



## Interleukin-21, mouse recombinant (rmIL-21)

**Catalog No:** 97298  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** Interleukin-21, IL-21, IL21

### Background

IL-21 is produced by CD4+ T cells in response to antigenic stimulation. Its action enhances antigen-specific responses of immune cells. The biological effects of IL-21 include induction of differentiation of T-cells-stimulated B-cells into plasma cells and memory B-cells, stimulation (in conjunction) with IL-4 of IgG production, and induction of apoptotic effects in naive B-cells and stimulated B-cells in the absence of T-cell signaling. Additionally, 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 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.

### Description

Interleukin-21 mouse recombinant produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 130 amino acids and having a total molecular mass of 15 kDa. Murine IL-21 is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

Mouse IL-21 was lyophilized from 20 mM NaHCO<sub>3</sub>, pH 8.5.

### Solubility

It is recommended to reconstitute the lyophilized Interleukin-21 in sterile 18 M $\Omega$ -cm H<sub>2</sub>O not less than 100  $\mu$ g/ml, which can then be further diluted to other aqueous solutions.

### Stability

Lyophilized IL-21, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Mouse IL21 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Purity

Greater than 95.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

### Amino Acid Sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Met-His-Lys-Ser-Ser.

### Activity

The ED50 = 10 - 50 ng/ml, determined by the cell proliferation assay of modified Ba/F3 cells.

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### Usage

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