



Interleukin-7, human recombinant (rHuIL-7-Yeast)

Catalog No: 94925
Lot No: XXXXX
Source: *Saccharomyces cerevisiae*
Synonyms: Lymphopoietin 1 (LP-1), pre-B cell factor, IL-7

Background

IL-7 is a cytokine important for B and T cell development. This cytokine and the hepatocyte growth factor (HGF) form a heterodimer that functions as a pre-pro-B cell growth-stimulating factor. This cytokine is found to be a cofactor for V(D)J rearrangement of the T cell receptor beta (TCRB) during early T cell development. This cytokine can be produced locally by intestinal epithelial and epithelial goblet cells, and may serve as a regulatory factor for intestinal mucosal lymphocytes. Knockout studies in mice suggested that this cytokine plays an essential role in lymphoid cell survival.

Description

Interleukin-7 human recombinant produced in yeast is a single, glycosylated polypeptide chain containing 152 amino acids and having a molecular mass of 17.4 kDa. IL-7 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a concentrated (1 mg/ml) solution in water containing 20 mM phosphate buffer.

Solubility

It is recommended to reconstitute the lyophilized Interleukin-7 in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Interleukin-7, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL-7 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 98.0% as determined by SDS-PAGE.

Amino Acid Sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Asp-Cys-Asp-Ile-Glu.

Activity

The ED₅₀ as determined by the dose-dependent stimulation of thymidine uptake by murine pre-B cell line 2E8 is <0.5 ng/ml, corresponding to a specific activity of >2 x 10⁶ units/mg.

Usage

This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.

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