

Product Information

Interleukin-1 α , human recombinant, expressed in *E. coli*

Catalog Number **I2778**
Storage Temperature -20°C

Synonyms: IL-1 α ; lymphocyte activating factor; LAF

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).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 TRF-H), B Cell Activating Factor (BAF), and B Cell Differentiation Factor (BDF).⁴

The two closely related cytokines, interleukin-1 α (IL-1 α) and interleukin-1 β (IL-1 β) share a 62% homology in their amino acid sequences and elicit nearly identical biological responses. IL-1 α and IL-1 β both have a molecular mass of ~17 kDa with some heterogeneity in the amount of glycosylation.

This product is lyophilized from a 0.2 μm -filtered solution containing 10 mM Tris, pH 8.0, containing 50 mM NaCl and 50 μg bovine serum albumin (BSA) per μg cytokine.

Purity: $\geq 98\%$ (SDS-PAGE and HPLC)

IL-1 α activity is measured in a proliferation assay using murine D10S cells. The EC_{50} is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

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 contents of one vial with sterile-filtered buffered saline containing 0.1–1.0% BSA or HSA to prepare a working solution containing 1 $\mu\text{g}/\text{ml}$ of the cytokine. If aseptic technique is used, additional filtration should not be necessary and should be avoided due to possible adsorption onto the filter membrane.

Storage/Stability

Store the product at -20°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°C or -20°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.K., *et al.*, Annu. 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 Oxford Press (Oxford, UK: 1987) p. 272.

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