



## User Manual

**Interleukin-6 (IL-6) (Rat)**

**Cat. No. REILP-06012**

**Description:**

Interleukin-6 (IL-6) is a pleiotropic cytokine that plays an important role in host defense by regulating immune and inflammatory responses. Produced by T cells, monocytes, fibroblasts, endothelial cells and keratinocytes, IL-6 has diverse biological functions. It stimulates B-cell differentiation and antibody production, synergizes with IL-3 in megakaryocyte development and platelet production, induces expression of hepatic acute-phase proteins, and regulates bone metabolism. IL-6 signals through the IL-6 receptor system that consists of two chains, IL-6R alpha and gp130. Murine IL-6 is inactive on human cells, while both human and murine are equally active on murine cells.

**Source:**

*Escherichia coli*

**Unit:**

10 µg

**Reconstitution:**

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at < -20°C. Further dilutions should be made in appropriate buffered solutions.

**Formulation:**

Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.

**Storage:**

This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one

week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

### **Molecular Weight:**

Approximately 21.7 kDa, a single, non-glycosylated polypeptide chain containing 187 amino acids

### **Endotoxin:**

Less than 1 EU/μg of IL-6 as determined by LAL method.

### **Usage:**

This material is offered by Cyagen Biosciences for research, laboratory or further evaluation purposes. FOR RESEARCH USE ONLY. NOT INTENDED FOR ANY ANIMAL OR HUMAN THERAP EUTIC OR DIAGNOSTIC USE.

### **Biological Activity:**

The ED50 determined by a cell proliferation assay using IL-6-dependent murine 7TD1 cells is less than 0.01 ng/mL, corresponding to a specific activity of  $> 1.0 \times 10^8$  IU/mg.

### **Physical Appearance:**

Sterile filtered white lyophilized (freeze-dried) powder.

### **AA Sequence:**

FPTSQVRRGD FTEDTTHNRP VYTTSQVGGL ITYVLREILE MRKELCNGNS  
DCMNSDDALS ENNLKLPEIQ RNDGCFQTTY NQEICLLKIC SGLLEFRFYL  
EFVKNLQDN KKDKARVIQS NTETLVHIFK QEIKDSYKIV LPTPTSNALL  
MEKLESQKEW LRTKTIQLIL KALEEFLKVT MRSTRQT

**Purity:**

> 95% by SDS-PAGE and HPLC analyses.

Material Safety Data Sheets (MSDSs) are available upon request.

The Certificate of Analysis (COA), which provides detailed quality control information for each product, is also available at the Cyagen website.

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