



## Synonym

IL21,Za11,Interleukin-21

## Source

Biotinylated Human IL-21, Fc,Avitag, premium grade(IL1-H82F7) is expressed from human 293 cells (HEK293). It contains AA Gln 30 - Ser 162 (Accession # [Q9HBE4-1](#)).

Predicted N-terminus: Gln 30

*Biotinylated Human IL-21, Fc,Avitag, premium grade (IL1-H82F7), designed for preclinical stage, has the same activity and performance with GMP Human IL-21 Protein, which enables a seamless transition from preclinical development to clinical phases. Premium Grade product offer a cost efficient alternative of GMP Grade products for the early development phase when safety of raw materials is not top priority. By using Premium Grade products in early development phase, you can transition easily into clinical and commercial phase without need to revalidate the raw materials and modify manufacturing process.*

## Molecular Characterization

IL-21(Gln 30 - Ser 162) Q9HBE4-1	Fc(Pro 100 - Lys 330) P01857	Avi
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This protein carries a human IgG1 Fc tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 43.6 kDa. The protein migrates as 50-55 kDa 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 Avitag is enzymatically labeled with biotin.*

## Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

## Endotoxin

Less than 0.02 EU per µg by the LAL method.

## Sterility

Negative

## Mycoplasma

Negative.

## Purity

>95% as determined by SDS-PAGE.

## 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.*

## Storage

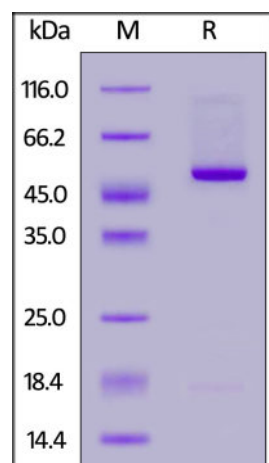
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

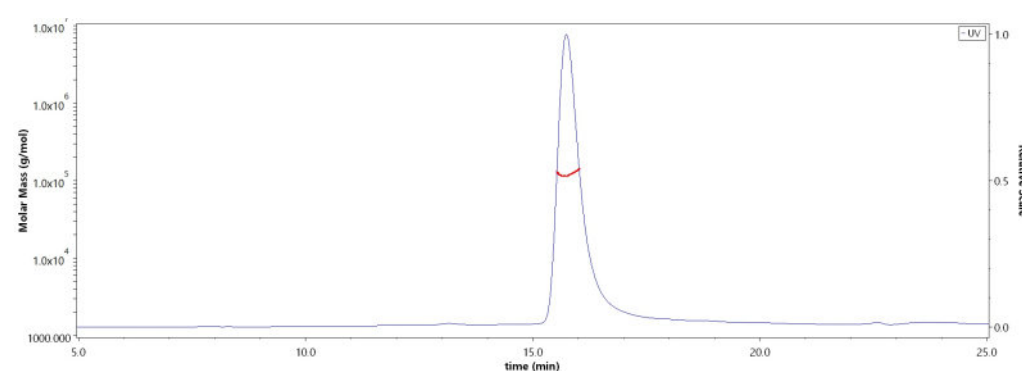
This product is stable after storage at:

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

## SDS-PAGE



## SEC-MALS



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and more!



# Biotinylated Human IL-21 Protein, Fc,Avitag™, premium grade

Catalog # IL1-H82F7

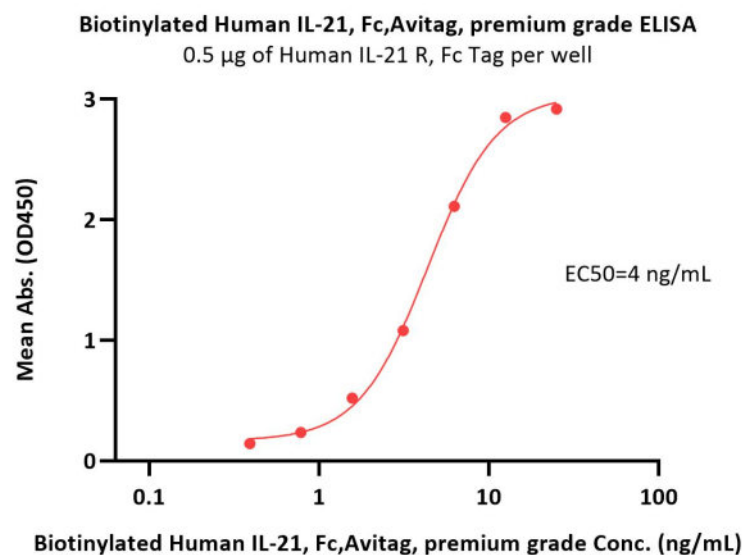


Biotinylated Human IL-21, Fc,Avitag, premium grade on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

