

## Recombinant Human IL-6 (carrier-free)

<b>Catalog# / Size</b>	570802 / 10 µg 570804 / 25 µg 570806 / 100 µg 570808 / 500 µg
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Interleukin-6, B cell stimulating factor-2 (BSF-2), Cytotoxic T cell differentiation factor (CDF), Hepatocyte stimulating factor (HSF), Hybridoma/plasmacytoma growth factor (HPGF)
<b>Description</b>	IL-6 is a potent lymphoid cell growth factor that stimulates the growth and survival of certain B cells and T cells. IL-6 plays a role in host defense, acute phase reactions, immune response, and hematopoiesis. IL-6 is expressed by T cells, B cells, monocytes, fibroblasts, hepatocytes, endothelial cells and keratinocytes.

### Product Details

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<b>Source</b>	Human IL-6, amino acids Pro29-Met212 (Accession # NM_000600) was expressed in <i>E. coli</i> .
<b>Molecular Mass</b>	The 185 amino acid N-terminal methionylated recombinant protein has a predicted molecular mass of 21,041 Da. The DTT-reduced and non-reduced protein migrate at approximately 23kDa by SDS-PAGE.
<b>Purity</b>	Purity is >98%, as determined by Coomassie stained SDS-PAGE.
<b>Formulation</b>	PBS, pH 7.2, 0.5M NaCl, 10% Glycerol
<b>Endotoxin Level</b>	Endotoxin level is <0.1 EU/µg (<0.01ng/µg) protein as determined by the LAL method.
<b>Concentration</b>	10 and 25 µg sizes are bottled at 200 µg/mL. 100 µg size and larger sizes are lot-specific and bottled at the concentration indicated on the vial. To obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.
<b>Storage &amp; Handling</b>	Unopened vial can be stored between 2°C and 8°C for up to 2 weeks, at -20°C for up to six months, or at -70°C or colder until the expiration date. For maximum results, quick spin vial prior to opening. The protein can be aliquoted and stored at -20°C or colder. Stock solutions can also be prepared at 50 - 100 µg/mL in appropriate sterile buffer, carrier protein such as 0.2 - 1% BSA or HSA can be added when preparing the stock solution. Aliquots can be stored between 2°C and 8°C for up to one week and stored at -20°C or colder for up to 3 months. <b>Avoid repeated freeze/thaw cycles.</b>
<b>Activity</b>	<p>The ED<sub>50</sub> is 4-20 pg/ml, corresponding to a specific activity of 0.5-2.5 X10<sup>8</sup> units/mg, as determined by a dose dependent stimulation in a 7TD1 cell proliferation assay.</p> <p>The specific activity of recombinant human IL-6 is approximately 5.0 x 10<sup>4</sup> IU/µg when compared against the 1st WHO International Standard for Interleukin-6 (NIBSC code: 89/548) as determined by the dose dependent stimulation of 7TD1 cell proliferation.</p> <p>For more information on specific activity, please visit the <a href="#">Recombinant Protein Unit Conversions page</a>.</p>
<b>Application</b>	<a href="#">Bioassay</a>
<b>Recommended Usage</b>	Use when high specific biological activity is required.
<b>Application Notes</b>	BioLegend carrier-free recombinant proteins provided in liquid format are shipped on blue-ice. Our comparison testing data indicates that when handled and stored as recommended, the liquid format has equal or better stability and shelf-life compared to commercially available lyophilized proteins after reconstitution. Our liquid proteins are verified in-house to maintain activity after shipping on blue ice and are backed by our <a href="#">100% satisfaction guarantee</a> . If you have any concerns, contact us at <a href="mailto:tech@biolegend.com">tech@biolegend.com</a> .
<b>Additional Product Notes</b>	View more applications data for this product in our <a href="#">Scientific Poster Library</a> .
<b>Application References</b>	

1. Reitsma JM, *et al.* 2013. *J Virol.* 87:10763. [PubMed](#)

(PubMed link indicates BioLegend citation)

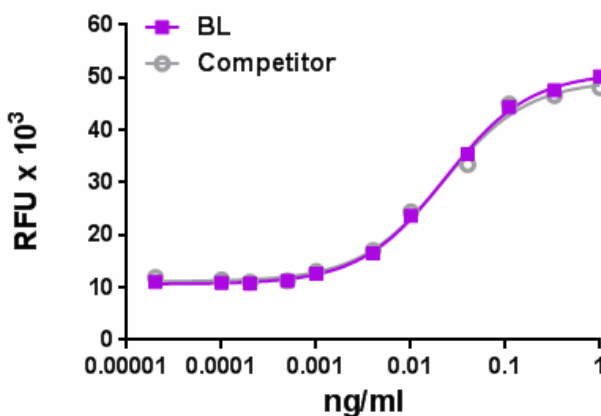
#### Product Citations

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14. Wong GK, *et al.* 2019. *JCI Insight.* 4. [PubMed](#)
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16. Yang F, *et al.* 2021. *Nat Commun.* 12:3424. [PubMed](#)
17. Jokela TA, *et al.* 2018. *Front Cell Dev Biol.* 6:41. [PubMed](#)

## Antigen Details

<b>Structure</b>	Neuropoietic cytokine family
<b>Distribution</b>	T cells, B cells, macrophages, bone marrow stromal cells, fibroblasts, keratinocytes, mesangium, astrocytes, endothelial cells
<b>Function</b>	Upregulated by IL-1, TNF, PDGF, IFN- $\beta$ , TNF- $\alpha$ , NGF, IL-17; downregulated by glucocorticoids IL-4, TGF- $\beta$
<b>Interaction</b>	T cells, B cells, hepatocytes, cholinergic neurons
<b>Ligand/Receptor</b>	Heterodimer IL-6R $\alpha$ (CD126)/IL-6R $\beta$ (CD130, gp130)
<b>Bioactivity</b>	Hematopoiesis; antigen-specific immune responses, inflammatory reactions; acute phase reaction
<b>Cell Type</b>	Hematopoietic stem and progenitors
<b>Biology Area</b>	Cell Biology, Immunology, Innate Immunity, Stem Cells
<b>Molecular Family</b>	Cytokines/Chemokines
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Fitzgerald K, <i>et al.</i> Eds. 2001. <i>The Cytokine FactsBook.</i> Academic Press San Diego.</li><li>2. Hirano T. 1998. <i>Intl. Rev. Immunol.</i> 16:249.</li><li>3. Patterson P. 1992. <i>Curr. Opin. Neurobiol.</i> 2:94.</li><li>4. Van Oers M, <i>et al.</i> 1993. <i>Ann. Hematology</i> 66:219.</li></ol>
<b>Gene ID</b>	<a href="#">3569</a>

## Product Data



Recombinant human IL-6 induces the proliferation of 7TD1 cells in a dose-dependent manner. BioLegend's product was compared side-by-side to the leading competitor equivalent product.

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