

Recombinant Mouse IL-21 Protein

Catalog No.: RP00664

Sequence Information

Species **Gene ID**
Mouse 60505

Swiss Prot **Tags**
Q9ES17 C-hFC

Synonyms
IL21, Interleukin-21, IL-21

Product Information

Source **Purification**
HEK293 cells ≥ 95 % as
 determined by
 SDS-PAGE.

Calculated MW **Observed MW**
40.79 kDa 45-60 kDa

Endotoxin
< 0.1 EU/μg of the protein by LAL
method.

Formulation
Lyophilized from a 0.22 μm filtered
solution of PBS, pH 7.4.

Reconstitution
Centrifuge the vial before opening.
Reconstitute to a concentration of
0.1-0.5 mg/mL in sterile distilled
water. Avoid vortex or vigorously
pipetting the protein. For long
term storage, it is recommended
to add a carrier protein or stabilizer
(e.g. 0.1% BSA, 5% HSA, 10% FBS
or 5% Trehalose), and aliquot the
reconstituted protein solution to
minimize free-thaw cycles.

Background

Interleukin-21 (IL-21) is an approximately 14 kDa four-helix-bundle cytokine in the family of cytokines that utilize the common gamma chain (gamma c) as a receptor subunit. gamma c is also a subunit of the receptors for IL-2, IL-4, IL-7, IL-9, and IL-15. IL-21 is produced by activated T follicular helper cells (Tfh), Th17 cells, and NKT cells. It exerts its biological effects through a heterodimeric receptor complex of gamma c and the IL-21-specific IL-21 R. Tfh-derived IL-21 plays an important role in the development of humoral immunity through its autocrine effects on the Tfh cell and paracrine effects on immunoglobulin affinity maturation, plasma cell differentiation, and B cell memory responses. It is also required for the migration of dendritic cells to draining lymph nodes. IL-21 regulates several aspects of T cell function. It co-stimulates the activation, proliferation, and survival of CD8+ T cells and NKT cells and promotes Th17 cell polarization. It blocks the generation of regulatory T cells and their suppressive effects on CD4+ T cells. IL-21 R engagement enhances the cytolytic activity and IFN-gamma production of activated NK cells but limits the expansion of resting NK cells. In addition, IL-21 suppresses cutaneous hypersensitivity reactions by limiting allergen-specific IgE production and mast cell degranulation. Dysregulation of the IL-21/IL-21 R system contributes to the development of multiple immunological disorders. The mouse IL-21 precursor contains a predicted 17 amino acid (aa) signal sequence and a 129 aa mature chain. Mature mouse IL-21 shares 66%, 59%, 58%, and 88% aa sequence identity with mature canine, human, rabbit, and rat IL-21, respectively.

Basic Information

Description

Recombinant Mouse IL-21 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (His18-Ser146) of Mouse IL-21 (Accession #NP_068554.1) fused with a hFc tag at the C-terminus.

Activity

Shipping

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

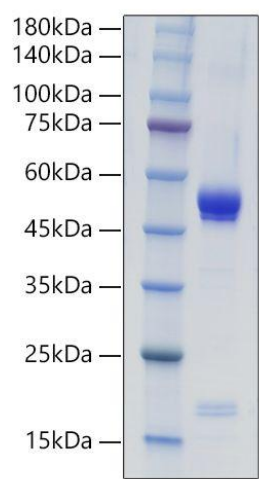
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Validation Data



Recombinant Mouse IL-21 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.