

## IL21

### Recombinant Human Interleukin-21

<b>Catalog No.</b>	CRI172B	<b>Quantity:</b>	10 µg
	CRI172C		1.0 mg
	CRI172D		100 µg

**Alternate Names:** IL-21, CVID11, Za11

**Description:** 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 ( $\gamma_c$ ) 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.

**Gene ID:** 59067

**UniProt ID:** Q9HBE4

**Source:** *E. coli*

**Molecular Weight:** 15.4 kDa (132 aa) monomer

**Formulation:** Lyophilized from sterile-filtered 10 mM sodium phosphate, pH 7.5.

**Purity:** >97% by reducing and non-reducing SDS-PAGE

**Endotoxin Level:**  $\leq 1$  EU/µg of protein by kinetic LAL analysis

**Biological Activity:** ED<sub>50</sub>  $\leq 5$  ng/ml, determined by dose-dependent proliferation of B9 cells

**Specific Activity:**  $\geq 2.0 \times 10^5$  U/mg

**Amino Acid Sequence:** MQDRHMIRMRLQLIDIVDQLK NYVNDLVPEFLPAPEDVETN CEWSAFSCFQ  
KAQLKSANTG NNERIINVSINKLKRKPPST NAGRRQKHRL TCPSCDSYEK  
KPPKEFLERFKSLLQKMIHQ HLSSRTHGSE DS

**Reconstitution:** **Centrifuge vial prior to opening.** Add sterile distilled water to a concentration of 0.1 mg/ml. **DO NOT VORTEX.** Allow several minutes for complete reconstitution. Further dilutions should be made in appropriate buffered solutions.

**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.

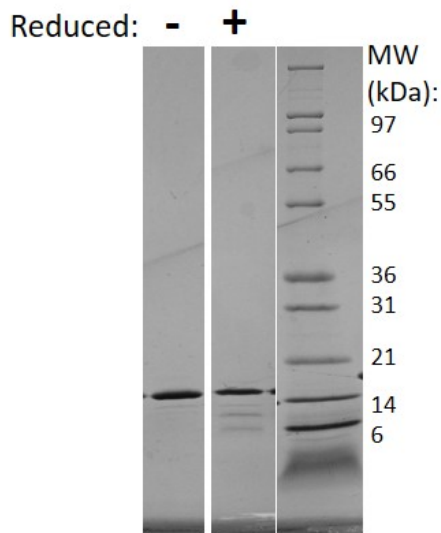
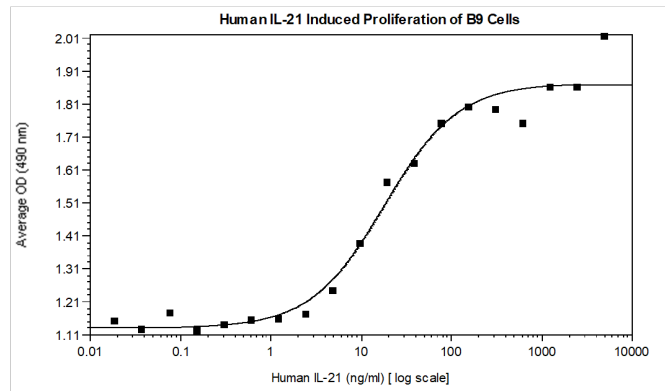


Figure: Serial dilutions of Human IL-21 were added to B9 cells. Cell proliferation was measured and the linear portion of the curve was used to calculate the ED50.



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