

Animal-Free Recombinant Human IL-21

Catalog # PBG10523

Specification

Animal-Free Recombinant Human IL-21 - Product Information

Animal-Free Recombinant Human IL-21 - Additional Information

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 conjuction) 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 γ chain (γ 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.

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.

/> <sub>Avery, D.T. et. al. (2008)

Authenticity

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

Endotoxin

Endotoxin level is $<0.1 \text{ ng/} \mu\text{g}$ of protein ($<1EU/\mu\text{g}$).

Protein Content

Verified by UV Spectroscopy and/or SDS-PAGE gel.

Storage

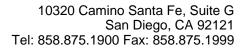
-20°C

Precautions

Animal-Free Recombinant Human IL-21 is for research use only and not for use in diagnostic or therapeutic procedures.

Animal-Free Recombinant Human IL-21 - Protocols

Provided below are standard protocols that you may find useful for product applications.





• Western Blot

- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

Animal-Free Recombinant Human IL-21 - Images