

Active Recombinant Mouse IL-1 beta Protein

Catalog No.: RP01340 **Recombinant** **10 Publications**

Sequence Information

Species	Gene ID	Swiss Prot
Mouse	16176	P10749

Tags

C-His

Synonyms

IL-1 beta; IL-; IL-1b; IL-1beta; IL1b

Product Information

Source	Purification
<i>E. coli</i>	> 95% by SDS-PAGE.

Endotoxin

< 1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

Interleukin-1 beta (IL1 beta or IL1B) also known as catabolin, 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.

Basic Information

Description

Active Recombinant Mouse IL-1 beta Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Val118-Ser269) of mouse IL-1 beta (Accession #NP_032387.1) fused with 6×His tag at the C-terminus.

Bio-Activity

1. Measured by its binding ability in a functional ELISA. Immobilized Mouse IL1B at 10 μg/mL (100 μL/well) can bind Human IL1R2 with a linear range of 0.03125-0.8036 μg/mL. 2. Measured in a cell proliferation assay using D10.G4.1 mouse helper T cells. The ED₅₀ for this effect is 42.1-168.4 pg/mL, corresponding to a specific activity of 5.94×10⁶-2.37×10⁷ units/mg.

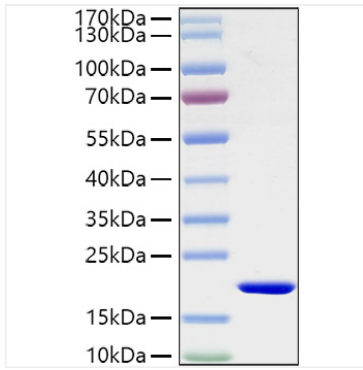
Storage

Store the lyophilized protein at -20°C to -80°C for long term.

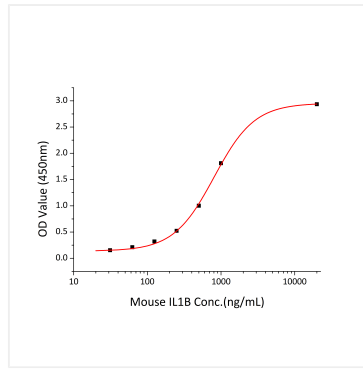
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

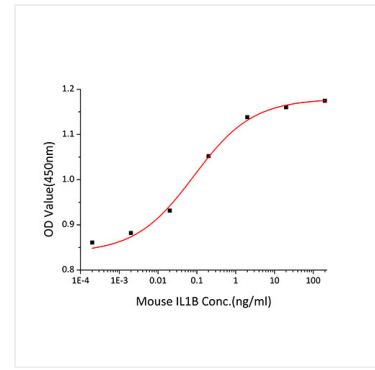
Validation Data



Recombinant Mouse IL-1 beta Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at showing bands at 19-20 kDa..



Immobilized Mouse IL1B at 10 µg/mL (100 µL/well) can bind Human IL1R2 with a linear range of 0.03125-0.8036 µg/mL.



Recombinant Mouse IL-1B promotes the proliferation of D10.G4.1 mouse helper T cells. The ED₅₀ for this effect is 42.1-168.4 pg/mL, corresponding to a specific activity of 5.94×10^5 - 2.37×10^7 units/mg.