



Product Datasheet

Product Name	Interleukin-21 Human Recombinant
Cata No	CB500310
Source	<i>Escherichia Coli.</i>
Synonyms	Za11, IL-21.

Description

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 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 (γ_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.

Interleukin-21 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 133 amino acids and having a total molecular mass of 15,463 Dalton.

The IL-21 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Biological Activity

The ED₅₀=1.0 -10 ng/ml, determined by the dose-dependant proliferation of human peripheral blood mononuclear cells.

Purity

Greater than 95.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

Formulation

Lyophilized from a concentrated (1mg/ml) solution containing no additives.

Stability

Lyophilized Interleukin-21 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution 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.

Sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Gln-Gly-Gln-Asp-Arg.

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