

Recombinant Human IL-21 protein(His Tag)

Catalog Number: PKSH034107

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

Description

| | |
|----------------------|--|
| Species | Human |
| Source | E.coli-derived Human IL-21 protein Gln 32-Ser 162, with an C-terminal His |
| Calculated MW | 16.2 kDa |
| Observed MW | 20 kDa |
| Accession | Q9HBE4 |
| Bio-activity | Measure by its ability to enhance IFN gamma secretion in NK-92 cells. The ED ₅₀ for this effect is <10 ng/mL. |

Properties

| | |
|-----------------------|---|
| Purity | > 95 % as determined by reducing SDS-PAGE. |
| Endotoxin | < 0.1 EU per µg 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 sterile PBS, pH 8.0. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual. |
| Reconstitution | Please refer to the printed manual for detailed information. |

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.

For Research Use Only