

DATASHEET
Version 20181206**IL-21, Human****Cat. No.:** Z03076-1**Size:** 1.0 mg**Synonyms:** Za11**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.

Amino Acid Sequence:

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00001 MQDRHMIRM QLIDIVDLK NYVNDLVPEF LPAPEDVETN
00041 CEWSAFSCFQ KAQLKSANTG NNERIINVS I KKLKRKPPST
00081 NAGRRQKHRL TCPSCDSYEK KPPKEFLERF KSLQKMIHQ
00121 HLSSRTHGSE DS
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Source: *E. coli***Species:** Human**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.**Molecular Weight:** 15.4 kDa, observed by reducing SDS-PAGE.**Formulation:** Lyophilized after extensive dialysis against PBS.**Reconstitution:** Reconstituted in ddH₂O at 100 µg/mL.**Purity:** > 95% by SDS-PAGE analysis.**Endotoxin Level:** < 0.2 EU/µg, determined by LAL method.**Storage:** Lyophilized recombinant human Interleukin-21 (rhIL-21) remains stable up to 6 months at lower than -70°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.