

Active Recombinant Full Length Human interleukin 7 protein, His tagged

Cat. No. IL7-13HFL Lot. No. (See product label)

SPECIFICATION

Product Overview

Recombinant human IL7, fused to His-tag at C-terminus, was expressed in insect cell and purified by using conventional chromatography techniques.

Species

Human

Source

Insect Cells

ProteinLength

1-177 aa

Description

The protein encoded by this gene 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. IL7 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. IL7 plays an essential role in lymphoid cell survival, and in the maintenance of naive and memory T cells. Alternative splicing results in multiple transcript variants encoding distinct isoforms. Additional splice variants have been described but their presence in normal tissues has not been confirmed. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection can be a potent inducer of proinflammatory cytokines and chemokines which may defend against the infection, but may also mediate destructive lung injury. Elevated serum IL7 levels, together with several other circulating cytokines and chemokines, has been found to

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	be associated with the severity of Coronavirus Disease 19 (COVID-19).
Tag	C-His
Form	Liquid
Bio-activity	Measured in a cell proliferation assay using PHA-activated human Peripheral Blood Mononuclear Cells(PBMC). The ED50 range ≤ 8 ng/mL.
Molecular Mass	18.4 kDa
AA Sequence	< ADP> DCDIEGKDGKQYESVLMVSIQQLLDSTMKEIGSNCLNNEFNFFKRHICDANK EGMFLFRAARKLRQFLKMNSTGDFDLHLLKVSEGTTILLNCTGQVKGRKPAALGEA QPTKSLEENKSLKEQKKLNDLCLFKRLLQEIKTCWNKILMGTKEH< HHHHHH>
Endotoxin	< 1 EU/ μ g of protein determined by LAL method
Purity	> 90% by SDS-PAGE
Applications	SDS-PAGE, Bioactivity
Storage	Can be stored at +2 to +8 centigrade for 1 week. For long term storage, aliquot and store at -20 to -80 centigrade. Avoid repeated freezing and thawing cycles.
Concentration	0.5 mg/mL (determined by absorbance at 280nm)
Storage Buffer	Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol
References	1. Iolyeva M., et al. (2013) Blood 122:2271-2281. 2. Younas M., et al. (2013) J. Immunol. 191:3161-3168.

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GENE INFORMATION

Gene Name IL7 interleukin 7 [Homo sapiens (human)]

Official Symbol IL7

Synonyms IL7; interleukin 7; IL-7; interleukin-7

Gene ID 3574

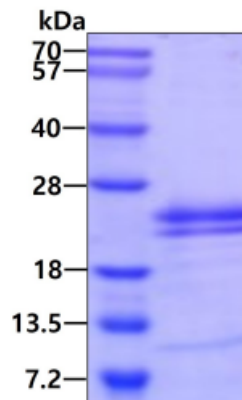
mRNA Refseq NM_000880

Protein Refseq NP_000871.1


MIM 146660

UniProt ID P13232

SDS-PAGE



3 µg by SDS-PAGE under reducing condition and visualized by coomassie blue

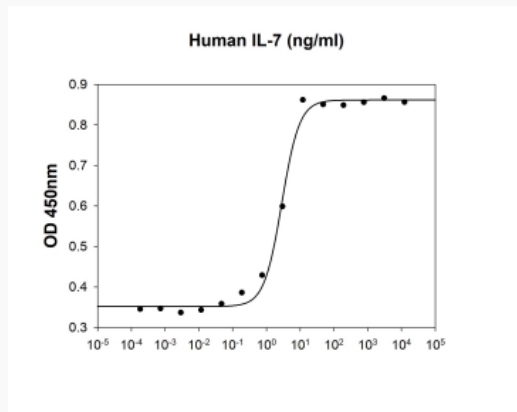
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Biological Activity



Human IL-7 stimulates cell proliferation of the PHA-activated human Peripheral Blood Mononuclear Cells(PBMC). The ED50 range ≤ 8 ng/mL.

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