

## Product Information Sheet

### Recombinant Human IL-21

**Catalog#** 200-21

**Source:** *E.coli*

**Description:** IL-21 is a pleiotropic cytokine produced by CD4<sup>+</sup> 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<sup>+</sup> 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 ( $\gamma$ c) 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. Recombinant human IL-21 is a 15.4 kDa protein consisting of 132 amino acid residues.

**Synonyms:** none

**Sequence:** MQDRHMIRMRLQLIDIVDQLK NYVNDLVPEF LPAPEDVETN CEWSAFSCFQ KAQLKSANTG NNERIINVSI KKLKRKPPST  
NAGRRQKHRL TCPSCDSYEK KPPKEFLERF KSLQKMIHQ HLSSRTHGSE DS

**Authenticity:** Verified by N-terminal and Mass Spectrometry analyses (when applicable).

**Purity:**  $\geq 98\%$  by SDS-PAGE gel and HPLC analyses.

**Endotoxin:** Endotoxin level is  $< 0.1$  ng/ $\mu$ g of protein ( $< 1$  EU/ $\mu$ g).

**Protein Content:** Verified by UV Spectroscopy and/or SDS-PAGE gel.

**Biological activity: Assay #1:** Determined by its ability to proliferate activated B cells.

**Assay #2:** Determined by its ability to induce human CD40L-activated naïve B cells to undergo Ig isotype switching to IgG, using an IL-21 concentration of 50 ng/ml. Maximal activity was achieved after approximately five cell divisions.\*

For a list of references please visit our website at [www.peprotech.com](http://www.peprotech.com)

**Country of Origin:** USA

Lot-specific information is not available on Product Information Sheet.  
See Certificate of Analysis for details.

\*Avery, D.T. et. al. (2008) *J. Immunol.* **181**, 1767-1779.

**Usage:** For Research Use Only. Not for use in diagnostic or therapeutic procedures.

#### Storage/Stability:

Product Form	Temperature	Storage Time
Lyophilized	-20°C to -80°C	See expiration date
Lyophilized	4°C	6 months
Lyophilized	RT	1 month
Diluted as per CoA	-20°C to -80°C	3 months
Diluted as per CoA	2°C to 8°C	1 week

**\*\*Avoid repeated freeze-thaw cycles.**

Updated 11/30/2014