

Mouse Interleukin-7 (mIL-7)



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MW (kDa):	UniProt ID:	Entrez-Gene Id:
14	#P10168	16196
Background	IL-7 plays a key role in lymphopoiesis and lymphoid homeostasis (1). Stromal and epithelial cells within the bone marrow and thymus produce IL-7 (1). The primary targets of IL-7 are T cells, B cells, and dendritic cells (1). IL-7 is crucial for T cell development, the importance of which is underscored by the lack of T cells in both mice and humans that are deficient in IL-7/IL-7R signaling (1,2). While IL-7 appears to be required for B cell development in mice, the role of IL-7 in human B cell development is unclear (1,3). In addition to its effects on T cell lymphopoiesis, IL-7 promotes the maintenance and survival of naïve and memory $\alpha\beta$ T cells, as well as $\gamma\delta$ T cells (1). The IL-7 receptor is a heterodimer of the common γ chain, γ_c , and the IL-7-specific IL-7R α (1). IL-7 activates PI3K/Akt, Jak1/2, and Stat1, 3, and 5 (1).	
Endotoxin	Less than 0.01 ng endotoxin/1 μ g mIL-7.	
Purity	>98% as determined by SDS-PAGE of 6 μ g reduced (+) and non-reduced (-) recombinant mIL-7. All lots are greater than 98% pure.	
Source / Purification	Recombinant mouse IL-7 (mIL-7) Glu26-Ile154 (Accession #NP_032397) was produced in <i>E. coli</i> at Cell Signaling Technology.	
Bioactivity	The bioactivity of recombinant mIL-7 was determined in a 2E8 cell proliferation assay. The ED ₅₀ of each lot is between 50-500 pg/ml.	
Background References	<ol style="list-style-type: none"> 1. Rochman, Y. et al. (2009) <i>Nat Rev Immunol</i> 9, 480-90. 2. Ma, A. et al. (2006) <i>Annu Rev Immunol</i> 24, 657-79. 3. Parrish, Y.K. et al. (2009) <i>J Immunol</i> 182, 4255-66. 	

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