

Product Information

Interleukin-1 α , Rat

Recombinant, Expressed in *E. coli*

I3901

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

Synonyms: IL-1 α , Lymphocyte activating factor, rIL-1 α

Product Description

Interleukin-1 (IL-1) activates T cells and lymphocytes, which then proliferate and secrete interleukin-2.¹ IL-1 is primarily released from stimulated macrophages and monocytes, but is also released from several other cell types,² and is thought to play a key role in inflammatory and immune responses.³ 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 TRFH), B cell activating factor (BAF) and B cell differentiation factor (BDF).⁴

The two closely related agents, interleukin-1 α (IL-1 α) and interleukin-1 β (IL-1 β) bind to the same cell surface receptor, elicit nearly identical biological responses, and share 25% homology in their amino acid sequence.

Molecular mass: $\sim 18\text{ kDa}$

This product is Lyophilized from 0.2 μm -filtered solution in PBS, pH 7.4 with 50 μg BSA per 1 μg as a carrier protein.

ED₅₀: 1.00 - 7.00 pg/mL

The biological activity of recombinant, rat IL-1 α was measured in a cell proliferation assay using the mouse helper T cell line, D10.G4.1.⁵ The EC₅₀ 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: <0.10 EU/ μg of the protein

Precautions and Disclaimer

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

Preparation Instructions

Reconstitute at 100 $\mu\text{g}/\text{mL}$ in sterile PBS containing at least 0.1% Human or Bovine Serum Albumin.

Storage/Stability

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

After reconstitution, store at 2–8 $^{\circ}\text{C}$ for a maximum of 3 months. For extended storage, freeze in working aliquots at $-70\text{ }^{\circ}\text{C}$ or $-20\text{ }^{\circ}\text{C}$. 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).

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