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#91974**Human IL-9 Recombinant Protein**

10 µg


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MW (kDa):	UniProt ID:	Entrez-Gene Id:
14	#P15248	3578
Background <p>Interleukin-9 (IL-9) is a pleiotropic cytokine best known as a T cell and mast cell growth factor (1,2). This T cell stimulator is a member of the common γ-chain-receptor cytokine family; other members include IL-2, IL-4, IL-7, IL-15, and IL-21 (1). IL-9 was first associated with the T helper 2 (T_H2) phenotype but is expressed by multiple other T_H cell subsets, including T_H9 cells, T_H17 cells, and regulatory T (T_{Reg}) cells (1-3). The effects of IL-9 are mediated through a heterotypic receptor complex consisting of IL-9 receptor alpha (IL-9Rα) and the common γ-chain (3,4). Binding of IL-9 initiates signaling cascades that involve the cross-phosphorylation of Jak1 and Jak3, leading to the activation of Stat1, Stat3, and Stat5 (1-3).</p>		
Endotoxin <p>Endotoxin levels are less than or equal to 1 EU / 1 µg hIL-9.</p>		
Purity <p>A greater than or equal to 95% purity was determined by SDS-PAGE.</p>		
Source / Purification <p>Recombinant human IL-9 was expressed in <i>E. coli</i> and is supplied in a lyophilized form.</p>		
Bioactivity <p>The bioactivity of recombinant hIL-9 was determined in a M-O7e cell proliferation assay. The ED₅₀ of each lot is less than or equal to 2 ng/ml.</p>		
Background References <ol style="list-style-type: none"> 1. Noelle, R.J. and Nowak, E.C. (2010) <i>Nat Rev Immunol</i> 10, 683-7. 2. Goswami, R. and Kaplan, M.H. (2011) <i>J Immunol</i> 186, 3283-8. 3. Chakraborty, S. et al. (2019) <i>Int J Mol Sci</i> 20, 2113. 4. Renauld, J.C. et al. (1992) <i>Proc Natl Acad Sci U S A</i> 89, 5690-4. 		

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