



Product Information

INTERLEUKIN-7 (IL-7) MOUSE, RECOMBINANT

Expressed in *E. Coli*

Product Number I 4892

Product Description

Interleukin-7 is a lymphoid cell growth factor that affects pre-B, pro-B, and early T cells.¹ It was first isolated by Namen in 1988,^{2,3} and was previously known as pre-B-cell growth factor and lymphopoietin-1. Recombinant mouse IL-7 is produced by a DNA sequence encoding the IL-7 protein.² IL-7 supports the growth of early B cells from long-term lymphoid bone marrow cultures.³ It is mitogenic to thymocytes and enhances the response of other stimuli such as PHA and Con A.⁴ IL-7 stimulates the proliferation of CD4⁺/CD8⁺ cells.^{4,5} The proliferative response of thymocytes to IL-7 is not affected by antibodies to the T cell growth factors such as IL-2, IL-4, and IL-6, suggesting that IL-7 is capable of stimulating T cell proliferation through a pathway independent of the known T cell growth factors.⁴ Mature T cells respond to IL-7 and Con A, but not to IL-7 alone. Mouse IL-7 has 65% amino acid sequence homology with human IL-7 and both proteins exhibit cross-species activity.

Reagents

Lyophilized from a 0.2 µm-filtered solution of phosphate buffered saline, pH 7.4 containing 250 µg bovine serum albumin (BSA) as a carrier protein.

Storage/Stability

Store at -20 °C for no more than 6 months.

After reconstitution, store at 2-8 °C for a maximum of one month. For extended storage, freeze in working aliquots at -70 °C or -20 °C. Repeated freezing and thawing is not recommended.

Product Profile

The biological activity of recombinant, mouse Interleukin-7 is measured in a cell proliferation assay using PHA activated human peripheral blood lymphocytes.⁶ The EC₅₀ is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

Reconstitution

Reconstitute the contents of the vial using sterile-filtered PBS containing 0.1% HSA or BSA to a concentration of not less than 1 µg/ml.

References

1. Henney, C. S., Immunol. Today, **10**, 170 (1989).
2. Namen, A. E., et al., Nature, **333**, 571 (1988).
3. Namen, A. E., et al., J. Exp. Med., **167**, 988 (1988).
4. Conlon, P. J., et al., Blood, **74**, 1368 (1989).
5. Suda, T., et al., J. Immunol., **144**, 3039 (1990).
6. Yokota, T., et al., Proc. Natl. Acad. Sci. USA, **83**, 5894 (1986).

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