

Rev03
Update: Dec,14,2021

DATASHEET

IL-21, Human

Cat. No.: Z02715

Product Introduction

Species	Human
Protein Construction	IL-21 (Gln30-Ser162) Accession # Q9HBE4
Purity	> 97% as analyzed by SDS-PAGE > 97% as analyzed by HPLC
Endotoxin Level	< 1 EU/μg of protein by LAL method
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by a cell proliferation assay using human N1186 T cells is less than 20.0 ng/ml, corresponding to a specific activity of > 5.0 × 10 ⁴ IU/mg.
Expression System	E. coli
Theoretical Molecular Weight	15.4 kDa
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS, pH 7.4.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at -70°C or -20°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles.

Background

Target Background : IL-21 is a pleiotropic cytokine produced by CD4⁺ T cells in response to antigenic stimulation. Its action generally 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 naïve 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 (γc) 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.

Synonyms : IL21; CVID11; IL-21; Za11; interleukin 21

For laboratory research use only. Direct human use, including taking orally and injection and clinical use are forbidden.