The purity of Biotinylated Human IL-21, Fc,Avitag, premium grade (Cat. No. IL1-H82F7) is more than 85% and the molecular weight of this protein is around 100-125 kDa verified by SEC-MALS.

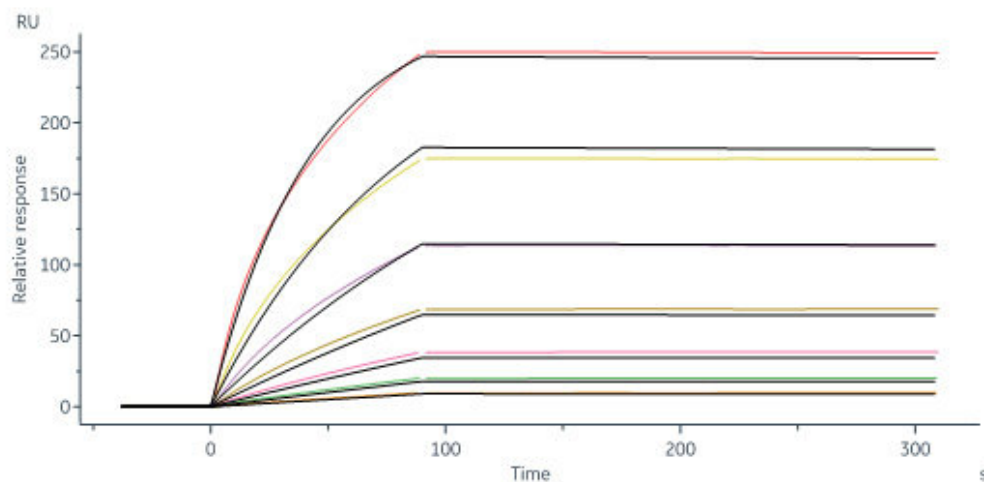
[Report](#)

## Bioactivity-ELISA



Immobilized Human IL-21 R, Fc Tag (Cat. No. ILR-H5257) at 5 µg/mL (100 µL/well) can bind Biotinylated Human IL-21, Fc,Avitag, premium grade (Cat. No. IL1-H82F7) with a linear range of 0.2-6 ng/mL (QC tested).

## Bioactivity-SPR



Biotinylated Human IL-21, Fc,Avitag, premium grade (Cat. No. IL1-H82F7) immobilized on CM5 Chip can bind Human IL-21 R, Fc Tag (Cat. No. ILR-H5257) with an affinity constant of 0.165 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

## Background

Interleukin-21 (IL-21) is a secreted protein which belongs to the IL-15 / IL-21 family. Interleukin-21 / IL-21 belongs to a family of cytokines that bind to a composite receptor consisting of a private receptor (IL21R) and the common cytokine receptor gamma chain (gamma(C)). Interleukin-21 / IL-21 impacts a number of cell types, including CD8+ memory T cells, NK cells and subsets of CD4 memory T cells. The IL-21R is widely distributed on lympho-haematopoietic cells. IL-21 is a pleiotropic cytokine produced by CD4+ T cells in response to antigenic stimulation. Its action generally enhances antigen-specific responses of immune cells. IL-21 promotes the anti-tumor activity of CD8+ T-cells and NK cells. IL-21 exerts its effect through binding to a specific type I cytokine receptor, IL-21R, which also

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5/15/2024

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Catalog # IL1-H82F7



contains the  $\gamma$  chain ( $\gamma c$ ) found in other cytokine receptors including IL-2, IL-4, IL-7, IL-9 and IL-15. The IL-21/IL-21R interaction triggers a cascade of events which includes activation of the tyrosine kinases JAK1 and JAK3, followed by activation of the transcription factors STAT1 and STAT3.

## Clinical and Translational Updates

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