

Recombinant Rat IL-1 beta Protein

Catalog No.: RP01788 **Recombinant** **1 Publications**

Sequence Information

Species	Gene ID	Swiss Prot
Rat	24494	Q5BKB0

Tags

C-His

Synonyms

IL-1F2;IL-1
beta;IL1B;IL-1BETA;IL1F2;IL-1β;il1b;IL1B

Product Information

Source	Purification
HEK293 cells	> 85% by SDS-PAGE.

Calculated MW	Observed MW
18.16 kDa	18-25 kDa

Endotoxin

<1EU/μg

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

Recombinant Rat IL-1 beta Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Val117-Ser268) of rat IL-1 beta (Accession #NP_113700.2) fused with a 6×His tag at the C-terminus.

Bio-Activity

Recombinant Rat IL-1 beta Protein stimulates cell proliferation of the D10.G4.1 mouse helper T cell line. The ED₅₀ for this effect is 0.68-2.72 ng/mL, corresponding to a specific activity of 3.68×10⁵~1.47×10⁶ units/mg.

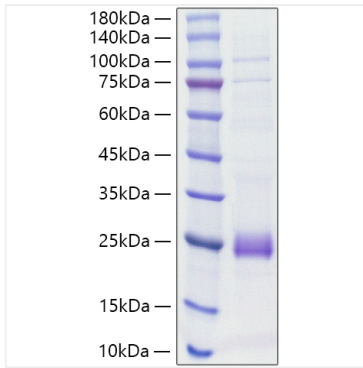
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

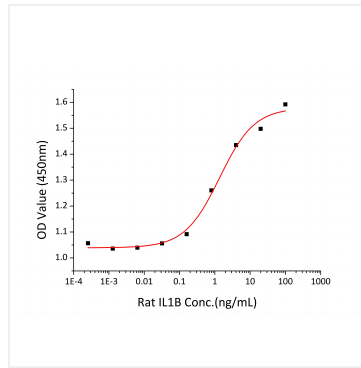
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Rat IL-1 beta Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 18-25 kDa.



Recombinant Rat IL-1 beta Protein stimulates cell proliferation of the D10.G4.1 mouse helper T cell line. The ED₅₀ for this effect is 0.68-2.72 ng/mL, corresponding to a specific activity of 3.68×10^5 ~ 1.47×10^6 units/mg.