

Recombinant Porcine Interleukin-1 alpha (rp IL-1a)

Synonyms: Hematopoietin-1, Lymphocyte-activating factor (LAF), Endogenous Pyrogen (EP), Leukocyte Endogenous Mediator (LEM), Mononuclear Cell Factor (MCF), IL-1 alpha, IL1, IL1F1.

Introduction: 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: Recombinant porcine IL-1alpha produced in *E. Coli* is a non-glycosylated, polypeptide chain containing 158 amino acids and having a molecular mass of 18076 Dalton. The rp IL-1alpha is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilized from a concentrated (1 mg/ml) solution in water containing no additives. The aliquots of 1µg and 2µg contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized rp IL-1alpha in sterile H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rp IL-1alpha although stable at room temperature for 3 weeks, should be stored desiccated below -18° C . Upon reconstitution rp IL-1alpha 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 95.0% as determined by RP-HPLC and SDS-PAGE.

Amino acid sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Ser-Ala-Thr-Tyr-Ser.

Biological Activity: rp IL-1alpha is fully biologically active when compared to standard. The ED₅₀ as determined by the dose-dependant stimulation of murine D10S cells is < 0.03 ng/ml.

Protein content: Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 1.13 as the extinction coefficient for a 0.1% (1 mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a standard solution of IL-1alpha as a Reference Standard.

This material is offered for **research only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	2 µg	Cat.N°	16349012
<i>medium</i>	10 µg	Cat.N°	16349013
<i>large</i>	50 µg	Cat.N°	16349015

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