Product Information

Interleukin-1α, Rat

Recombinant, Expressed in *E. coli*

I3901

Storage Temperature: −20 °C

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

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-1a (IL-1a) and interleukin-1b (IL-1b) 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 0.2 µm-filtered solution in PBS, pH 7.4 with 50 µg BSA per 1 µg as a carrier protein.

ED_{50}: 1.00 -7.00 pg/mL

The biological activity of recombinant, rat IL-1α was measured in a cell proliferation assay using the mouse helper T cell line, D10.G4.1.[5] 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.

Purity: ≥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 µg/mL in sterile PBS containing at least 0.1% Human or Bovine Serum Albumin.

Storage/Stability

Store the product at −20 °C.

After reconstitution, store at 2–8 °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., 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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