

IL-21 Protein, Human(E. coli)

Cat. No.:	HY-P7038A
Synonyms:	rHuIL-21; Za11; IL21
Species:	Human
Source:	E. coli
Accession:	Q9HBE4 (H25-R155)
Gene ID:	59067
Molecular Weight:	Approximately 16 kDa

PROPERTIES

Biological Activity	Measured by its ability to enhance IFN-gamma secretion in NK-92 human natural killer lymphoma cells. The ED ₅₀ for this effect is 25.69 ng/mL, corresponding to a specific activity is 3.893×10 ⁴ U/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

IL-21 Protein, a cytokine with immunoregulatory activity, serves as a pivotal mediator in orchestrating the interplay between innate and adaptive immunity. Notably, it induces the production of IgG(1) and IgG(3) in B-cells, emphasizing its role in shaping humoral immune responses. Additionally, IL-21 is intricately involved in the generation and maintenance of T follicular helper (Tfh) cells, playing a crucial part in the formation of germinal centers—an essential process in adaptive immunity. Collaborating with IL6, it contributes to the early generation of Tfh cells, proving critical for mounting an effective antibody response during acute viral infections. Furthermore, IL-21 may play a role in the proliferation and maturation of natural killer (NK) cells, particularly in synergy with IL15. Its regulatory influence extends to mature B- and T-cells, modulating their proliferation in response to activating stimuli. In concert with IL15 and IL18, IL-21 stimulates interferon gamma production in T-cells and NK cells, highlighting its multifaceted impact on immune responses. During T-cell-mediated immune responses, IL-21 exhibits the potential to inhibit dendritic cells (DC) activation and maturation, adding another layer to its regulatory repertoire.

Caution: Product has not been fully validated for medical applications. For research use only.

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