

## Interleukin-6

### Recombinant Human Interleukin-6 (rhIL-6)

**Catalog#:** BX1005-20: 20 µg  
BX1005-200: 200 µg  
BX1005-1000: 1.0 mg

**Lot#:** On vial label

**Formulation:** Lyophilized powder lyophilized from a volatile buffer (50 mM NH<sub>4</sub>HCO<sub>3</sub>, pH 8.0).

**Preservative:** None.

**MW:** 21 kD

**Purity:** >97% on 15% SDS-PAGE.

**Source:** Recombinant mature protein expressed in *E. coli* (189 amino acid residues).

**Sterility:** 0.2 µm membrane-filtered and packaged aseptically.

**ED50:** ND

**Endotoxin\*:** ≤0.1 EU/µg

**QC Tests:** SDS-PAGE

#### Reconstitution and Use:

Reconstitute the contents of the vial using sterile phosphate-buffered saline (PBS) to a concentration no less than 100 µg/ml and aliquot for future use. (*If the initial rehydration is too dilute, activity may be lost due to the non-specific adsorption to the container*). The solution can then be further diluted to a working stock solution.

If the product is going to be used for applications requiring absolute asepsis, it's best to filter-sterilize the solution using a sterile and non-pyrogenic 0.2 µm membrane before use.

#### Storage and Stability:

Upon receiving, store the product at -20 °C. After reconstitution, store the working aliquots at 2-8 °C for no more than 3 months. For extended storage, aliquot the rehydrated solution (≥100 µg/ml) and freeze at -70 °C or -20 °C. Avoid repeated freezing and thawing. More dilute solutions stored at -20 °C will lose activity faster.

#### \*\*Endotoxin Assay:

Endotoxin Unit (EU) is determined by Limulus Amebocyte Lysate (LAL) assay (Sigma).

### About Interleukin-6

Interleukin-6 (IL-6) is a pro-inflammatory cytokine that also has an important role in immunity. IL-6 induces growth and terminal differentiation of B cells; secretion of immunoglobulins; differentiation and activation of T cells and macrophages; and the induction of acute-phase response proteins. Many types of cells, including macrophages, T cells, fibroblasts, and endothelial cells, produce IL-6 in response to stimuli such as bacteria, viruses, and other cytokines, particularly IL-1 and tumor necrosis factor, alpha (TNF). Human IL-6 is active on both mouse and rat cells, while mouse IL-6 has no activity on human cells. Recombinant human IL-6 is a 22 kDa protein containing 189 amino acid residues

#### Recombinant Amino Acid Sequence:

MAFPAPVPPG EDSKDVAAPH RQPLTSSERI DKQIRYILDG  
ISALRKETCN KSNMCESKE ALAENNLNLP KMAEKDGCFFQ  
SGFNEETCLV KIITGLLEFE VYLEYLQNRV ESSEEQARAV  
QMSTKVLIQF LQKKAKNLDA ITTPDPTTNA SLLTKLQAQN  
QWLQDMTTHL ILRSFKEFLQ SSLRALRQM

#### Further Readings:

- Kishimoto, T. (1989) *Blood* **74**:1.
- Barton, B.E. (1997) *Clin. Immunol. Immunopathol.* **85**:16.
- Poupart, P. *et al.* (1987) *EMBO J.* **6**:1219.
- Hibi, M. *et al.* (1996) *J. Mol. Med.* **74**:1.
- Hirano, T. *et al.* (1994) *Stem Cells* **12**:262.
- Akira, S. *et al.* (1993) *Adv. Immunol.* **54**:1.
- Van Snick, J. (1990) *Annu. Rev. Immunol.* **8**:253.
- Kishimoto, T. *et al.* (1992) *Polyfunctional Cytokines: IL-6 and LIF*. Wiley, Chichester (CIBA Found Symp 167) p. 5.
- Kishimoto, T. (1992) *Int. Arch. Allergy Immunol.* **99**:172.
- Chiu, C-P. *et al.* (1988) *Proc. Natl. Acad. Sci. USA* **85**:7099.
- Northemann, W. *et al.* (1989) *J. Biol. Chem.* **264**:16072