

Product Information

Interleukin-2 from mouse

recombinant, expressed in *E. coli*
carrier free, suitable for cell culture

Catalog Number **I4161**

Storage Temperature $-20\text{ }^{\circ}\text{C}$

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

Product Description

Interleukin-2 was the first interleukin molecule to be discovered. It is a T cell-derived cytokine, which was first described as a T cell growth factor (TCGF). In addition to its potent T cell growth stimulatory activity, biological functions of IL-2 also include B cell growth and differentiation, and generation of LAK cells and NK cells.^{1,2}

Mouse IL-2 contains 149 amino acids with disulfide bonds between Cys⁷² and Cys¹²⁰. The disulfide bond is essential for its biological activity. The amino acid sequence of mouse IL-2 has 63% homology with human IL-2.³ Human IL-2 is active on both human and mouse lymphocytes. Mouse IL-2 is active on mouse lymphocytes.

Molecular mass: 17.2 kDa

Recombinant, mouse Interleukin-2 is lyophilized from a 0.2 μm -filtered solution of 10 mM sodium citrate, pH 4.0. It is a carrier free product as no additional proteins are added after isolation of the recombinant protein.

Purity: $\geq 97\%$ (SDS-PAGE)

Endotoxin: ≤ 1 EU/ μg of protein

ED₅₀: ≤ 0.2 ng/mL

The biological activity of recombinant, mouse IL-2 is measured by its ability to stimulate the proliferation of the IL-2 dependent mouse cytotoxic T cell line, CTLL-2.⁴ The ED₅₀ is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

Precautions and Disclaimer

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

Preparation Instructions

Centrifuge vial prior to opening. Reconstitute the contents of the vial in water to a concentration range of 0.1–1.0 mg/mL.

Storage/Stability

Store the lyophilized product at $-20\text{ }^{\circ}\text{C}$.

After reconstitution, store at $2\text{--}8\text{ }^{\circ}\text{C}$ for a maximum of one week. For extended storage, freeze in working aliquots at $-70\text{ }^{\circ}\text{C}$ or $-20\text{ }^{\circ}\text{C}$. Repeated freezing and thawing is not recommended.

References

1. Hatakeyama, M. et al., Peptide Growth Factors and their Receptors I, Sporn, M., et al., eds., Springer-Verlag (New York, NY: 1991) p. 523.
2. Gaffen, S.L., and Liu, K.D., Overview of interleukin-2 function, production and clinical applications. *Cytokine*, **28**, 109-123 (2004).
3. Yokata, T. et al., Use of a cDNA expression vector for isolation of mouse interleukin 2 cDNA clones: Expression of T-cell growth-factor activity after transfection of monkey cells. *Biochemistry*, **82**, 68-72 (1985).
4. Gearing, A. et al., Lymphokines and Interferons, A Practical Approach, Clemens, M., et al., eds., IRL Press (Oxford, UK: 1987) p. 296.

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