Recombinant Human IL-1 beta Protein

Catalog No.: RP00002

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Sequence Information

Species
Human

Gene ID
3553

Swiss Prot
P01584

Tags
C-His

Synonyms
IL-1,IL1-BETA,IL1F2,IL1 beta,IL1B

Product Information

Source
E. coli

Purification
≥ 95 % as determined by SDS-PAGE;≥ 95 % as determined by HPLC.

Calculated MW
18.22 kDa

Observed MW
18 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.Contact us for customized product form or formulation.

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 Human IL-1 beta Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Ala117-Ser269) of human IL-1 beta (Accession #NP_000567.1) fused with an initial Met at the N-terminus and a 6×His tag at the C-terminus.

Activity
1.Measured in a cell proliferation assay using D10.G4.1 mouse helper T cells. The ED_{50} for this effect is 6.04-24.16 pg/mL, corresponding to a specific activity of 4.14×10^{7}~1.66×10^{8} units/mg.
2.Measured by its binding ability in a functional ELISA. Immobilized Human IL-1 beta (Catalog: RP00002) at 10 μg/mL (100 μL/well) can bind Biotinylated Human IL-1R1 (Catalog: RP01036) with a linear range of 0.002-1 μg/mL.

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℃

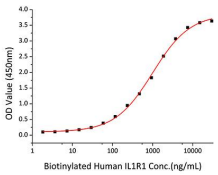
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

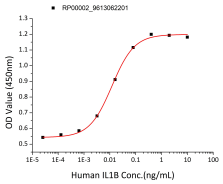
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Please visit http://abclonal.com for a complete listing of recommended products.

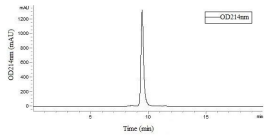
Validation Data



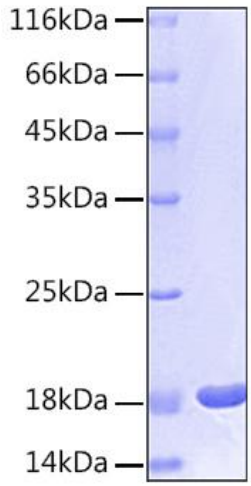
Immobilized Human IL-1 beta (Catalog: RP00002) at 10 μg/mL (100 μL/well) can bind Biotinylated Human IL-1R1 (Catalog: RP01036) with a linear range of 0.002-1 μg/mL.



Recombinant Human IL-1 beta promotes the proliferation of D10.G4.1 mouse helper T cells. The ED_{50} for this effect is 6.04-24.16 pg/mL, corresponding to a specific activity of 4.14×10^{7}~1.66×10^{8} units/mg.



Recombinant Human IL-1 beta Protein is greater than 95% as determined by SEC-HPLC.



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