

## GMP Recombinant Human IL6

Cat. No. IL6-96H    Lot. No. (See product label)

### SPECIFICATION

#### Product Overview

**Species** Human

**Source** E.coli

#### Description

Interleukin-6 (IL-6) is a multifunctional protein that plays important roles in host defense, acute phase reactions, immune responses, and hematopoiesis. According to the type of biological responses being studied, IL-6 was previously named interferon- $\beta$ 2, 26 kDa protein, B cell stimulatory factor-2 (BSF-2), hybridoma/plasmacytoma growth factor, hepatocyte stimulating factor, cytotoxic T cell differentiation factor, and macrophage-granulocyte inducing factor 2A (MGI-2A). The IL-6 designation was adopted after these variously named proteins were found to be identical on the basis of their amino acid and/or nucleotide sequences. IL-6 is expressed by a variety of normal and transformed cells including T cells, B cells, monocytes/macrophages, fibroblasts, hepatocytes, keratinocytes, astrocytes, vascular endothelial cells, and various tumor cells. The production of IL-6 is upregulated by numerous signals including mitogenic or antigenic stimulation, LPS, calcium ionophore, IL-1, IL-2, IFN, TNF, PDGF, and viruses. IL-6 expression in monocytes is inhibited by IL-4 and IL-13.

**Form** Lyophilized from a 0.2  $\mu$ m filtered concentrated solution in PBS, pH 7.4.

#### Bio-activity

The ED50 determined by a cell proliferation assay using IL-6-dependent murine 7TD1 cells is less than 0.1 ng/mL, corresponding to a specific activity of  $>1.0 \times 10^7$  IU/mg.

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|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Molecular Mass</b> | Approximately 20.7 kDa, a single non-glycosylated polypeptide chain containing 183 amino acids.                                                                                                                                                                                                                                                                         |
| <b>AA Sequence</b>    | VPPGEDSKDV AAPHRQPLTS SERIDKQIRY ILDGISALRK ETCNKSNMCE<br>SSKEALAENN LNLPKMAEKD GCFQSGFNEE TCLVKIITGL LEFEVYLEYL<br>QNRFESSEEQ ARAVQMSTKV LIQFLQKKAK NLDAITTPDP TTNASLLTKL<br>QAQNQWLQDM TTHLILRSFK EFLQSSLRAL RQM                                                                                                                                                      |
| <b>Endotoxin</b>      | Less than 1 EU/μg of IL-6 as determined by LAL method.                                                                                                                                                                                                                                                                                                                  |
| <b>Purity</b>         | >96% by SDS-PAGE and HPLC analyses.                                                                                                                                                                                                                                                                                                                                     |
| <b>Usage</b>          | This material is offered by Creative Biomart for research, laboratory or further evaluation purposes. FOR RESEARCH USE ONLY. NOT INTENDED FOR ANY ANIMAL OR HUMAN THERAPY, CLINICAL OR DIAGNOSTIC USE.                                                                                                                                                                  |
| <b>Storage Buffer</b> | 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.             |
| <b>Reconstitution</b> | 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 |

## GENE INFORMATION

|                  |                                                         |
|------------------|---------------------------------------------------------|
| <b>Gene Name</b> | IL6 interleukin 6 (interferon, beta 2) [ Homo sapiens ] |
|------------------|---------------------------------------------------------|

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|                            |                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Official Symbol</b>     | IL6                                                                                                                                                                                                                                                                                                                                                         |
| <b>Synonyms</b>            | IL6; interleukin 6 (interferon, beta 2); IFNB2; interleukin-6; BSF2; HGF; HSF; IL 6; CDF; BSF-2; IFN-beta-2; interferon beta-2; interleukin BSF-2; hybridoma growth factor; CTL differentiation factor; B-cell stimulatory factor 2; B-cell differentiation factor; IL-6;                                                                                   |
| <b>Gene ID</b>             | 3569                                                                                                                                                                                                                                                                                                                                                        |
| <b>mRNA Refseq</b>         | NM_000600                                                                                                                                                                                                                                                                                                                                                   |
| <b>Protein Refseq</b>      | NP_000591                                                                                                                                                                                                                                                                                                                                                   |
| <b>MIM</b>                 | 147620                                                                                                                                                                                                                                                                                                                                                      |
| <b>UniProt ID</b>          | P05231                                                                                                                                                                                                                                                                                                                                                      |
| <b>Chromosome Location</b> | 7p21-p15                                                                                                                                                                                                                                                                                                                                                    |
| <b>Pathway</b>             | ATF-2 transcription factor network, organism-specific biosystem; Adipogenesis, organism-specific biosystem; African trypanosomiasis, organism-specific biosystem; African trypanosomiasis, conserved biosystem; Amoebiasis, organism-specific biosystem; Amoebiasis, conserved biosystem; Androgen Receptor Signaling Pathway, organism-specific biosystem; |
| <b>Function</b>            | cytokine activity; cytokine activity; growth factor activity; interleukin-6 receptor binding; contributes_to interleukin-6 receptor binding; interleukin-6 receptor binding;                                                                                                                                                                                |