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## Product Data Sheet

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Product Name: IL 7 Human, Yeast  
 Cat. No.: GP20529  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Saccharomyces cerevisiae.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Lymphopoietin 1 (LP-1); pre-B cell factor; IL-7.		
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.		
Solubility	It is recommended to reconstitute the lyophilized Interleukin -7 in sterile 18MΩ-cm H <sub>2</sub> O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	Lyophilized from a concentrated (1mg/ml) solution in water containing 20mM phosphate buffer.		

### Introduction

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.

### Biological Activity

The ED<sub>50</sub> 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 10<sup>6</sup> units/mg.

### Stability

Lyophilized Interleukin-7 although stable at room temperature for 3 weeks, should be

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stored desiccated below  $-18^{\circ}\text{C}$ . Upon reconstitution IL7 should be stored at  $4^{\circ}\text{C}$  between 2-7 days and for future use below  $-18^{\circ}\text{C}$ . For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Background

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. The IL-7 is purified by proprietary chromatographic techniques.

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