Recombinant Mouse IL-1 beta Protein

Catalog No.: RP01340

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Sequence Information

Species
Mouse

Gene ID
16176

Swiss Prot
P10749

Tags
C-His

Synonyms
IL-1 beta,IL-, Il-1b, IL-1beta,Il1b

Product Information

Source
E. coli

Purification
≥ 95 % as determined by SDS-PAGE.

Calculated MW
18.23 kDa

Observed MW
19-20 kDa

Endotoxin
< 0.1 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 stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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
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.

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 ED_{50} for this effect is 42.1-168.4 pg/mL, corresponding to a specific activity of 5.94×10^{6}-2.37×10^{7}units/mg.

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃

Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

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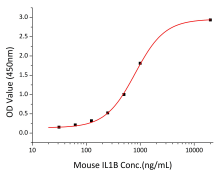
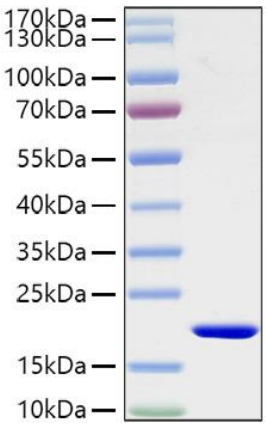
For research use only. Not for therapeutic or diagnostic purposes.
Please visit http://abclonal.com for a complete listing of recommended products.

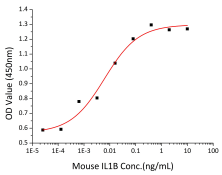
Validation Data



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-1 beta Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



Recombinant Mouse IL-1B promotes the proliferation of D10.G4.1 mouse helper T cells. The ED_{50} for this effect is 3.10-12.40 pg/mL, corresponding to a specific activity of 8.06×10^{7}~3.23×10^{8} units/mg..