

## Animal-Free IL-1 beta Protein, Mouse (His)

Cat. No.:	HY-P700187AF
Synonyms:	rMuIL-1 $\beta$ ; Catabolin; IL1F2; IL-1 beta; IL1B
Species:	Mouse
Source:	E. coli
Accession:	P10749 (V118-S269)
Gene ID:	16176
Molecular Weight:	Approximately 18.3 kDa

### PROPERTIES

AA Sequence	<pre> M V P I R Q L H Y R   L R D E Q Q K S L V   L S D P Y E L K A L   H L N G Q N I N Q Q V I F S M S F V Q G   E P S N D K I P V A   L G L K G K N L Y L   S C V M K D G T P T L Q L E S V D P K Q   Y P K K K M E K R F   V F N K I E V K S K   V E F E S A E F P N W Y I S T S Q A E H   K P V F L G N N S G   Q D I I D F T M E S   V S S           </pre>
Biological Activity	Measure by its ability to induce D10.G4.1 cells proliferation. The ED <sub>50</sub> for this effect is < 8 pg/mL. The specific activity of recombinant mouse IL-1 beta is approximately >1.2x 10 <sup>8</sup> IU/mg/.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a solution containing 1X PBS, pH 7.4.
Endotoxin Level	<0.1 EU per 1 $\mu$ g of the protein by the LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	IL-1 beta Protein is a potent pro-inflammatory cytokine that was initially discovered as the major endogenous pyrogen. It has various effects on immune cells, such as inducing prostaglandin synthesis, activating neutrophils, promoting T-cell activation and cytokine production, stimulating B-cell activation and antibody production, and increasing fibroblast proliferation and collagen production. IL-1 beta Protein also plays a role in promoting the differentiation of Th17 cells and works synergistically with IL12 to induce the synthesis of IFNG by Th1 cells. Moreover, it contributes to angiogenesis by inducing VEGF production in collaboration with TNF and IL6. IL-1 beta Protein is involved in the transduction of
------------	---

---

inflammation downstream of pyroptosis, where its mature form is specifically released into the extracellular environment through the gasdermin-D (GSDMD) pore. It exists as a monomer and interacts with MEFV, as well as integrins ITGAV:ITGBV and ITGA5:ITGB1, which are required for IL1B signaling. IL-1 beta Protein also interacts with the cargo receptor TMED10 and HSP90AB1 and HSP90B1, which facilitate the translocation of cargo into the ERGIC.

---

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA