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## Mouse Interleukin-7 (mIL-7)

**For Research Use Only. Not for Use in Diagnostic Procedures.**

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  $\gamma$  chain,  $\gamma_c$ , and the IL-7-specific IL-7R $\alpha$  (1). IL-7 activates PI3K/Akt, Jak1/2, and Stat1, 3, and 5 (1).

### Endotoxin

Less than 0.01 ng endotoxin/1  $\mu$ g mIL-7.

### Purity

>98% as determined by SDS-PAGE of 6  $\mu$ 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 *E. coli* at Cell Signaling Technology.

### Bioactivity

The bioactivity of recombinant mIL-7 was determined in a 2E8 cell proliferation assay. The ED<sub>50</sub> of each lot is between 50-500 pg/ml.

### Background References

1. Rochman, Y. et al. (2009) *Nat Rev Immunol* 9, 480-90.
2. Ma, A. et al. (2006) *Annu Rev Immunol* 24, 657-79.
3. Parrish, Y.K. et al. (2009) *J Immunol* 182, 4255-66.

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