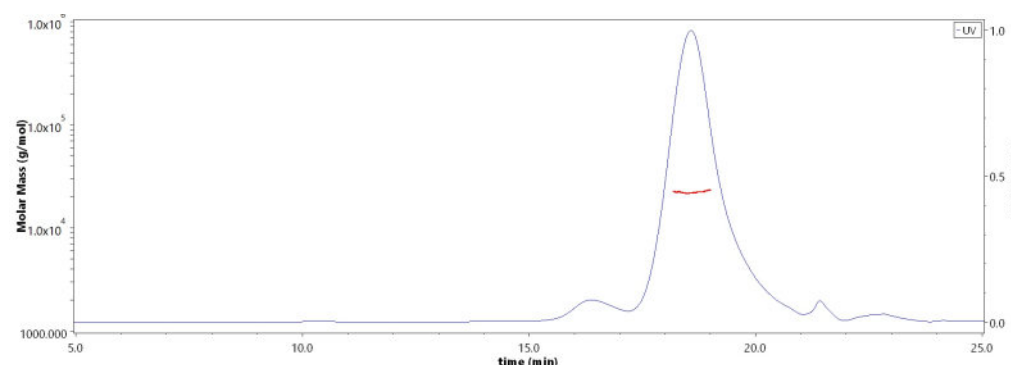
### SDS-PAGE



Mouse 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% (With [Star Ribbon Pre-stained Protein Marker](#)).

### Bioactivity-ELISA

### SEC-MALS

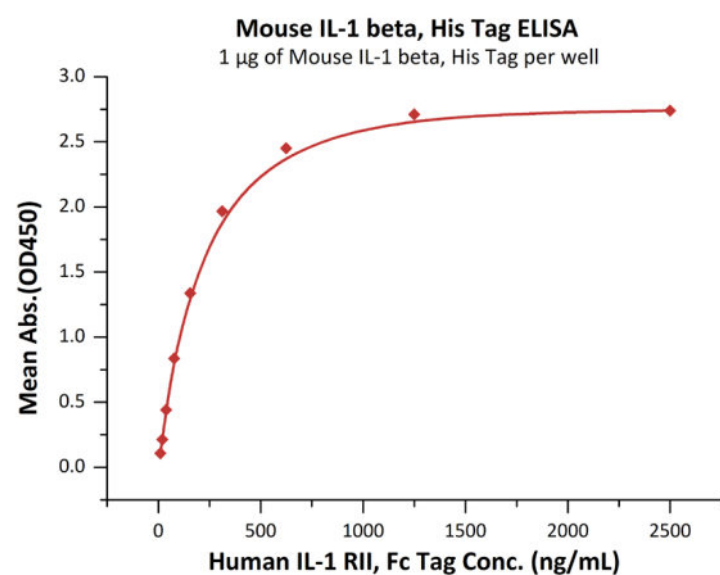


The purity of Mouse IL-1 beta, His Tag (Cat. No. ILB-M51H3) is more than 85% and the molecular weight of this protein is around 20-25 kDa verified by SEC-MALS.

[Report](#)

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Immobilized Mouse IL-1 beta, His Tag (Cat. No. ILB-M51H3) at 10 µg/mL (100 µL/well) can bind Human IL-1 RII, Fc Tag (Cat. No. IL2-H4256) with a linear range of 20-156 ng/mL (QC tested).

## Background

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

IL1 $\beta$  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 IL1 $\alpha$  and IL1 $\beta$  are regulated independently, they bind to the same receptor and exert identical biological effects.

IL-1 $\beta$  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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