

## IL21

### Recombinant Human Interleukin-21

<b>Catalog No.</b>	CRI172A CRI172B CRI172C	<b>Quantity:</b>	2 µg 10 µg 1.0 mg
<b>Alternate Names:</b>	IL-21, CVID11, Za11		
<b>Description:</b>	<p>Interleukin 21 (IL-21) is a member of the common-gamma chain family of cytokines with immunoregulatory activity. IL-21 plays a role in both the innate and adaptive immune responses by inducing the differentiation, proliferation and activity of multiple target cells including macrophages, natural killer (NK) cells, B cells and cytotoxic T cells. IL-21 is produced by CD4+ T cells in response to antigenic stimulation. Its action generally enhances antigen-specific responses of immune 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. The IL-21R activates the JAK/STAT signaling pathway and is expressed on T, B, and NK cells. Within the B cell lineage, IL-21 is a switch factor regulating IgG1 and IgG3 antibody production. IL-21 also cooperates with IL-4 for the production of multiple antibody classes in B cells.</p>		
<b>Gene ID:</b>	59067		
<b>UniProt ID:</b>	Q9HBE4		
<b>Source:</b>	<i>E. coli</i>		
<b>Molecular Weight:</b>	15.4 kDa (132 aa)		
<b>Formulation:</b>	Lyophilized from sterile-filtered 10 mM sodium phosphate, pH 7.5.		
<b>Purity:</b>	>95% by reducing and non-reducing SDS-PAGE		
<b>Endotoxin Level:</b>	≤1 EU/µg of protein by kinetic LAL analysis		
<b>Biological Activity:</b>	<p>ED<sub>50</sub> &lt; 50 ng/ml, determined by dose-dependent proliferation of B9 cells.            ED<sub>50</sub> &lt; 2.0 ng/ml, determined by dose-dependent proliferation of ANBL-6 cells.</p>		
<b>Specific Activity:</b>	<p>&gt;2.0 × 10<sup>4</sup> U/mg, determined by dose-dependent proliferation of B9 cells.            &gt;5.0 × 10<sup>5</sup> U/mg, determined by dose-dependent proliferation of ANBL-6 cells.</p>		
<b>Amino Acid Sequence:</b>	<p>MQDRHMIRMRLQLIDIVDQLK NYVNDLVPEFLPAPEDVETN CEWSAFSCFQ            KAQLKSANTG NNERIINVSI KKLKRKPPST NAGRRQKHRL TCPSCDSYEK            KPPKEFLERF KLLQKMIHQ HLSSRTHGSE DS</p>		
<b>Reconstitution:</b>	<p><b>Centrifuge vial prior to opening.</b> Add sterile distilled water to a concentration of 0.1 mg/ml. <b>DO NOT VORTEX.</b> Allow several minutes for complete reconstitution. Further dilutions should be made in appropriate buffered solutions.</p>		



**Storage & Stability:**

Lyophilized product is stable at room temperature for shipping purposes. Upon receipt, store at -20°C to -80°C for up to 1 year.

Upon reconstitution, the preparation is stable for up to 1 month at 2-8°C. For long term storage, freeze in working aliquots and store at -20 to -80°C. For maximal stability, dilute to working aliquots in a 0.1% BSA solution. **Avoid repeated freeze-thaw cycles.**

Figure 1: 1 µg run under (-) non-reducing and reducing (+) conditions in a 4-20% Tris-Glycine gel, stained with Coomassie Blue.

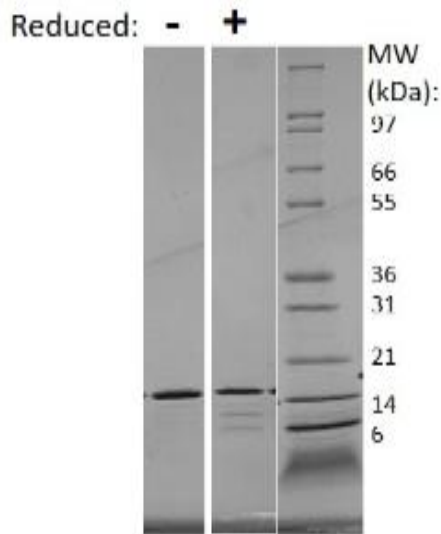
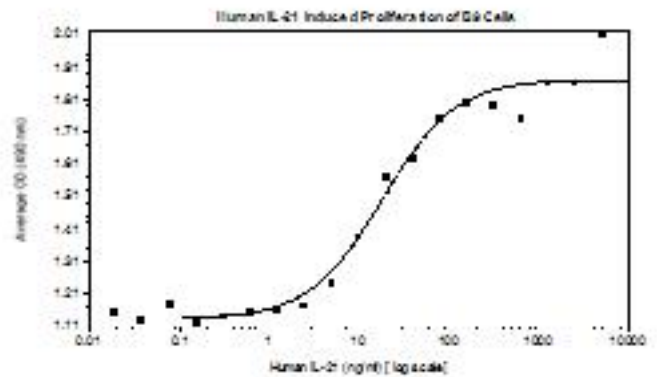


Figure: Serial dilutions of Human IL-21 were added to B9 cells. Cell proliferation was measured and the linear portion of the curve was used to calculate the ED50.



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