# DATASHEET

| Name | IL-1 A, REC.RAT | | |
|---|---|---|---|
| Product | Interleukin-1 alpha, Rec. Rat | Article-No. | 40121 |
| Formulation | White powder - lyophilised from a concentrated (1mg/ml) sterile solution containing 50mM Tris-HCl pH=8 | Storage | Freezer at -20°C<br>Prevent freeze-thaw cycles |

**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.

**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 byinflammation, 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 Rat Interleukin-1 alpha in *Escherichia Coli* is single, a non-glycosylated, polypeptide chain containing 155 amino acids and having a molecular mass of 17703 Dalton. The rrIL-1a is purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*.

**Purity:** > 98.0% (per RP-HPLC & SDS-PAGE)

**Solubility:**
It is recommended to reconstitute the lyophilised rrIL-1a in sterile 18MΩ-cm $H_2O$ not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:**
Lyophilised rrIL-1a, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rrIL-1a 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).

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**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.

**Biological Activity:**
The $ED_{50}$ as determined by the dose-dependent stimulation of mouse D10S cells is <0.005ng/ml, corresponding to a Specific Activity of 2 x $10^8$ IU/mg.

**Protein content:**
Protein quantification was carried out by two independent methods:
1. UV spectroscopy at 280 nm using the absorbency value of 0.751 as the extinction coefficient for a 0.1% (1mg/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-1 as a reference standard.

**Usage:**
Our products are intended for lab research only. Not for human, animal or diagnostic use.

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