

## Product Information

### **Interleukin-1 $\alpha$ , rat recombinant, expressed in *E. coli***

Catalog Number **I3901**

Storage Temperature  $-20^{\circ}\text{C}$

Synonyms: IL-1 $\alpha$ , Lymphocyte activating factor, rIL-1 $\alpha$

#### **Product Description**

Interleukin-1 (IL-1) activates T cells and lymphocytes, which then proliferate and secrete interleukin-2.<sup>1</sup> IL-1 is primarily released from stimulated macrophages and monocytes, but is also 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 $\beta$ ) bind to the same cell surface receptor, elicit nearly identical biological responses, and share 25% homology in their amino acid sequence.

Molecular mass: ~18 kDa

This product is lyophilized from a 0.2  $\mu\text{m}$  filtered solution of phosphate buffered saline, pH 7.4, containing 50  $\mu\text{g}$  of bovine serum albumin per  $\mu\text{g}$  of cytokine.

EC<sub>50</sub>: 1–10 pg/ml

The biological activity of recombinant, rat IL-1 $\alpha$  was measured in a cell proliferation assay using the mouse helper T cell line, D10.G4.1.<sup>5</sup> The EC<sub>50</sub> is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

Purity:  $\geq 97\%$  (SDS-PAGE)

Endotoxin:  $\leq 0.1$  ng/ $\mu\text{g}$  IL-1

#### **Precautions and Disclaimer**

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### **Preparation Instructions**

Reconstitute the contents of the vial using 0.2  $\mu\text{m}$  filtered PBS containing 0.1% HSA or BSA to a final concentration of  $\geq 100$   $\mu\text{g}/\text{ml}$ .

#### **Storage/Stability**

Store the product at  $-20^{\circ}\text{C}$ .

After reconstitution, store at  $2-8^{\circ}\text{C}$  for a maximum of 3 months. For extended storage, freeze in working aliquots at  $-70^{\circ}\text{C}$  or  $-20^{\circ}\text{C}$ . 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. Symons, J., et al., Lymphokines and Interferons, A Practical Approach, Clemens, M., et al., eds., IRL Press (Oxford, UK: 1987).

GS, RYC, PCS MAM 10/10-1

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