DATASHEET
Version 20181206

IL-21, Human

Cat. No.: Z02715-10

Size: 10.0 ug

Synonyms: Interleukin-21 (IL-21), Human;

Description:

IL-21 is a pleiotropic cytokine produced by CD4+ T cells in response to antigenic stimulation. Its action generally 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 conjuction) 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 (γc) 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.

Amino Acid Sequence:

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00001 QGQDRHMIRM RQLIDIVDQL KNYVNDLVPE FLPAPEDVET
00041 NCEWSAFSCF QKAQLKSANT GNNERIINVS IKKLKRKPPS
00081 TNAGRRQKHR LTCPSCDSYE KKPPKEFLER FKSLLQKMIH
00121 QHLSSRTHGS EDS
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Source: *E. coli*

Species: Human

Biological Activity: Fully biologically active when compared to standard. The ED_{50} as determined by by a cell proliferation assay using human N1186 T cells is less than 20 ng/ml, corresponding to a specific activity of > 5.0×10^4 IU/mg.

Molecular Weight: Approximately 15.4 kDa, a single non-glycosylated polypeptide chain containing 133 amino acids.

Formulation: Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.

Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Reconstitution: We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Purity: > 97 % by SDS-PAGE and HPLC analyses.

Endotoxin Level: Less than 1 EU/μg of rHuIL-21 as determined by LAL method.

Storage: This lyophilized preparation is stable at 2-8 °C, but should be kept at -20 °C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 °C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 °C to -70 °C. Avoid repeated freeze/thaw cycles.

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