

## Murine IL-1 alpha

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.

**PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING**

Size	Order #	Lot #	Expiry Date
2 µg	1495.960.002		
10 µg	1495.960.010		
1 mg	1495.960.199		

Please enquire for bulk quantities and other vial sizes

### Description

Recombinant murine Interleukin-1 alpha (IL-1 alpha), produced in *E. Coli* is a 17.9 kDa protein with 156 amino acid residues. It is a non-secreted proinflammatory cytokine produced in a variety of cells including monocytes, tissue macrophages, keratinocytes and other epithelial cells. Both IL-1 alpha and IL-1 beta binds to the same receptor and has similar if not identical biological properties. These cytokines have a broad range of activities including, stimulation of thymocyte proliferation, by inducing IL-2 release, B-cell maturation and proliferation, mitogenic FGF-like activity and the ability to stimulate the release of prostaglandin and collagenase from synovial cells. However, whereas IL-1 beta is a secreted cytokine, IL-1 alpha is a predominantly a cell-associated cytokine.

- **Biological Activity**             $\geq 5 \times 10^8$  units/mg
- **Source**                            *E. Coli*
- **Purity**                              $\geq 97\%$  (SDS-PAGE, HPLC)
- **Endotoxin level**                 $\leq 0.1 \text{ ng}/\mu\text{g}$  ( $\leq 1 \text{ EU}/\mu\text{g}$ )
- **Stabilizer**                        None
- **Buffer**                             PBS (pH 7.5)\*
- **Physical state**                 Sterile filtered, lyophilized

### Biological Activity

The ED<sub>50</sub> of  $\leq 0.002$  ng/ml was determined by the dose-dependent stimulation of the proliferation of murine D10S cells. It corresponds to a specific activity of  $\geq 5 \times 10^8$  units/mg.

### Reconstitution

We recommend a quick spin followed by reconstitution in water to a concentration of 0.1-1.0mg/ml. This solution can then be diluted into other aqueous buffers and stored at 4°C for 1 week or -20°C for future use.

### Stability

The lyophilized protein is stable at room temperature for a few weeks, but best stored at -20°C. Reconstituted murine IL-1 alpha should be stored in working aliquots at -20°C. For Long term storage we recommend the addition of a carrier Protein e.g. 0,1% highly pure HSA (2835.958.188) or BSA. **Please avoid repeated freeze-thaw cycles.**

### Amino Acid Sequence

SAPYTYQSDL RYKLMKLVLRQ KFVMNDSLNO TIYQDVDPKHY LSTTWLNDLQ QEVKFDMYAY SSGGDDSKYP  
 VTLKISDSQL FVSAQGEDQP VLLKELPETP KLITGSETDL IFFWKSINSK NYFTSAAYPE LFIATKEQSR  
 VHLARGLPSM TDFQIS

**Usage:** For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

\*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.

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