

## Recombinant Human IL-21 Protein

Catalog Number: GPEH0721

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

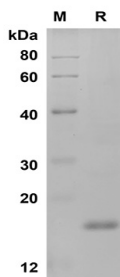
### Description

|               |                                                                         |
|---------------|-------------------------------------------------------------------------|
| Species       | Human                                                                   |
| Source        | E.coli-derived Human IL-21 protein Gln30-Ser162, with an N-terminal His |
| Calculated MW | 17.8 kDa                                                                |
| Observed MW   | 18 kDa                                                                  |
| Accession     | Q9HBE4                                                                  |
| Bio-activity  | Not validated for activity                                              |

### Properties

|                |                                                                                                                                                                                                                                        |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Purity         | > 95% as determined by reducing SDS-PAGE.                                                                                                                                                                                              |
| Endotoxin      | < 10 EU/mg of the protein as determined by the LAL method                                                                                                                                                                              |
| Storage        | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 °C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |
| Shipping       | This product is provided as lyophilized powder which is shipped with ice packs.                                                                                                                                                        |
| Formulation    | Lyophilized from a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.                                                                                                                                                  |
| Reconstitution | It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.                                                                                               |

### Data



SDS-PAGE analysis of Human IL-21 proteins, 2µg/lane of Recombinant Human IL-21 proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 18 KD.

### Background

IL-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. 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.