

**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.

**Alternative Names:**

None

**Amino Acid Sequence:**

MQDRHMIRMRLQLIDIVDQLK NYVNDLVPEF LPAPEDVETN  
CEWSAFSCFQ KAQLKSANTG NNERIINVSI KKLKRKPPST  
NAGRRQKHRL TCPSCDSYEK KPPKEFLERF KSLQKMIHQ  
HLSSRTHGSE DS

**TECHNICAL INFORMATION**

**Source:** *E.coli*

**Physical Appearance:**

Sterile Filtered white lyophilized (freeze-dried) powder.

**Formulation:**

Recombinant human IL-21 is lyophilized from 20 mM Na<sub>2</sub>PO<sub>4</sub>, 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 a concentration of 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 determined by the dose-dependent stimulation of Mino cells and is typically less than 0.1-0.6 ng/mL.

*Products are for research use only. They are not intended for human, animal, or diagnostic applications.*

