

## Background:

IL-21 (Interleukin-21) is a potent cytokine regulating many cell types of the immune system. IL-21 is produced by activated T follicular helper cells (Tfh), Th17 cells, and NKT cells (2-6). Tfh-derived IL-21 plays an important role in the development of humoral immunity through its autocrine effects on the Tfh cell and paracrine effects on immunoglobulin affinity maturation, plasma cell differentiation, and B cell memory responses. IL-21 protein regulates several aspects of T cell function. It co-stimulates the activation, proliferation, and survival of CD8+ T cells and NKT cells and promotes Th17 cell polarization. IL-21 blocks the generation of regulatory T cells and their suppressive effects on CD4+ T cells. In addition to its role in T cell biology, IL-21 also plays a critical role in B cell activation, proliferation, differentiation, and apoptosis. It is also required for the migration of dendritic cells to draining lymph nodes. And IL-21 suppresses cutaneous hypersensitivity reactions by limiting allergen-specific IgE production and mast cell degranulation. In the autoimmune disease Systemic lupus erythematosus (SLE), a link between IL-21 and SLE disease susceptibility and progression was recently reported.

## Source:

Recombinant Human IL-21 is expressed from Escherichia coli. It contains AA Gln 30 - Ser 162. Predicted molecular mass 18.1 kDa. This protein carries a polyhistidine tag at the N-terminus.

**His<sub>6</sub> TEV IL-21(Gln 30 - Ser 162)**

## Endotoxin:

Less than 1.0 EU per µg by the LAL method.

## AA Sequence:

QGQDRHMIRMRLIDIVDQLKNYVNDLVPEFLPAPEDVETNCEWSAFSCFQKAQLKSANTGNNERIINVSIKKLRKPPSTNAGRRQ  
KHRLTCPSCDSYEKPPKEFLERFKSLLQKMIHQHLSSRTHGSEDS

## Purity:

Purity >90% as determined by SDS-PAGE.

## Formulation:

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization. Contact us for customized product form or formulation.

## Reconstitution

Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at < -20°C. Further dilutions should be made in appropriate buffered solutions.

## Storage

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

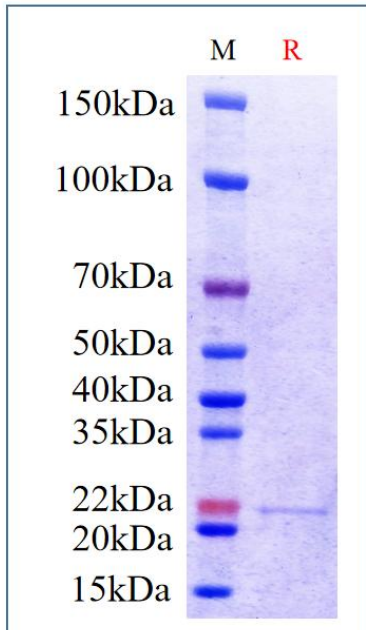
**Please avoid repeated freeze-thaw cycles.**

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



Human IL-21, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.