

Recombinant Human IL-1 beta Protein

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|---------------------|---|-----------------|---------|
| Catalog No | RP00002 | Category | Protein |
| Description | Recombinant Human IL-1 beta Protein is produced by <i>E. coli</i> 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 | Measured in a cell proliferation assay using D10.G4.1 mouse helper T cells. The ED ₅₀ for this effect is <12 pg/mL. The specific activity of recombinant human IL-1 beta is approximately 1.4 x 10 ⁵ IU/μg, which is calibrated against recombinant human IL-1 beta WHO International Standard. | | |

Sequence Information

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|--------------------|--|-------------------|--------|
| Species | Human | Gene ID | 3553 |
| Tags | 6×His tag at the C-terminus | Swiss Prot | P01584 |
| Synonyms | IL-1;IL1-BETA;IL1F2 | | |
| AA Sequence | APVRSLNCTLRDSQQKSLVMSGPYELKALHLQGQDMEQQVVFMSFVQGEESNDKIPVAL GLKEKNLYLSCVLKDDKPTLQLESVDPKNYPKKKMEKRFVFNKIEINNKLEFESAQFPNW YISTSQAENMPVFLGGTKGGQDITDFTMQFVSS | | |

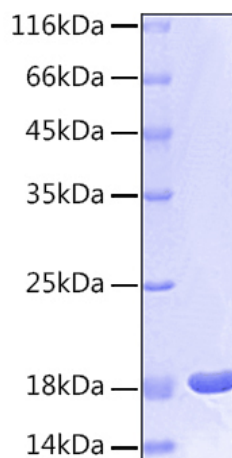
Product information

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|-----------------------|--|
| Source | <i>E. coli</i> |
| Purity | > 95% by SDS-PAGE. |
| 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 | Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. |
| 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. |

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.

SDS-PAGE



Bioactivity

Recombinant Human IL-1 beta was determined by SDS-PAGE under reducing conditions with Coomassie Blue, showing a band at 18 kDa.