

## Cell-Vive™ GMP Recombinant Human IL-13 (carrier-free)

<b>Catalog# / Size</b>	571114 / 25 µg 571116 / 100 µg
<b>Other Names</b>	ALRH, BHR1, P600, IL-13, MGC116786, MGC116788, MGC116789, IL13
<b>Description</b>	Initially cloned from cDNA libraries of activated T cells, human IL-13 is an immunoregulatory cytokine produced by Th2 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 is a key mediator in the pathogenesis of allergic inflammation sharing many functional properties with IL-4 including the alpha subunit of the IL-4 receptor (IL-4R $\alpha$ ). IL-13 mediates its effects by interacting with a complex receptor system comprised of IL-4R $\alpha$ and two IL-13 binding proteins, IL-13R $\alpha$ 1 and IL-13R $\alpha$ 2. Ligation of the IL-13 receptor complex results in signaling via the insulin receptor substrate (IRS)-1 and 2 and STAT-6 pathways. IL-13 has been implicated in airway hypersensitivity, mucus hypersecretion, inflammatory bowel disease, and parasitic nematode expulsion. In vitro studies suggest IL-13 decreases SARS-CoV-2 entry to bronchial epithelial cells.

### Product Details

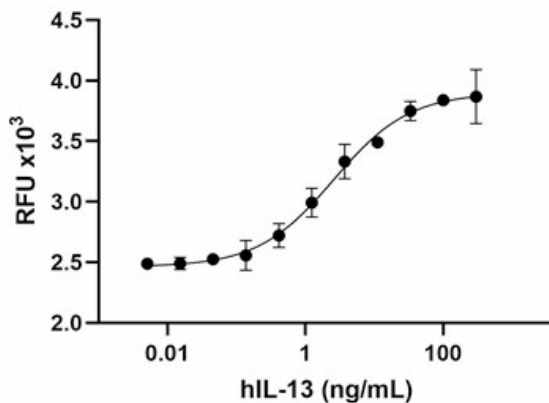
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<b>Source</b>	Human IL-13, amino acid (Gly21-Asn132) (Accession: # X69079) was expressed in <i>E.coli</i> .
<b>Molecular Mass</b>	The 112 amino acid recombinant protein has a predicted molecular mass of 12.3 kD. The DTT-reduced and non-reduced protein migrate at approximately 9 kD by SDS-PAGE. The N-terminal amino acid is Gly.
<b>Purity</b>	> 95%, as determined by Coomassie stained SDS-PAGE.
<b>Formulation</b>	0.1 µm filtered protein solution is in 10 mM NaH <sub>2</sub> PO <sub>4</sub> , 150 mM NaCl, pH 7.2
<b>Endotoxin Level</b>	Less than 0.1 EU per µg of protein as determined by the LAL method.
<b>Concentration</b>	25 µg and 100 µg sizes are bottled at 0.5 mg/mL
<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 the 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% endotoxin-free 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 or stored at -20°C or colder for up to 3 months. <b>Avoid repeated freeze/thaw cycles.</b>
<b>Activity</b>	Human IL-3 induces proliferation of human TF-1 cells in a dose-dependent manner. The ED <sub>50</sub> for this effect is 0.5 – 3.0 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 validated 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>Disclaimer</b>	<b>GMP Recombinant Proteins.</b> BioLegend GMP recombinant proteins are manufactured in a dedicated GMP facility and compliant with ISO 13485:2016. For research or <i>ex vivo</i> cell processing use. Not for use in diagnostic or therapeutic procedures. Our processes include: <ul style="list-style-type: none"><li>• Batch-to-batch consistency</li><li>• Material traceability</li><li>• Documented procedures</li><li>• Documented employee training</li><li>• Equipment maintenance and monitoring records</li><li>• Lot-specific certificates of analysis</li><li>• Quality audits per ISO 13485:2016</li><li>• QA review of released products</li></ul>

## Antigen Details

<b>Structure</b>	Monomer
<b>Ligand/Receptor</b>	IL-4R $\alpha$ , IL-13R $\alpha$ 1, and IL-13R $\alpha$ 2
<b>Bioactivity</b>	Human IL-13 induces the proliferation of TF-1 cells
<b>Cell Sources</b>	IL-13 is secreted by activated T cells, Th2 cells, basophils, mast cells, activated eosinophils and NK cells
<b>Cell Targets</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>Antigen References</b>	<ol style="list-style-type: none"><li>1. McKenzie ANJ, <i>et al.</i> 1993. <i>P Natl Acad Sci USA</i>. 90:3735.</li><li>2. Papasavvas E, <i>et al.</i> 2005. <i>J. Immunol.</i> 175:5532.</li><li>3. Kelly-Wellch, <i>et al.</i> 2005. <i>Science Signaling</i>. 2005:293.</li><li>4. Hershey GK. 2003. <i>J Allergy Clin Immunol.</i> 111:677.</li><li>5. Harris J, <i>et al.</i> 2007. <i>Immunity.</i> 27:505.</li><li>6. LaPorte SL, <i>et al.</i> 2008. <i>Cell.</i> 132:259.</li><li>7. Jackson DJ, <i>et al.</i> 2020. <i>J Allergy Clin Immunol.</i> 146:203. e3.</li><li>8. Bonser LR, <i>et al.</i> 2022. <i>Am J Respir Cell Mol Biol.</i> 66:391.</li></ol>
<b>Regulation</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>Gene ID</b>	<a href="#">3596</a>

## Product Data



GMP recombinant human IL-13 induces the proliferation of human TF-1 cells in a dose-dependent manner. The ED<sub>50</sub> for this effect is 0.5 – 3.0 ng/mL.

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