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Human Interleukin-1α (hIL-1α)

2 µg



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MW (kDa):	UniProt ID:	Entrez-Gene Id:
22	#P01583	3552
Background	IL-1α is a pro-inflammatory cytokine produced by activated monocytes, lymphocytes and epithelial cells (1). IL-1α is synthesized as an active precursor protein that appears to be cleaved by cytosolic proteases into its mature form (1,2). Often, precursor and mature forms of IL-1α are primarily retained intracellularly rather than constitutively secreted. (1,2). Signaling by IL-1α involves IL-1α binding to an IL-1 accessory protein (IL-1AcP) and then the complex binds to IL-1RI (1,2). Signaling is through activation of MAP kinase and NFκB pathways (1,2). IL-1α also binds to an IL-RII that lacks an intracellular signaling domain and thereby serves as a high affinity decoy receptor. Inhibition of IL-1α activity is through IL-1R antagonist (IL-1Ra) that binds IL-1R1 but does not signal. IL-1α has been shown to be a key mediator of virus-induced inflammatory responses in mice (3).	
Endotoxin	Less than 0.01 ng endotoxin/1 µg hIL-1α.	
Purity	>98% as determined by SDS-PAGE of 6 µg reduced (+) and non-reduced (-) recombinant hIL-1α. All lots are greater than 98% pure.	
Source / Purification	Recombinant human IL-1α (hIL-1α) Ser113-Ala271 (Accession #X03833) was expressed in human 293 cells at Cell Signaling Technology.	
Bioactivity	The bioactivity of recombinant hIL-1α was determined by its ability to induce IL-8 production by primary human fibroblasts. The ED ₅₀ of each lot is between 0.6-2.0 ng/ml.	
Background References	<ol style="list-style-type: none"> 1. Dinarello, C.A. (1996) <i>Blood</i> 87, 2095-147. 2. Allan, S.M. et al. (2005) <i>Nat Rev Immunol</i> 5, 629-40. 3. Di Paolo, N.C. et al. (2009) <i>Immunity</i> 31, 110-21. 	

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