

PRODUCT DATA SHEET



Bioworld Technology, Inc.

Recombinant IL-21, Human

Catalog Number: BK0098-1mg

Source: Escherichia coli.

Quantity: 1mg

Description:

Interleukin-21 (IL-21) belongs to the Type I four helix bundle cytokines, and shares the common cytokine receptor γ chain with IL-2, IL-4, IL-7, IL-9, and IL-15. IL-21 is expressed by CD4⁺ T cells, natural killer (NK) T cells, and Th17 cells, and the IL-21 receptor is highly expressed on CD4⁺ and CD8⁺ B cells; indeed, IL-21 plays a pivotal role in the survival and proliferation of B cells, and their differentiation to immunoglobulin (Ig) producing cells. IL-21 up-regulates and down-regulates the production of IgG1 and IgE by B cells, respectively, and diminishes the severity of allergy and asthma. In some case, IL-21 also induces the apoptosis of B cells. The other roles of IL-21 include regulation of innate immune systems, implication on autoimmunity, and antitumor actions. Recombinant human Interleukin-21 (rhIL-21) produced in E.coli is a single non-glycosylated polypeptide chain containing 132 amino acids. A fully biologically active molecule, rhIL-21 has a molecular mass of 15.4 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

Molecular Weight:

15.4 kDa, observed by reducing SDS-PAGE.

Purity:

> 95% by SDS-PAGE analysis.

Biological Activity:

ED50 < 0.5 ng/mL, measured by a cell growth inhibition assay using Mino cells, corresponding to a specific activity of > 2.0 × 10⁶ units/mg.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

Lyophilized after extensive dialysis against PBS.

AA Sequence:

MQDRHMIRMQRQLIDIVDQLKQYVNDLVPE-
FLPAPEDVETNCEWSAFSCFQKAKLKSANTGN-
NERIINVSIIKLLKRKPPSTNAGRQKHRLTCP-
SCDSYEKKPPKEFLERFKSLLQK-
MIHQHLSRTHGSEDS

Endotoxin:

< 0.2 EU/μg, determined by LAL method.

Reconstitution:

Reconstituted in ddH₂O at 100 μg/mL.

Storage:

Lyophilized recombinant human Interleukin-21 (rhIL-21) remains stable up to 6 months at -80 °C from date of receipt. Upon reconstitution, rhIL-21 should be stable up to 2 weeks at 4 °C or up to 3 months at -20 °C.

Usage:

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