

# Biotinylated Human IL-7 Protein, His,Avitag™, low endotoxin (MALS verified)

Catalog # IL7-H82Q3



BIOSYSTEMS  
**Acro**

## Synonyms

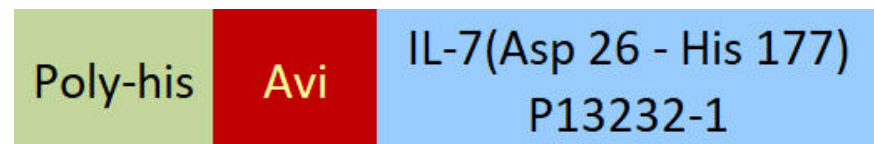
IL7, Interleukin-7

## Source

Biotinylated Human IL-7 Protein, His,Avitag (IL7-H82Q3) is expressed from human 293 cells (HEK293). It contains AA Asp 26 - His 177 (Accession # [P13232-1](#)).

Predicted N-terminus: His

## Molecular Characterization



This protein carries a polyhistidine tag at the N-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 21.0 kDa. The protein migrates as 30-32 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Labeling

**Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avi tag is enzymatically labeled with biotin.**

## Protein Ratio

Passed as determined by the SABA assay / HABA assay / binding ELISA.

## Endotoxin

Less than 0.01 EU per µg by the LAL method / rFC method.

## Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

## Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

## Reconstitution

Please see Certificate of Analysis for specific instructions.

**For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.**

## Shipping and Storage

This product is shipped at ambient temperature.

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

**Please avoid repeated freeze-thaw cycles.**

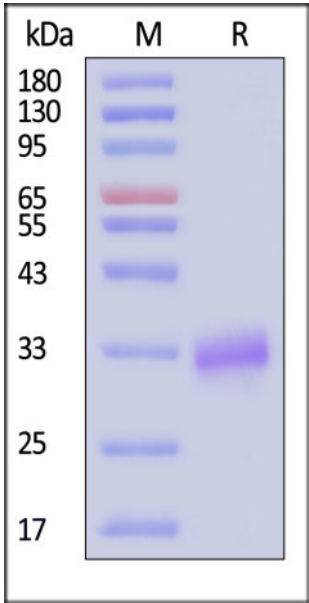
This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## ACRO Quality Management System

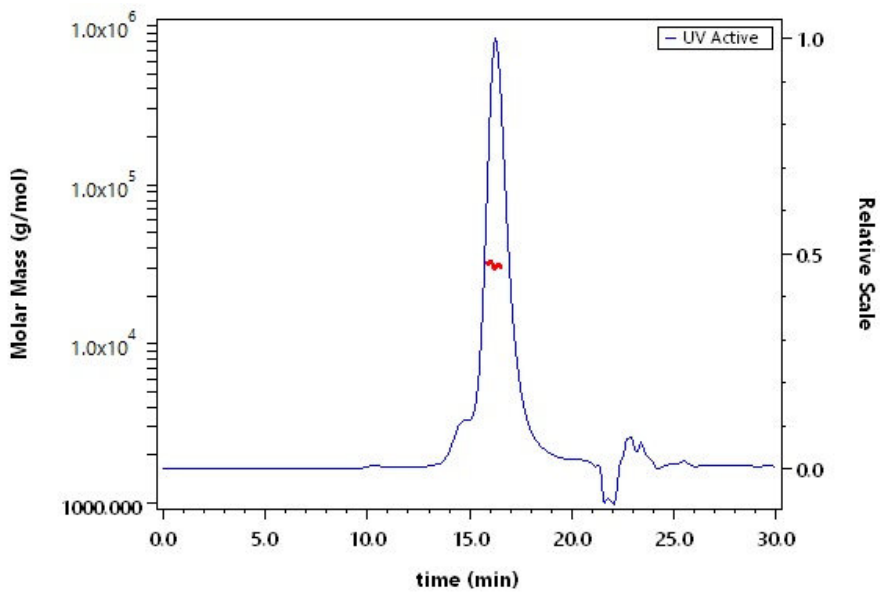
- [QMS\(ISO, GMP\)](#)
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE



Biotinylated Human IL-7 Protein, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

SEC-MALS



The purity of Biotinylated Human IL-7 Protein, His,Avitag (Cat. No. IL7-H82Q3) is more than 90% and the molecular weight of this protein is around 20-35 kDa verified by SEC-MALS.

Background

Interleukin 7 is also known as IL7, IL-7, and is a hematopoietic growth factor secreted by stromal cells in the red marrow and thymus. It is also produced by keratinocytes, dendritic cells, hepatocytes, neurons, and epithelial cells, but is not produced by lymphocytes. IL-7 stimulates the differentiation of multipotent (pluripotent) hematopoietic stem cells into lymphoid progenitor cells, It also stimulates proliferation of all cells in the lymphoid lineage (B cells, T cells and NK cells). It is important for proliferation during certain stages of B-cell maturation, T and NK cell survival, development and homeostasis. 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 binds to the IL-7 receptor, a heterodimer consisting of Interleukin-7 receptor alpha and common gamma chain receptor. Il-7 promotes hematological malignancies (acute lymphoblastic leukemia, T cell lymphoma). Elevated levels of IL-7 have also been detected in the plasma of HIV-infected patients. IL-7 as an immunotherapy agent has been examined in many pre-clinical animal studies and more recently in human clinical trials for various malignancies and during HIV infection. IL-7 could also be beneficial in improving immune recovery after allogenic stem cell transplant.



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