# Recombinant Human IL-1 beta Protein

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Catalog No.: RP00002 Recombinant 1 Publications

# **Sequence Information**

**Species** Gene ID **Swiss Prot** Human 3553 P01584

**Tags** 

C-His

**Synonyms** 

IL-1;IL1-BETA;IL1F2;IL1 beta;IL1B

# **Product Information**

Source **Purification** E. coli ≥ 95 % as

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

Calculated MW Observed MW

18.22 kDa 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.

### **Contact**

400-999-6126 8 cn.market@abclonal.com.cn  $\sim$ 

# **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.

### **Bio-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  $4.14 \times 10^7 \sim 1.66 \times 10^8$  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

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

#### Storage

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

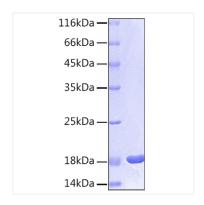
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

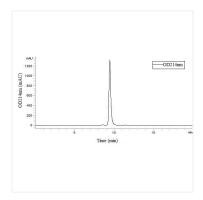
### Operational Notes

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

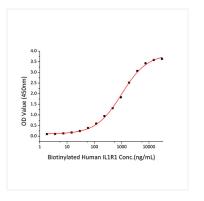
# **Validation Data**



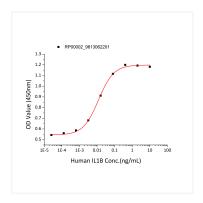
Recombinant Human IL-1 beta Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



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



Immobilized Human IL-1 beta (Catalog: RP00002) at 10  $\mu$ g/mL (100  $\mu$ L/well) can bind Biotinylated Human IL-1R1 (Catalog: RP01036) with a linear range of 0.002-1  $\mu$ g/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  $4.14\times10^7\sim1.66\times10^8$  units/mg.