

Technical Bulletin

Interleukin-6 Human

Recombinant, Expressed in Escherichia coli, Animal Component Free, Suitable for Cell Culture

SRP3096

Synonym: IL-6

Product Description

Interleukin 6 (IL-6) is a multifunctional alpha-helical, 22-28 kDa phosphorylated and variably glycosylated protein originally discovered in the medium of RNA-stimulated fibroblastoid cells.¹ IL-6 appears to be directly involved in the responses that occur after infection and cellular injury, and it may prove to be as important as IL-1 and TNF- α in regulating the acute phase response.^{2,3}

IL-6 is reported to be produced by fibroblasts, activated T cells, activated monocytes or macrophages, and endothelial cells. It acts upon a variety of cells including fibroblasts, myeloid progenitor cells, T cells, B cells, hepatocytes and several types of cancer cells. IL-6 induces multiple effects as indicated by its numerous synonyms: it is known as B-cell stimulatory factor 2 (BSF-2), CTL differentiation factor (CDF), Hybridoma growth factor or Interferon beta-2 (IFN-beta-2). In addition, IL-6 appears to interact with IL-2 in the proliferation of T lymphocytes.⁵ IL-6 potentiates the proliferative effect of IL-3 on multipotential hematopoietic progenitors.⁶

This Animal Component Free product is lyophilized from a 0.2 μ m filtered solution of phosphate buffered saline (PBS), pH 7.4, and stabilizers.

The biological activity of IL-6 was tested in culture by measuring its ability to stimulate proliferation of the IL-6 dependent mouse T1165.85.2.1 cells.

The EC₅₀ 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 the contents of the vial using endotoxin free water to a concentration of 100 μ g/ml. For lower concentrations, the product should be diluted before use in medium containing at least 0.5% protein (i.e., cell culture medium containing 5–10% serum).

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 –20 °C or –70 °C. Repeated freezing and thawing is not recommended.

References

1. Billiau, A., *Immunol. Today*, **8**, 84 (1987).
2. Gauldie, J., *et al.*, *Proc. Natl. Acad. Sci. USA*, **84**, 7251 (1987).
3. Van Snick, J., *Ann. Rev. Immunol.*, **8**, 253 (1990).
4. Kishimoto, T., *Clin. Rev. Allergy Immunol.*, **28**, 197 (2005).
5. Nordan, R., *et al.*, *J. Immunol.*, **139**, 813 (1987).
6. Van Snick, J., *et al.*, *Proc. Nat. Acad. Sci. USA*, **83**, 9679 (1986).

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