

Recombinant human IL21

Catalog No: #AG0015

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Description

Product Name	Recombinant human IL21
Host Species	HEK293
Purification	> 95% by Tris-Bis PAGE;> 95% by SEC-HPLC
Immunogen Description	Gln30-Ser162
Target Name	IL21
Other Names	Human IL-21, h-IL-21, rh-IL-21, recombinant IL-21, interleukin-21
Accession No.	Uniprot:Q9HBE4Gene ID:59067
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GeneID	59067
Target Species	human
Calculated MW	15.5 KDa
Tag Info	additional amino acid free
Formulation	0.22 µm filtered solution of PBS, pH 7.4.
Storage	Aliquot and store at -80°C. Avoid repeated freeze/thaw cycles.

Background

IL-21 (Interleukin-21) is a potent cytokine regulating many cell types of the immune system. IL-21 is produced by activated T follicular helper cells (Tfh), Th17 cells, and NKT cells (2-6). 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 (4, 8, 9). IL-21 protein 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 (3, 5, 6, 11, 12). IL-21 blocks the generation of regulatory T cells and their suppressive effects on CD4+ T cells (13, 14). In addition to its role in T cell biology, IL-21 also plays a critical role in B cell activation, proliferation, differentiation, and apoptosis (2). It is also required for the migration of dendritic cells to draining lymph nodes (10). And IL-21 suppresses cutaneous hypersensitivity reactions by limiting allergen-specific IgE production and mast cell degranulation (16). In the autoimmune disease Systemic lupus erythematosus (SLE), a link between IL-21 and SLE disease susceptibility and progression was recently reported (19).

IL-21 protein exerts its biological effects through a heterodimeric receptor complex of gamma c and the IL-21-specific IL-21 R (2, 7). IL-21 is an approximately 14 kDa four-helix-bundle member of 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 (1). IL-21 R engagement enhances the cytolytic activity and IFN-gamma production of activated NK cells but limits the expansion of resting NK cells (15). Dysregulation of the IL-21/IL-21 R system contributes to the development of multiple immunological disorders (1, 17). The 133 amino acid (aa) mature human IL-21 protein shares 63% and 61% aa sequence identity with mouse and rat IL-21 protein, respectively. Alternative splicing generates an additional isoform with a substitution of the C-terminal 16 amino acids (18).

Note: This product is for in vitro research use only