

## BACKGROUND:

Interleukin-21 (IL-21) is a member of the common gamma-chain family of cytokines (includes IL-2, IL-4, IL-7, IL-9, IL-13, and IL-15) and is expressed by activated CD4+ T cells. IL-21 has a private receptor known as IL-21R, which is expressed on T, B, and NK cells. Within the B cell lineage, IL-21 regulates IgG1 production and cooperates with IL-4 for the production of multiple Ab classes *in vivo*. Initial studies have demonstrated that IL-21 has pleiotropic effects on the proliferation, differentiation, and effector functions of B, T, natural killer, and dendritic cells.

Recombinant human IL-21 is a non-glycosylated protein, containing 133 amino acids and having a total molecular mass of 15.5 kDa.

**Cat. No.:**  
RP1090AF

### AA Sequence:

MLKTLNLGSC	VIATNLQEIR	NGFSEIRGSV
QAKDGNIDIR	ILRRTESLQD	TKPANRCCLL
RHLLRLYLDR	VFKNYQTPDH	YTLRKISSLA
NSFLTIIKDL	RLCHAHMTCH	CGEEAMKKYS
QILSHFEKLE	PQAAVVKALG	ELDILLQWME
ETE		

## TECHNICAL INFO

### Source:

*E. coli*

### Physical Appearance:

Sterile Filtered white lyophilized (freeze-dried) powder.

### Formulation:

10 mM sodium phosphate, pH 7.5

### Stability:

Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

### Reconstitution:

Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at 0.1 mg/mL, which can be further diluted into other aqueous solutions.

### Protein Content and Purity determined by:

- UV spectroscopy at 280 nm.
- RP-HPLC calibrated against a known standard.
- Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

### Endotoxin Level:

Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.

### Biological Activity:

The activity is measured by dose-dependent ANBL-cell proliferation, with Bioactivity Acceptance Criteria ED50 at 2 ng/mL.

### Animal Component-Free

This product is produced with no animal derived raw products. All processing and handling employs animal free equipment and animal free protocols.

