

Product Information

Interleukin 6, human recombinant, expressed in HEK 293 cells suitable for cell culture

Catalog Number **SCU0001**
Storage Temperature -20°C

Synonyms: IL-6, B-cell stimulatory factor 2 (BSF-2), CTL differentiation factor (CDF), Interferon beta-2 (IFN-beta-2), Hybridoma growth factor

Product Description

Interleukin 6 (IL-6) is a pleiotropic glycoprotein belonging to the IL-6 family of cytokines.¹ It is a multifunctional cytokine with well-defined pro and anti-inflammatory properties.² IL-6 is secreted by T cells and macrophages to stimulate immune response, e.g., during infection and after trauma, especially burns or other tissue damage leading to inflammation.³ The O-linked sugar chain of IL-6 is thought to contribute to the stability of the cytokine through polymerization suppression and/or conformational changes,⁴ exemplifying the significance of its expression in a human expression system, which allows proper glycosylation.

Recombinant human IL-6 is expressed in human HEK 293 cells as a 183 amino acids glycosylated protein, with a calculated molecular mass of 20.8 kDa. It is supplied as a lyophilized powder in phosphate buffered saline (PBS), pH 7.4, with no additives or carrier proteins. It is aseptically filled.

The biological activity of recombinant human IL-6 was tested in culture by measuring its ability to stimulate proliferation of the IL-6 dependent mouse T1165 cells.

EC₅₀: 0.2–2 ng/mL

The EC₅₀ is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

Purity: $\geq 98\%$ (SDS-PAGE)

Endotoxin level: ≤ 0.1 EU/ μg of IL-6

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein in sterile, ultrapure water to a final concentration of 100 $\mu\text{g/mL}$.

Storage/Stability

Store the lyophilized product at -20°C . The product is stable for at least 2 years as supplied.

After reconstitution, it is recommended to store the protein in working aliquots at -20°C .

References

1. Nakashima, K. et al., gp130 and the IL-6 family of cytokines: signaling mechanisms and thrombopoietic activities. *Semin. Hematol.*, **35**, 210-221 (1998).
2. Wolf, J. et al., Interleukin-6 and its receptors: A highly regulated and dynamic system. *Cytokine*, **70**, 11-20 (2014).
3. Cook, A.D. et al. The phenotype of inflammatory macrophages is stimulus dependent: implications for the nature of the inflammatory response. *J. Immunol.*, **171**, 4816-4823 (2003).
4. Orita, T. et al., Polypeptide and Carbohydrate Structure of Recombinant Human Interleukin-6 Produced in Chinese Hamster Ovary Cells, *J. Biochem.*, **115**, 345-350 (1994)

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