

**Product No. I-6889**  
**Interleukin-1-Alpha (IL-1 $\alpha$ )**  
Human, Recombinant  
Expressed in *E. coli*

**Lot** 063H0295

**Product Description**

Interleukin-1, originally known as Lymphocyte Activating Factor (LAF), activates T cells and lymphocytes, which then proliferate and secrete Interleukin-2 (IL-2).<sup>1</sup> IL-1 is released primarily from stimulated macrophages and monocytes, but has also been shown to be released from several other cell types,<sup>2</sup> and is thought to play a key role in inflammatory and immune responses.<sup>3</sup> Other synonyms for IL-1 include: endogenous pyrogen (EP), mitogenic protein (MP), Helper Peak-1 (HP-1), T Cell Replacing Factor III (TRF III or TRF<sub>H</sub>), B Cell Activating Factor (BAF), and B Cell Differentiation Factor (BDF).<sup>4</sup> The two closely related agents, Interleukin-1-Alpha (IL-1 $\alpha$ ) and Interleukin-1-Beta (IL-1 $\beta$ ) share a 62% homology in their amino acid sequences and elicit nearly identical biological responses. IL-1 $\alpha$  and IL-1 $\beta$  both have an approximate molecular weight of 17 kD with some heterogeneity in the amount of glycosylation.

**Performance Characteristics**

IL-1 $\alpha$  is assayed using the human T cell line EL4-NOB1 which produces IL-2 in response to IL-1. Since the IL-2 produced is proportional to the IL-1 concentrations used, IL-2 is assayed by thymidine uptake using an IL-2 dependent T cell line such as CTLL-2.<sup>5</sup> Activity of human IL-1 $\alpha$  is expressed in international units (IU) (NBSB std. code 86/632).

**Product Information**

Expressed in *E. coli*  
Mass/vial: 1  $\mu$ g  
Purity:  $\geq$ 98% by SDS-PAGE and N-Terminal Sequence Analysis

Specific Activity: 1.2 x 10<sup>7</sup> IU/mg  
Preservatives: None  
Carrier Proteins: None  
Endotoxin: <0.1 ng/ $\mu$ g IL-1 $\alpha$

**Use**

Reconstitute contents of one vial with 0.1 - 0.5 ml of sterile-filtered buffered saline or tissue culture media containing 0.1 - 1.0% BSA or 1 - 10% serum to prepare a stock solution. The stock solution may be diluted to the final working concentration of IL-1 $\alpha$  which is generally 0.04 - 1.25 ng/ml.

**Storage**

Store unopened vial at -20°C. Aliquots of IL-1 $\alpha$  may be stored at -20°C. Prolonged storage of product or repeated freezing and thawing is **not** recommended.

**References**

1. Gery, I., et al., *J. Exp. Med.*, **136**, 128 (1972).
2. Oppenheim, J., et al., *Immunol. Today*, **7**, 45 (1986).
3. Durum, S., et al., *Ann. Rev. Immunol.*, **3**, 263 (1985).
4. Aarden, L., et al., *J. Immunol.*, **123**, 2928 (1979).
5. Gearing, A.J.H., et al., *J. Immunol. Meth.*, **99**, 7 (1987).

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