



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

**Catalog No:** 50437  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**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 *E. coli* is a single, non-glycosylated polypeptide chain containing 153 amino acids and having a molecular mass of 17412 Dalton. 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 no additives.

### Solubility

It is recommended to reconstitute the lyophilized Interleukin-7 in sterile 18 M $\Omega$ -cm H<sub>2</sub>O not less than 100  $\mu$ g/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 (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

### Amino Acid Sequence

MDCDIEGKDG KQYESVLMVS IDQLLDMSKE IGSNCLNNEF NFFKRHCDA NKEGMFLFRA ARKLRQFLKM NSTGDFDLHL  
LKVSEGTTL LNCTGQVKGR KPAALGEAQP TKSLEENKSL KEQKKNLNDLC FLKRLLQEIK TCWNKILMGT KEH

### Activity

The ED50 as determined by the dose-dependant stimulation of murine IXN/2B cells is <0.5 ng/ml, corresponding to a specific activity of 2,000,000 IU/mg.

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### Usage

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