

Recombinant Human Interleukin-7 (rh IL-7)

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

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. IL-7 is found to be a cofactor for V(D)J rearrangement of the T cell receptor beta (TCRB) during early T cell development. IL-7 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 IL-7 plays an essential role in lymphoid cell survival.

Description: Recombinant human IL-7 produced in *E.Coli* is a single, non-glycosylated polypeptide chain containing 153 amino acids and having a molecular mass of 17.4 kDa. The rh IL-7 is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilized from a 0.22 µm filtered solution in 25 mM sodium phosphate, 200 mM NaCl, pH 6.5. The aliquots of 1µg and 2µg contain Trehalose 5% (w/vol) for better recovery.

Solubility: It is recommended to reconstitute the lyophilized rh IL-7 in sterile H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rh IL-7 although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rh 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 95.0% as determined by SDS-PAGE / silver stain.

Endotoxicity: The endotoxin level is less than 1 EU/µg determined by LAL method.

Amino acid sequence: MDCDIEGKDG KQYESVLMVS IDQLDSMKE IGSNCLNNEF NFFKRHICDA
NKEGMFLFRA ARKLRQFLKM NSTGDFDLHL LKVSEGTTIL LNCTGQVKGR KPAALGEAQP TKSLEENKSL
KEQKKLNDLC FLKRLLEIK TCWNKILMGT KEH

Biological 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 x 10⁶ IU/mg.

This material is offered for **research use only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	2 µg	Cat.N°	11340072
<i>medium</i>	10 µg	Cat.N°	11340073
<i>large</i>	50 µg	Cat.N°	11340075
<i>x-large</i>	250 µg	Cat.N°	11340077
<i>xx-large</i>	1000 µg	Cat.N°	11340078

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