

Human IL-21 Recombinant Protein

Catalog Number: 14-8219

Also Known As: Interleukin-21, IL21

For Research Use Only. Not for use in diagnostic procedures.

Product Information

Contents: Human IL-21 Recombinant Protein

 **Catalog Number:** 14-8219

Concentration: 0.1 mg/mL

Handling Conditions: For best recovery, quick-spin vial prior to opening. Use in a sterile environment

Source: A DNA sequence encoding the mature form of human IL-21 amino acids Gln25-Ser155 accession # NM_021803 was expressed in E.coli


Molecular Mass: The protein has a predicted molecular mass of 17,150. The DTT reduced protein migrates as a 17 kDa polypeptide on SDS-PAGE. The non-reduced protein migrates as a 17 kDa polypeptide.

Purity: > 98% as determined by SDS-PAGE.


Endotoxin Level: Less than 0.01ng/ug cytokine as determined by the LAL assay.

Bioactivity: The ED50 of this protein, as measured by B9 cell proliferation assay, is less than or equal to 25 ng/mL. This corresponds to a specific activity of greater than or equal to 4 x 10⁴ Units/mg.

Formulation: Sterile liquid; 20 mM sodium phosphate, pH 7.2, 0.6 M NaCl, 1.0% BSA. 0.22 um filtered.

 **Temperature Limitation:** Store at less than or equal to -70°C.

 **Batch Code:** Refer to Vial

 **Use By:** Refer to Vial

Description

Human Interleukin-21 (IL-21) is a 131-amino acid protein with 57% identity to the mouse gene. It contains a 24-amino acid signal peptide and a 4-helix-bundle cytokine domain homologous to IL-2, IL-4 and IL-15. IL-21 stimulates B cell proliferation in an anti-CD40 dependent manner but inhibits B cell proliferation stimulated by IL-4 plus anti-IgM. IL-21 is induced by IL-6 in activated T cells, a process that is dependent on STAT3 but not on ROR-gamma. IL-21 induces Th17 differentiation and suppresses FOXP3 expression, which requires STAT3 and ROR-gamma.

Applications Reported

Recombinant Human IL-21 has been reported for use in cytokine bioassays, and ELISA. For research use only, not for diagnostic or therapeutic use. The recombinant human IL-21 has been reported useful for bioassay and ELISA.

Applications Tested

The ED50 of this protein, as measured by B9 cell proliferation assay, is less than or equal to 25 ng/mL. This corresponds to a specific activity of greater than or equal to 4 x 10⁴ Units/mg.

References

Ettinger, R., et al., J. Immunol., 2005, 175: 7867 - 7879. IL-21 Induces Differentiation of Human Naive and Memory B Cells into Antibody-Secreting Plasma Cells. Ozaki, K., et al., J. Immunol., 2004; 173: 5361 - 5371. Regulation of B Cell Differentiation and Plasma Cell Generation by IL-21, a Novel Inducer of Blimp-1 and Bcl-6. Zeng, R., et al., Blood, 2007; 109: 4135 - 4142. The molecular basis of IL-21-mediated proliferation. Zeng, R., et al., J. Exp. Med., Jan 2005; 201: 139 - 148. Synergy of IL-21 and IL-15 in regulating CD8+ T cell expansion and function.

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