

Human Interleukin-21 (hIL-21)



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MW (kDa):	UniProt ID:	Entrez-Gene Id:
16	#Q9HBE4	59067
Background	IL-21 is produced by Th17, T follicular helper (Tfh) and NKT cells (1-3). Targets include T cells, B cells, NK cells and dendritic cells (1-3,5). IL-21 induces proliferation and activation of NK cells, thereby up-regulating IFN- γ production and cytotoxic activity (1,3,4). IL-21 increases proliferation and survival of CD40 primed B cells (1,2) and appears to have a significant role in plasma cell differentiation (2). IL-21 binds to a complex consisting of IL-21Ra and the common γ chain, γ c. IL-21 binding activates the Jak1/Jak3, Stat1, Stat3 and Stat5 pathway. IL-21 binding can also activate the MAP kinase and PI3K/Akt pathways.	
Endotoxin	Less than 0.01 ng endotoxin/1 μ g hIL-21.	
Purity	>98% as determined by SDS-PAGE of 6 μ g reduced (+) and non-reduced (-) recombinant hIL-21. Less than 9% is nicked after Arg114 to generate 6 kDa and 10 kDa polypeptides observed in reduced (+) hIL-21.	
Source / Purification	Recombinant human IL-21 (hIL-21) Gln30-Ser155 (Accession # NM_021803) was expressed in human 293 cells at Cell Signaling Technology.	
Bioactivity	The bioactivity of recombinant hIL-21 was determined by its ability to induce IFN- γ production by NK-92 cells. The ED ₅₀ of each lot is between 1.0-6.0 ng/ml.	
Background References	<ol style="list-style-type: none"> 1. Parrish-Novak, J. et al. (2000) <i>Nature</i> 408, 57-63. 2. Parrish-Novak, J. et al. (2002) <i>J Leukoc Biol</i> 72, 856-63. 3. Konforte, D. et al. (2009) <i>J Immunol</i> 182, 1781-7. 4. Strengell, M. et al. (2002) <i>J Immunol</i> 169, 3600-5. 5. Davis, I.D. et al. (2007) <i>Clin Cancer Res</i> 13, 6926-32. 	

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