



Interleukin-21, rat recombinant (rrIL-21)

Catalog No: 97500
Lot No: XXXXX
Source: *E. coli*
Synonyms: Interleukin-21, IL-21, IL21

Background

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 naive 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.

Description

Interleukin-21 rat recombinant produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 129 amino acids and having a total molecular mass of 15.2 kDa. IL-21 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Rat IL-21 was lyophilized from a 0.2 μ m filtered concentrated solution in PBS, pH 7.4.

Solubility

It is recommended to reconstitute the lyophilized Interleukin-21 in sterile 18 M Ω -cm H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Stability

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

Purity

Greater than 95.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

HKSSPQRPDH LLIRLRHLM D IVEQLKIYEN DLDPELLTAP QDVKGQCEHE AFACFQKAKL KPSNTGNKKT FINDLLAQLR
RRLPAKRTGN KQRHMAKPCS CDLYEKKTPK EFLERLKWLL QKMIHQHLS

Activity

The biological activity is measured by its ability to proliferate activated B cells.

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