

IL 7 Human, Yeast

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

Catalog #: CYP5-305

Synonyms: Lymphopoietin 1 (LP-1), pre-B cell factor, IL-7.

For research use only.

Source: *Saccharomyces cerevisiae*.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

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.

Purity: Greater than 98.0% as determined by SDS-PAGE.

Formulation:

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

Stability:

Lyophilized Interleukin-7 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL7 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.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

Solubility:

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

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 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 $2 \times 10^6 \text{ units/mg}$.

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