

Recombinant Rat Interleukin-21 (rr IL-21)

Synonymes: Interleukin-21, IL-21, Il21.

Introduction: 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) 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: Recombinant rat IL-21 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. The rr IL-21 is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: lyophilized from a 0.22 μ m filtered solution in PBS, pH 7.4
The aliquotes of 1 μ g and 2 μ g contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized rr IL-21 in sterile H₂O not less than 100 μ g/ml which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rr IL-21 although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rr IL-21 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 RP-HPLC and by SDS-PAGE.

Amino Acid Sequence: HKSSPQRPDH LLIRLRHLMD IVEQLKIYEN DLDPELLTAP QDVKGQCEHE AFACFQKAKL KPSNTGNNKT FINDLLAQLR RRLPAKRTGN KQRHMAKCPS CDLYEKKTPK EFLERLKWLL QKMIHQHLS.

Biological Activity: Measured by its ability to proliferate activated B cells

This material is offered for **research only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	2 μ g	Cat.N°	13340212
<i>medium</i>	10 μ g	Cat.N°	13340213

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