

Product Information

**Interleukin-2, human
recombinant, expressed in HEK 293 cells
cell culture tested, endotoxin tested**

Product Number **I17002**
Storage Temperature -20°C

Synonyms: IL-2, T-cell growth factor

Product Description

Recombinant human IL-2 is expressed in human 293 cells as a glycoprotein with a calculated molecular mass of 15 kDa. This protein is manufactured in human cells using an all-human production system, with full chemically defined ingredients and with no serum. The human cells expression system allows human-like glycosylation and folding, and often supports better stability of the protein in culture.

Interleukin-2 (IL-2) is a lymphokine that promotes the long-term proliferation of activated T cells,¹ and as such it is an essential mediator of immune response.² IL-2 signals through the IL-2 receptor, a complex consisting of three chains, termed alpha, beta, and gamma. The gamma chain is shared by all members of this family of cytokine receptors.³ Enhancement of IL-2 signaling using IL-2/anti-IL-2 immune complexes substantially improves immune surveillance in the context of suppressed immunity, and enhances control of the infection.⁴

This product is lyophilized from phosphate buffered saline (PBS), pH 7.4, with no carrier proteins. It is aseptically filled.

The biological activity of recombinant human IL-2 was tested in culture by measuring its ability to stimulate proliferation of the mouse CTLL-2 cells (mouse cytotoxic T cell line).

ED₅₀: ≤ 4 ng/mL

The ED₅₀ is defined as the effective concentration of IL-2 that elicits a 50% increase in cell growth in a cell based bioassay.

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

Endotoxin level: ≤ 1 EU/ μg IL-2 (LAL)

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 100 mM acetic acid 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. Morgan, D.A. et al., Selective in vitro growth of T lymphocytes from normal human bone marrows. *Science*, **193**, 1007-1008 (1976).
2. Gillis, S., and Watson, J., Biochemical and biological characterization of lymphocyte regulatory molecules. V. Identification of Interleukin 2-producing human leukemia T cell line. *J. Exp. Med.*, **152**, 1709-1719 (1980).
3. Liao, W. et al., IL-2 family cytokines: new insights into the complex roles of IL-2 as a broad regulator of T helper cell differentiation. *Curr. Opin. Immunol.*, **23**, 598-604 (2011).
4. Molloy, M.J. et al., Interleukin-2 immune complexes as a therapy for persistent virus infection. *J. Immunol.*, **182**, 4512-4515 (2009).

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