

PRODUCT DATA SHEET



Bioworld Technology, Inc.

Recombinant Rat Interleukin 21 (rRtIL-21)

Catalog Number: PR3010

Source: Escherichia coli.

Quantity: 2µg/10µg/1.0mg

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 conjunction) 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.

Molecular Weight:

Approximately 15.2 kDa, a single non-glycosylated polypeptide chain containing 129 amino acids.

Purity:

>95% by SDS-PAGE and HPLC analyses.

Biological Activity:

Measured by its ability to inhibit IL21 dependent proliferation of N1186 human T cells.

The ED50 for this effect is typically 1-5µg/mL in the presence of 50 ng/mL of recombinant mouse IL21.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

Lyophilized from a 0.2mm filtered concentrated solution in PBS, pH 7.4

AA Sequence:

HKSSPQRPDHLLIRLRHLM DIVEQLKIY
ENDLDPELLTAPQDVKGQCEHEAFACF
QKAKLKPSTNTGNNKTFINDLLAQLRRR
LP AKRTGNKQRHMAKCPSCDLYEKKT
PK EFLERLKWLLQKMIHQHLS

Endotoxin:

Less than 1EU/µg of rRtIL-21 as determined by LAL method.

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.

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.

Usage:

This material is offered by USA Bioworld biotech for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE. Made in China

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