

Interleukin-6

Recombinant Human Interleukin-6 (rhIL-6)

Catalog#: I1005-20: 20 µg
I1005-200: 200 µg
I1005-1000: 1.0 mg

Lot#: On vial label

Formulation: Lyophilized powder lyophilized from a volatile buffer (50 mM NH₄HCO₃, 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.

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 KSNMCESSKE ALAENNLNLP KMAEKDGCFFQ
SGFNEETCLV KIITGLLEFE VYLEYLQNRN ESSEEQARAV
QMSTKVLIQF LQKKAKNLDA IITPDPTTNA 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

**Endotoxin Assay:

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

For research use only, not for use in humans.

Interleukin-6

Recombinant Mouse Interleukin-6 (rmIL-6)

Catalog#:	I1006-20:	20µg
	I1006-200:	200µg
	I1006-1000:	1.0mg
Lot#:	On vial label	
Formulation:	Lyophilized powder lyophilized from a volatile buffer (50 mM NH ₄ HCO ₃ , pH 8.0).	
Preservative:	None.	
MW:	22 kD	
Purity:	>97% on 15% SDS-PAGE.	
Source:	Recombinant mature protein expressed in <i>E. coli</i> (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 phosphate buffer (pH6.0) at a concentration no less than 100 µg/ml. Dilute the stock solution with sterile phosphate-buffered saline (PBS) to a working 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 mouse IL-6 is a 22 kDa protein containing 189 amino acid residues

Recombinant Amino Acid Sequence:

```
MAFPTSQVRR GDFTEDTTPN RPVYTTSQVG GLITHVLWEI  
VEMRKELCNG NSDCMNNDDA LAENNLKLP E IQRNDGCYQT  
GYNQEICLLK ISSGLLEYHS YLEYMKNL K DNKKDKARVL  
QRDTEFLIHI FNQEVKDLHK IVLPTPI SNA LLTDKLESQK  
EWLRTKTIQF ILKSLEEF LK VTLRSTRQT
```

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