

# Recombinant Mouse IL-21 Protein

Catalog Number: ATGP4049

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

18-146aa

### UniProt No.

Q9ES17

### NCBI Accession No.

NP\_068554.1

### Alternative Names

Interleukin-21, IL-21, CVID11, IL21, IL-21, IL-21Za11interleukin-21, Interleukin-21 isoform, Za11, UscroPMagleukin-21, IL-21, 2

## PRODUCT SPECIFICATION

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### Molecular Weight

15 kDa (130aa), confirmed by MALDI-TOF

### Concentration

1mg/ml (determined by Bradford assay)

### Formulation

Liquid in. Phosphate-Buffered Saline (pH 7.4)

### Purity

> 90% by SDS - PAGE

### Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

### Biological Activity

The activity is determined by the IFN-g ELISA in a using NK-92 human natural killer cells. The ED50 range  $\leq$  100 ng/ml.

### Tag

Non-Tagged

### Application

SDS-PAGE, Bioactivity

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

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## BACKGROUND

### Description

IL-21, also known as Interleukin-21, is produced from activated helper T cells such as Th17 cells and is a member of the common- $\gamma$  chain family of cytokines that includes IL-2, IL-4, IL-7, IL-9, and IL-15. Previous studies have shown that IL-21 plays an important role in the regulation of both innate and adaptive immune responses. IL-21 is critical for NK cell activation and expansion. IL-21 also promotes terminal B cell differentiation into plasma cells and antibody production. Furthermore, IL-21 enhances antigen-specific CD8 T cell expansion and the differentiation of follicular helper T cells in vivo. IL-21 also promotes the differentiation of the inflammatory Th17 lineage and contributes to autoimmunity. IL-21 isoform is an alternative splice variant form of IL-21 that we previously identified and reported to have a similar function as original IL-21. Follicular helper T cells also produce IL-21 to activate and differentiate B cells. Recombinant mouse IL-21, was expressed in *E. coli* and purified by using conventional chromatography techniques.

### Amino acid Sequence

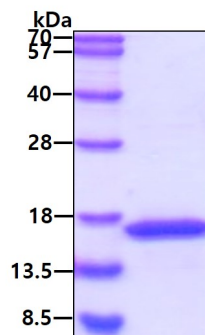
MHKSSPQGPD RLLIRLRHLI DIVEQLKIYE NDLPELLSA PQDVKGHCEH AAFACFQKAK LKPSNPGNNK TFIIDLVAQL  
RRRLPARRGG KKQKHIKCP SCDSYEK RTP KEFLERLKW L LQKMIHQHLS

### General References

Yuqing Yuan., et al. (2017) JCI Insight. 6;2(7):e90652.  
Akemi Araki., et al. (2019) J Immunol. 202:3326-3333.

## DATA

### SDS-PAGE



3 $\mu$ g by SDS-PAGE under reducing condition and visualized by coomassie blue stain

### Biological Activity

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Mouse IL-21 stimulates IFN-g secretion of the NK-92 human natural killer cells. The ED50 range  $\leq 100$  ng/ml.

