

# Human Leukemia Inhibitory Factor (hLIF)



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MW (kDa):	UniProt ID:	Entrez-Gene Id:
20	#P15018	3976
<b>Background</b>	Leukemia Inhibitory Factor (LIF) is a 20 kDa pleiotrophic factor belonging to the IL-6 superfamily of cytokines (1). LIF is expressed in a number of tissues and cell types. The LIF receptor is a heterodimer comprised of LIF-R (gp190) and gp130, a common signal transducer for IL-6-type cytokines (1). Depending on cell type and context, LIF/LIF-R can activate Erk, PI3K, and Jak1/Stat1/3 pathways (1,2). LIF has a diverse array of biological activities. Murine embryonic stem cells are dependent on LIF for pluripotency and self-renewal in vitro (1). Exercise-induced LIF secretion in muscle induces myoblast proliferation, suggesting that LIF may play a role in exercise-induced muscle hypertrophy (2). LIF also negatively regulates Th2 and Th17 cell differentiation (3,4).	
<b>Endotoxin</b>	Less than 0.01 ng endotoxin/1 µg hLIF.	
<b>Purity</b>	>98% as determined by SDS-PAGE of 6 µg reduced (+) and non-reduced (-) recombinant hLIF. All lots are greater than 98% pure.	
<b>Source / Purification</b>	Recombinant human LIF (hLIF) Ser23-Phe202 (Accession #P15018) was produced in <i>E. coli</i> at Cell Signaling Technology.	
<b>Bioactivity</b>	The bioactivity of recombinant hLIF was determined in a TF-1 cell proliferation assay. The ED <sub>50</sub> of each lot is between 0.2-1.5 ng/ml.	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Mathieu, M.E. et al. (2012) <i>Stem Cell Rev</i> 8, 1-15.</li> <li>2. Broholm, C. and Pedersen, B.K. (2010) <i>Exerc Immunol Rev</i> 16, 77-85.</li> <li>3. Cao, W. et al. (2011) <i>Immunity</i> 35, 273-84.</li> <li>4. Ullah, U. et al. (2012) <i>Sci Rep</i> 2, 464.</li> </ol>	

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