

## Recombinant Mouse IL-13 (carrier-free)

<b>Catalog# / Size</b>	575902 / 10 µg 575904 / 25 µg 575906 / 100 µg 575908 / 500 µg
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	P600, IL-13, IL1
<b>Description</b>	Mouse IL-13 was initially cloned from cDNA libraries of activated T cells and was designated as P600. IL-13 is an immunoregulatory cytokine secreted predominantly by activated T(H)2 cells, and it is a key mediator in the pathogenesis of allergic inflammation. IL-13 shares many functional properties with IL-4, and they share a common receptor subunit, the alpha subunit of the IL-4 receptor (IL-4Ralpha). IL-13 mediates its effects by interacting with a complex receptor system comprised of IL-4Ralpha and two IL-13 binding proteins, IL-13Ralpha1 and IL-13Ralpha2. Ligation of the IL-13 receptor complex results in signaling via the insulin receptor substrate (IRS)-1 and 2 and STAT-6 pathways. Interleukin-13 (IL-13), like IL-4, is a cytokine produced by T(H)2 type helper T cells in response to signaling through the T cell antigen receptor and by mast cells and basophils upon cross-linkage of the high-affinity receptor for immunoglobulin E (IgE). IL-13 has been implicated in airway hypersensitivity and mucus hypersecretion, inflammatory bowel disease, and parasitic nematode expulsion.

### Product Details

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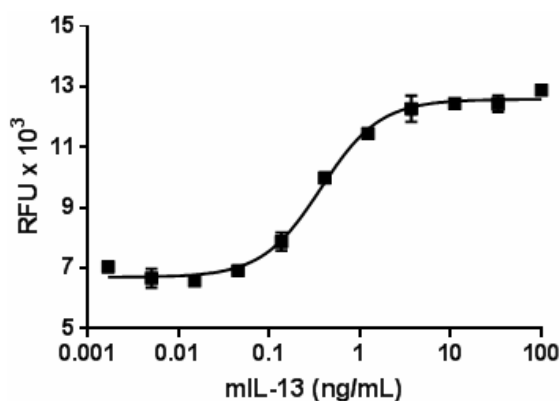
<b>Source</b>	Mouse IL-13, amino acids Ser26-Phe131 (Accession # NM_008355), was expressed in <i>E. coli</i> .
<b>Molecular Mass</b>	The 106 amino acid recombinant protein has a predicted molecular mass of 11,677 Da. The DTT-reduced protein migrates at approximately 9kDa and the non-reduced protein migrates at approximately 8kDa by SDS-PAGE. The N-terminal amino acid is Serine.
<b>Purity</b>	Purity is >98%, as determined by Coomassie stained SDS-PAGE.
<b>Formulation</b>	0.22 µm filtered protein solution is in 10mM NaH <sub>2</sub> PO <sub>4</sub> , 150mM NaCl, pH 7.2.
<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>	Recombinant mouse IL-13 induces the proliferation of TF-1 cell in a dose-dependent manner. The ED <sub>50</sub> for this effect is 0.3 - 1.5 ng/mL.
<b>Application</b>	<a href="#">Bioassay</a>
<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>Product Citations</b>	<ol style="list-style-type: none"><li>1. Dalmás E <i>et al.</i> 2017. Immunity. 47(5):928-942 . <a href="#">PubMed</a></li><li>2. Kakiuchi N, <i>et al.</i> 2020. Nature. 260:577. <a href="#">PubMed</a></li><li>3. Mia MM, <i>et al.</i> 2020. PLoS Biol. 18:e3000941. <a href="#">PubMed</a></li><li>4. Boothby IC, <i>et al.</i> 2021. Nature. 599:667. <a href="#">PubMed</a></li></ol>

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6. Alban TJ, *et al.* 2020. *Front Immunol.* 11:285416667. [PubMed](#)
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## Antigen Details

<b>Structure</b>	Cytokine
<b>Distribution</b>	IL-13 is secreted by activated T cells, Th2 cells, basophils, mast cells, activated eosinophils and NK cells.
<b>Function</b>	IL-13 modulates human monocytes/macrophages and B cells. IL-13 induces an increase of MHC class II expression in human monocytes/macrophages, and direct inhibition of inflammatory cytokines such as TNF- $\alpha$ and IL-1 $\beta$ .
<b>Interaction</b>	IL-13 receptors are expressed on human B cells, basophils, eosinophils, mast cells, endothelial cells, fibroblasts, monocytes, macrophages, respiratory epithelial cells, and smooth muscle cells.
<b>Ligand/Receptor</b>	IL-4Ralpha, IL-13Ralpha1, and IL-13Ralpha2
<b>Biology Area</b>	Cell Biology, Immunology, Neuroinflammation, Neuroscience
<b>Molecular Family</b>	Cytokines/Chemokines
<b>Antigen References</b>	<ol style="list-style-type: none"> <li>1. Brown J, <i>et al.</i> <i>J. Immunol.</i> 142:679-687 1989.</li> <li>2. McKenzie ANJ, <i>et al.</i> <i>P. Natl. Acad. Sci. USA</i> 90:3735-3739 1993.</li> <li>3. Pappasavvas E, <i>et al.</i> <i>J. Immunol.</i> 175:5532-5540 2005.</li> <li>4. Kelly-Wellch, <i>et al.</i> <i>Science Signaling</i> 293:2005.</li> <li>5. Hershey GK <i>J Allergy Clin Immunol</i> 111:677-690 2003.</li> <li>6. Harris J, <i>et al.</i> <i>Immunity</i> 27:505-517 2007.</li> <li>7. LaPorte SL, <i>et al.</i> <i>Cell</i> 132:259-272 2008.</li> </ol>
<b>Gene ID</b>	<a href="#">16163</a>

## Product Data



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BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 [www.biolegend.com](http://www.biolegend.com)  
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587

