

# Growth Factor Data Sheet

GoldBio growth factors are manufactured for RESEARCH USE ONLY and cannot be sold for human consumption!

Interleukin-21 (IL21) 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 IL21 include induction of differentiation of T-cells-stimulated B-cells into plasma cells and memory B-cells, stimulation of IgG production with IL4, and induction of apoptotic effects in naive B-cells and stimulated B-cells in the absence of T-cell signaling. Additionally, IL21 promotes the anti-tumorigenic activity of CD8+ T-cells and natural killer (NK) cells. IL21 exerts its effect through binding to a specific type I cytokine receptor, IL21R, which also contains the gamma chain ( $\gamma$ c) found in other cytokine receptors, including IL2, IL4, IL7, IL9 and IL15. The IL21/IL21R 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.

<b>Catalog Number</b>	<b>1510-21</b>
<b>Product Name</b>	<b>IL21, Rat</b> Recombinant Rat Interleukin-21 IL21 Interleukin 21
<b>Source</b>	<i>Escherichia coli</i>
<b>MW</b>	~15.2 kDa (129 amino acids)
<b>Sequence</b>	HKSSPQRPDH LLIRLRHLM DIVEQLKIYEN DLDPELLTAP QDVKGQCEHE AFACFQKAKL KPSNTGNNKT FINDLLAQLR RRLPAKRTGN KQRHMAKPCS CDLYEKKTPK EFLERLKWLL QKMIHQHLS
<b>Accession Number</b>	<a href="#">A3QPB9</a>
<b>Purity</b>	>95% by SDS-PAGE and HPLC analyses
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a cell proliferation assay using human N1186 cells is less than 50 ng/ml, corresponding to a specific activity of $> 2.0 \times 10^4$ IU/mg.
<b>Formulation</b>	Sterile filtered white lyophilized powder. Purified and tested for use in cell culture.
<b>Storage/Handling</b>	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage. The reconstituted sample can be apportioned into working aliquots and stored at -80 °C for up to 6 months. Avoid repeated freeze/thaw cycles.
<b>Reconstitution</b>	The sample should be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a siliconized tube using PBS that contains a 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Reconstituted solutions are stable for up to one week at 2-8°C. Stock solutions should be aliquoted and stored at -80°C. Further dilutions should be made in appropriate buffered solutions containing BSA or serum.