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Product Information

Interleukin-2 human (IL-2)
recombinant, expressed in HEK 293 cells
cell culture tested, endotoxin tested

Product Number **H7041**
Storage Temperature –20 °C

Synonyms: IL-2, T Cell Growth Factor (TCGF), aldesleukin

Product Description

Recombinant human Interleukin-2 (IL-2) is expressed in human HEK 293 cells with a calculated molecular mass of 15 kDa. This protein is manufactured in human cells, with no serum. The human cells expression system allows human-like glycosylation and folding, and often supports higher specific activity of the protein. The protein is produced with no artificial tags.

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 a solution of 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).

EC_{50}: ≤5.0 ng/mL

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

Purity: ≥95.0% (SDS-PAGE)

Endotoxin: ≤1.00 EU/µg IL-2 (LAL)

Uniprot: P60568

Precautions and Disclaimer

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. Reconstitute in water to a concentration of 0.1 mg/mL. Do not vortex. This solution can be stored at 2–8 °C for up to 1 week. For extended storage, it is recommended to store in working aliquots at –20 °C.

Storage/Stability

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

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 lnterleukin 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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