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## Human IL-6 Recombinant Protein

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MW (kDa):	UniProt ID:	Entrez-Gene Id:
21	#P05231	3569

<b>Background</b>	Acute phase response is induced by interleukin-6 (IL-6) produced by T cells, macrophages, fibroblasts, endothelial and other cells (1,2). IL-6 induces proliferation or differentiation in many cell types including B cells, thymocytes and T cells. IL-6, in concert with TGF-β, is important for developing Th17 responses. IL-6 binds to IL-6Rα and through this association induces gp130 homodimerization (1). gp130 homodimerization triggers the Jak/Stat cascade and the SHP-2/Erk MAP kinase cascade (1,3,4). IL-6 also forms a complex with an IL-6Rα splice variant that is non-membrane-associated (3). The IL-6/soluble IL-6Rα complex can then activate the gp130 signaling pathway in cells that express gp130 but not IL-6Rα (3). Research studies have shown that IL-6, through increasing expression of proangiogenic VEGF, may also contribute to metastatic breast cancer (5).
<b>Endotoxin</b>	Endotoxin levels are less than or equal to 1 EU / 1 µg hIL-6.
<b>Purity</b>	A greater than or equal to 95% purity was determined by SDS-PAGE.
<b>Source / Purification</b>	Recombinant human IL-6 was expressed in <i>E. coli</i> and is supplied in a lyophilized form.
<b>Bioactivity</b>	The bioactivity of recombinant hIL-6 was determined in a B9 cell proliferation assay. The ED <sub>50</sub> of each lot is less than or equal to 25 pg/ml.
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Heinrich, P.C. et al. (1998) <i>Biochem J</i> 334 (Pt 2), 297-314.</li> <li>2. Heinrich, P.C. et al. (1998) <i>Z Ernährungswiss</i> 37 Suppl 1, 43-9.</li> <li>3. Jones, S.A. (2005) <i>J Immunol</i> 175, 3463-8.</li> <li>4. Jenkins, B.J. et al. (2004) <i>Mol Cell Biol</i> 24, 1453-63.</li> <li>5. Hong, D.S. et al. (2007) <i>Cancer</i> 110, 1911-28.</li> </ol>

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