

Product Information

Interleukin-6 from mouse recombinant, expressed in *Escherichia coli*, suitable for cell culture, carrier free

Catalog Number **I9646**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

Synonyms: IL-6, B cell stimulating factor (BSF-2), plasmacytoma growth factor (PCT-GF), interferon β 2 (IFN β 2), monocyte derived human B cell growth factor, hepatocyte stimulating factor (HSF), interleukin hybridoma/plasmacytoma-1 (IL-HP1)

Product Description

Interleukin-6 (IL-6) is a multifunctional protein originally discovered in the medium taken from RNA-stimulated fibroblastoid cells.¹ Interleukin-6, a potent lymphoid cell growth factor, stimulates the growth and survivability of certain B cells and T cells. Interleukin-6 appears to be directly involved in the responses that occur after infection and injury. It may be as important as IL-1 and TNF- α in regulating the acute phase response.^{2,3} IL-6 is produced by fibroblasts, activated T cells, activated monocytes or macrophages, and endothelial cells. It acts on a variety of cells including fibroblasts, myeloid progenitor cells, T cells, B cells, and hepatocytes.³ In addition, IL-6 appears to interact with IL-2 in the proliferation of T lymphocytes.⁴ IL-6 also potentiates the proliferative effect of IL-3 on multipotential hematopoietic progenitors.⁵

This recombinant mouse interleukin-6 (IL-6) product is a 21.7 kDa protein containing 187 amino acid residues that is expressed in *E. coli*. The product is lyophilized from a 0.2 μm filtered buffered solution.

Purity: $\geq 97\%$ (SDS-PAGE)

EC₅₀: 0.02–0.2 ng/ml

The biological activity of recombinant human IL-6 was tested in culture by measuring its ability to stimulate proliferation of the IL-6 dependent T1165 murine cell line. The EC₅₀ is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

Endotoxin level: ≤ 1.0 EU/ μg

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 vial contents in either water or PBS at a concentration of 0.1 mg/ml. For longer stability, solution can be supplemented with 0.1% BSA. Do not vortex.

Storage/Stability

Prior to reconstitution, store the lyophilized protein at $-20\text{ }^{\circ}\text{C}$. Product is stable for up to a few weeks at $4\text{ }^{\circ}\text{C}$, but is best stored at $-20\text{ }^{\circ}\text{C}$.

After reconstitution, store in working aliquots at $-20\text{ }^{\circ}\text{C}$. Repeated freezing and thawing is not recommended.

References

1. Billiau, A., Interferon β 2 as a promoter of growth and differentiation of B cells, *Immunol. Today*, **8**, 84- 87 (1987).
2. Gauldie, J. et al., Interferon beta 2/B-cell stimulatory factor type 2 shares identity with monocyte-derived hepatocyte-stimulating factor and regulates the major acute phase protein response in liver cells. *Proc. Natl. Acad. Sci. USA*, **84**, 7251-7255 (1987).
3. Kamimura, D. et al., IL-6 signal transduction and its physiological roles: the signal orchestration model. *Rev. Biochem. Pharmacol.*, **149**, 1-38 (2003).
4. Nordan, R.P. et al., Purification and NH₂-terminal sequence of a plasmacytoma growth factor derived from the murine macrophage cell line P388D1. *J. Immunol.*, **139**, 813-817 (1987).
5. Van Snick, J. et al., Purification and NH₂-terminal amino acid sequence of a T-cell-derived lymphokine with growth factor activity for B-cell hybridomas. *Proc. Nat. Acad. Sci. USA*, **83**, 9679-9683 (1986).

DT,KAA,MAM 03/15-1