



## Interleukin-1 alpha, rat recombinant (rrIL-1-alpha)

**Catalog No:** 87380  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** Hematopoietin-1, Lymphocyte-activating factor (LAF), Endogenous Pyrogen (EP), Leukocyte Endogenous Mediator (LEM), Mononuclear Cell Factor (MCF), IL-1 alpha, IL1, IL-1A, IL1F1

### Background

Interleukin-1 alpha is a proinflammatory cytokine produced by a wide variety of cell types, including macrophages, osteoblasts, monocytes and hepatocytes. Circulating levels of are normally low and only rise after stimulation by agents such as those produced by inflammation, infection or microbial endotoxins. IL-1 alpha possesses a wide variety of biological activities and exerts its effects by binding to specific cell surface receptors.

### Description

Interleukin-1 alpha rat recombinant produced in *E. coli* is single, a non-glycosylated, polypeptide chain containing 155 amino acids and having a molecular mass of 17703 Dalton. IL-1A is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

The protein was lyophilized from a concentrated (1 mg/ml) sterile solution containing 50 mM Tris-HCl, pH 8.

### Solubility

It is recommended to reconstitute the lyophilized Interleukin-1a in sterile 18 MΩ-cm H<sub>2</sub>O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

### Stability

Lyophilized Interleukin-1a, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL1A should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Purity

Greater than 98.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

### Amino Acid Sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Pro-His-Ser-Phe.

### Activity

The ED<sub>50</sub> as determined by the dose-dependant stimulation of murine D10S cells is <0.005 ng/ml, corresponding to a specific activity of 200,000,000 IU/mg.

### Usage

**This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.**

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