

## Product Information

### Interleukin-6, human, Carrier Free recombinant, expressed in *E. coli*

Catalog Number **I2786**  
Storage Temperature  $-20^{\circ}\text{C}$

Synonyms: IL-6, B cell stimulating factor (BSF-2), plasmacytoma growth factor (PCT-GF), interferon  $\beta 2$  (IFN $\beta 2$ ), 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 26 kDa protein originally discovered in the medium of RNA-stimulated fibroblastoid cells.<sup>1</sup> Interleukin-6 appears to be directly involved in the immune responses that occur after infection and cellular injury, and it may prove to be as important as IL-1 and TNF- $\alpha$  in regulating the acute phase response.<sup>2,3</sup>

IL-6 is reportedly 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, and hepatocytes. IL-6 induces multiple effects as indicated by its numerous synonyms.<sup>4</sup> In addition, IL-6 appears to interact with IL-2 in the proliferation of T lymphocytes.<sup>5</sup> IL-6 potentiates the proliferative effect of IL-3 on multipotential hematopoietic progenitors.<sup>6</sup>

This product is lyophilized from a 0.2  $\mu\text{m}$ -filtered solution of phosphate buffered saline, pH 7.4, containing a stabilizer.

Purity: >97% (SDS-PAGE)

EC<sub>50</sub>: 0.2–2.0 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 mouse T1165.85.2.1 cells. The EC<sub>50</sub> is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

Endotoxin level:  $\leq 1$  EU/ $\mu\text{gP}$

#### 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 with endotoxin free water to a concentration of 100  $\mu\text{g/mL}$ . For lower concentrations, the prepared solution should be diluted in medium containing at least 0.5% protein before use (e.g., cell culture medium containing 5–10% serum).

#### Storage/Stability

Store the product at  $-20^{\circ}\text{C}$ . When stored at  $-20^{\circ}\text{C}$ , the product is stable for at least 2 years. After reconstitution, store at  $2-8^{\circ}\text{C}$  for a maximum of 3 months. For extended storage freeze in working aliquots at  $-70^{\circ}\text{C}$  or  $-20^{\circ}\text{C}$ . Repeated freezing and thawing is not recommended.

#### References

1. Kishimoto, T., and Hirano, T, A new interleukin with pleiotropic activities. *Bioessays*, **9**, 11-15 (1988).
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**, 7521-7255 (1987).
3. Van Snick, J., Interleukin-6: an overview. *Ann. Rev. Immunol.*, **8**, 253-278 (1990).
4. Kishimoto, T., IL-6: from laboratory to bedside. *Clin. Rev. Allergy Immunol.*, **28**, 177-186 (2005).
5. Nordan, R. et al., Purification and NH<sub>2</sub>-terminal sequence of a plasmacytoma growth factor derived from the murine macrophage cell line P388D1. *J. Immunol.*, **139**, 813-817 (1987).
6. Van Snick, J. et al., Purification and NH<sub>2</sub>-terminal amino acid sequence of a T-cell-derived lymphokine with growth factor activity for B-cell hybridomas. *Proc. Natl. Acad. Sci. USA*, **83**, 9679-9683 (1986).

PD,SG,AI,MAM 07/18-1