



Interleukin-7, rat recombinant (rrIL-7)

Catalog No: 97520
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 rat recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 129 amino acids and having a molecular mass of 15.0 kDa. IL-7 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.

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 IL-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. Please prevent freeze-thaw cycles.

Purity

Greater than 98.0% as determined by SDS-PAGE.

Amino Acid Sequence

DCHIKDKDGK AFGSVLMISI NQLDKMTGTD SDCPNNEPNF FKKHLCDDTK EAAFLNRAAR KLRQFLKMNI SEEFNDHLLR
VSDGTQTLVN CTSKEEKTIK EQKKNDP CFL KRLLEIKTC WNKILKGS I

Activity

Fully biologically active when compared to standard. The ED50 was determined by the dose-dependent stimulation of the proliferation of murine 2E8 cells is less than 0.2 ng/ml, corresponding to a specific activity of 5,000,000 IU/mg.

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