

Animal-Free IL-21 Protein, Mouse (His)

Cat. No.:	HY-P700199AF
Synonyms:	rMuIL-21; Za11; IL21
Species:	Mouse
Source:	E. coli
Accession:	Q9ES17 (H18-S146)
Gene ID:	60505
Molecular Weight:	Approximately 15.9 kDa

PROPERTIES

AA Sequence	<p>M H K S S P Q G P D R L L I R L R H L I D I V E Q L K I Y E N D L D P E L L S A</p> <p>P Q D V K G H C E H A A F A C F Q K A K L K P S N P G N N K T F I I D L V A Q L</p> <p>R R R L P A R R G G K K Q K H I A K C P S C D S Y E K R T P K E F L E R L K W L</p> <p>L Q K M I H Q H L S</p>
Biological Activity	Measure by its ability to enhance IFN gamma secretion in NK-92 cells. The ED ₅₀ for this effect is <6 ng/mL. The specific activity of recombinant mouse IL-21 is >1.6 x 10 ⁵ IU/mg
Appearance	Lyophilized powder.
Formulation	Lyophilized from a solution containing 1X PBS, pH 7.4, trehalose.
Endotoxin Level	<0.1 EU per 1 µg of the protein by the 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 from date of receipt. 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, a cytokine endowed with immunoregulatory prowess, emerges as a key player in orchestrating the delicate transition between innate and adaptive immunity. This multifaceted regulator takes the stage in inducing the production of IgG(1) and IgG(3) in B-cells, thereby substantiating its pivotal role in shaping humoral immune responses. IL-21 finds its niche in fostering the generation and perpetuation of T follicular helper (Tfh) cells and the intricate formation of germinal centers. Collaborating synergistically with IL6, it exercises command over the early development of Tfh cells, contributing
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indispensably to a robust antibody response during acute viral infections. Beyond B-cells, IL-21 extends its influence to the realm of natural killer (NK) cells, where, in synergy with IL15, it fuels their proliferation and maturation. Further, IL-21 flexes its regulatory muscle, guiding the proliferation and maturation of mature B- and T-cells in response to activating stimuli. In tandem with IL15 and IL18, it orchestrates the production of interferon-gamma in both T-cells and NK cells. Notably, during T-cell-mediated immune responses, IL-21 steps in as a potential inhibitor, dampening the activation and maturation of dendritic cells, unveiling a nuanced regulatory role in immune dynamics.

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

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