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Product Information

Interleukin 1 β human, recombinant expressed in *E. coli*

Product Number **I9401**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

Synonym: IL-1 β

Product Description

Interleukin-1 (IL-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 types² 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 agents, 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 weight of ~ 17 kDa with some heterogeneity in the amount of glycosylation. Recombinant human IL-1 β is a 17.3 kDa protein containing 153 amino acid residues.

This product is lyophilized from a 0.2 μm filtered solution.

IL-1 β is assayed by the dose-dependent stimulation of MTS cleavage by murine D10S cells.⁵ The ED₅₀ is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

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

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 contents of the vial using water to a concentration of 0.1–1.0 mg/ml. This solution can then be diluted into other aqueous buffers and stored at $2\text{--}8\text{ }^{\circ}\text{C}$ for up to one week. For extended storage, freeze at $-20\text{ }^{\circ}\text{C}$. 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

The lyophilized product is best stored at $-20\text{ }^{\circ}\text{C}$. It is stable for up to a few weeks at room temperature. Reconstituted product should be stored in working aliquots at $-20\text{ }^{\circ}\text{C}$. Repeated freezing and thawing is not recommended. Do not store in frost-free freezer.

References

1. Gery, I., *et al.*, *J. Exp. Med.*, **136**, 128 (1972).
2. Oppenheim, J.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 Press, p. 272 (1987).

LCM,KAA,RBG,MAM 11/06-1

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