

## Recombinant Human IL-6 Protein

Size / Cat.No.: 50 $\mu$ g / GMP-TL512-0050

100 $\mu$ g / GMP-TL512-0100

### Product Name

Generic Name	Recombinant Human IL-6 Protein
Synonym	IL6,Interleukin-6,BSF2,HSF,IFNB2

### Product Information

Protein sequence	A DNA sequence encoding the human IL-6 (NP_000591.1: V30-M212) was expressed with a His-tag at the C-terminus.
Expression Host	HEK293 cells
QC Testing Purity	> 90 % as determined by SDS-PAGE.
Activity	Determined by the dose-dependent stimulation of the proliferation of TF-1 cells, the activity is $\geq 2.0 \times 10^7$ U/mg.
Endotoxin	< 0.1EU per $\mu$ g of the protein as determined by the LAL method.
Molecular Mass	The Recombinant Human IL-6 Protein predicts a molecular mass of 21.6 kD.
Formulation	Lyophilized from sterile PBS, pH 7.4. Normally 6 % mannitol are added as protectants before lyophilization.
Stability & Storage	24 months at 2°C to 8°C in lyophilized state. 6 months at -20°C under sterile conditions after reconstitution. 12 months at -80°C under sterile conditions after reconstitution. Recommend to aliquot the protein into smaller quantities after reconstituting with water for injection, normal saline or PBS, and keep the diluted concentration above 100 $\mu$ g/mL. Avoid repeated freeze-thaw cycles.

### Background

Interleukin 6 (IL-6) produced by fibroblasts, monocytes, macrophages, T lymphocytes, B lymphocytes, epithelial cells, keratinocytes and various tumor cells. IL-1, TNF- $\alpha$ , PDGF, viral infection, double stranded RNA, and cAMP can all induce normal cells produce IL-6. IL-6 can stimulate the proliferation, differentiation of immune responses and improve immune cell functions. IL-6R is widely expressed on the surface of activated B cells, quiescent T cells, NK cells, myeloma cells, hepatocytes, and myeloid leukemia cells. The main role of IL-6 is to promote the proliferation and differentiation of B cells and the secretion of antibodies. It also has extensive effects on liver cells, T cells, neural tissue, and hematopoietic system. IL-6 also has anti-tumor effects and can directly or indirectly enhance the tumoricidal activity of NK cells and CTL.

**References**

1. Ferguson-Smith AC, Chen YF, Newman MS, May LT, Sehgal PB, Ruddle FH (1988) Regional localization of the interferon-beta 2/B-cell stimulatory factor 2/hepatocyte stimulating factor gene to human chromosome 7p15-p21. *Genomics* 2 (3): 203–8. doi:10.1016/0888-7543(88)90003-1. PMID 3294161.
2. Van der Poll T, Keogh CV, Guirao X, Buurman WA, Kopf M, Lowry SF (1997) Interleukin-6 gene-deficient mice show impaired defense against pneumococcal pneumonia. *The Journal of Infectious Diseases* 176 (2): 439–44. doi:10.1086/514062. PMID 9237710.
3. Banks WA, Kastin AJ, Gutierrez EG (1994) Penetration of interleukin-6 across the murine blood-brain barrier. *Neuroscience Letters* 179 (1-2): 53–6. doi:10.1016/0304-3940(94)90933-4. PMID 7845624.