

Cytokines

Human Recombinant IL-21



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Catalog #	78082	Interleukin 21	10 µg
	78082.1		50 µg
	78082.2		100 µg
	78082.3		500 µg
	78082.4		1000 µg

Product Description

Interleukin 21 (IL-21) is a pleiotropic cytokine that is composed of four α -helical bundles and primarily produced by natural killer T (NKT) cells, T follicular helper (Tfh) cells, and Th17 cells (Spolski & Leonard 2008). IL-21 signals via heterodimers of the IL-21 receptor (IL-21R) and the IL2RG encoded common cytokine receptor γ -chain (Ozaki et al. 2000; Parrish-Novak et al.), and utilizes the JAK/STAT, MAPK, and PI3K pathways (Spolski & Leonard 2014). IL-21 has been shown to have a critical role in regulating immunoglobulin production and differentiation of the pro-inflammatory Th17 population of cells (Nurieva et al.; Ozaki et al. 2002). Additionally, IL-21 specifically sustains CD8+ T cell effector activity and provides a mechanism of CD4+ T cell help during chronic viral infection (Elsaesser et al.). IL-21 signaling was also found critical for the development of type 1 diabetes in NOD mice (Sutherland et al.) and control of T cell autoimmunity by regulatory B cells (Yoshizaki et al.).

Product Information

Alternative Names:	Interleukin-21, Za11
Accession Number:	Q9HBE4
Amino Acid Sequence:	MQGQDRHMIR MRQLIDIVDQ LKNYVNDLVP EFLPAPEDVE TNCEWSAFSC FQKAQLKSAN TGNNERIINV SIKKLKRKPP STNAGRRQKH RLTCPCDSY EKKPPKEFLE RFKSLLQKMI HQHLSRTHG SEDS
Predicted Molecular Mass:	15.6 kDa
Species:	Human
Formulation:	Lyophilized afterdialysis against phosphate-buffered saline.
Source:	<i>E. coli</i>

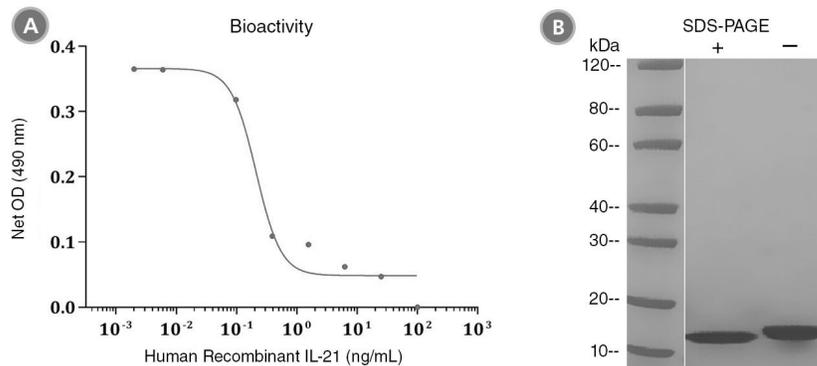
Specifications

Activity:	The specific activity is $\geq 2 \times 10^6$ units/mg ($EC_{50} \leq 0.5$ ng/mL), as determined by the ability to inhibit growth of Mino cells.
Purity:	$\geq 95\%$
Endotoxin Level:	Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 0.2 EU/ μ g protein.

Preparation and Storage

Storage:	Store at -80°C .
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. As a general guide, do not store at $2 - 8^\circ\text{C}$ for more than 2 weeks or at -20°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Human Recombinant IL-21 was tested by its ability to inhibit the proliferation of Mino cells. The EC₅₀ is defined as the effective concentration of the growth factor at which cell proliferation inhibition is at 50% of maximum. The EC₅₀ in the above example is less than 0.5 ng/mL.

(B) 2 µg of Human Recombinant IL-21 was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant IL-21 has a predicted molecular mass of 15.6 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines, or contact us at techsupport@stemcell.com.

References

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