

Product No. I-4517
Interleukin-2 (IL-2)
Mouse Recombinant
Expressed in Yeast

Description

Interleukin-2 (IL-2, also known as T cell growth factor) is an immunomodulatory factor produced by certain subsets of T lymphocytes.¹ This lymphokine has proved useful in promoting long term growth of activated T cells and related cell types. Interleukin-2 effects the activation and proliferation of NK cells, induces Interferon- γ and B cell growth factor secretion,²⁻⁵ and modulates the expression of the IL-2 receptor.⁶ Interleukin-2 has been isolated from a number of cell types⁷⁻⁹ and has been produced by recombinant DNA technology.¹⁰

Performance Characteristics

Recombinant, mouse Interleukin-2 has been tested in culture using a modification of the biological assay in Current Protocols in Immunology.¹¹ IL-2 dependent CTLL-2 cells are plated in medium containing dilutions of IL-2. After an incubation period, MTT is added to the cultures. The cultures are incubated again, the MTT solubilized, and the plates are read by a multiwell plate reader. The EC₅₀ is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay. Biological Response Modifiers Program (BRMP) units have been established as an interim standard by the National Institutes of Health (NIH).

Product Information

Molecular Weight: 18 kD
Purity: $\geq 90\%$ by SDS-PAGE
EC₅₀: 0.1 - 4.0 units/ml
Specific Activity: 1×10^6 - 1×10^7 BRMP units/mg
Package Size: 10,000 BRMP units
Formulation: Lyophilized from 0.2 μm -filtered phosphate buffered saline.
Carrier Protein: 0.1% BSA
Sterility: 0.2 μm -filtered
Endotoxin: <0.2 ng/ μg

Reconstitution and Use

Reconstitute the contents of the vial using 1 ml of 0.2 μm -filtered deionized water to prepare a stock solution. Prepare aliquots and immediately store at -70°C . Reconstituted IL-2 may be further diluted in a solution containing 0.1-1.0% BSA or 1-10% serum in phosphate buffered saline or tissue culture medium. Diluted IL-2 should be used immediately. Additional filtration is **not** recommended and may result in product loss due to adsorption onto the filter membrane.

Storage

Prior to reconstitution, store at -70°C . After reconstitution, store in working aliquots at -70°C for a maximum of 6 months. Prolonged storage of product or repeated freezing and thawing is **not** recommended and will result in decreased biological activity.

References

1. Smith, K., Science, **240**, 1169 (1988).
2. Morgan, D., et al., Science, **193**, 1007 (1976).
3. Ortaldo, J., et al., J. Immunol., **133**, 779 (1984).
4. Farrar, J., et al., Immunol. Rev., **63**, 129 (1982).
5. Inaba, K., et al., J. Exp. Med., **158**, 2040 (1983).
6. Smith, K., et al., Proc. Natl. Acad. Sci. USA, **82**, 864 (1985).
7. Welte, K., et al., J. Exp. Med., **156**, 454 (1982).
8. Kniep, E., et al., Eur. J. Biochem., **143**, 199 (1984).
9. Robb, R., et al., Proc. Natl. Acad. Sci. USA, **80**, 5990 (1983).
10. Taniguchi, T., et al., Nature, **302**, 305 (1983).
11. Coligan, J., et al., Current Protocols in Immunology Vol. 1, 6:3.1 (1991).