

## Recombinant Human IL-13 (ELISA Std.)

<b>Catalog# / Size</b>	571109 / 4 pack
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	ALRH, BHR1, P600, IL-13, MGC116786, MGC116788, MGC116789, IL13
<b>Description</b>	Human IL-13 was initially cloned from cDNA libraries of activated T cells. IL-13 is an immunoregulatory cytokine secreted predominantly by activated Th2 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 STAD-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>	Human IL-13, amino acids Gly21-Asn132 (Accession # X69079), was expressed in <i>E. coli</i> , approximately 12 kD
<b>Formulation</b>	Lyophilized in sterile-filtered PBS, pH 7.2, containing 1% BSA, 0.09% sodium azide, and protease inhibitors.
<b>Concentration</b>	Lot-specific (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>	Upon receipt, store unopened vials between 2°C and 8°C immediately and use within 12 months from date of receipt. Prior to use, reconstitute the lyophilized powder with 0.2 ml of PBS containing a carrier protein (e.g., 1% BSA, protease free), pH7.4. Re-cap vial, vortex. Allow the reconstituted standard to sit at room temperature for 15 minutes, vortex again to mix completely. The reconstituted standard stock solution can be aliquoted into polypropylene vials and stored at -70°C for up to one month. Do not re-use diluted standards. Use a manual defrost freezer and avoid repeated freeze thaw cycles.
<b>Application</b>	<a href="#">ELISA</a>
<b>Recommended Usage</b>	Each lot of this protein is quality control tested by <a href="#">ELISA assay</a> . For use as an ELISA standard, a standard curve comprised of doubling dilutions from 2000 pg/ml to 31.3 pg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes</b>	This IL-13 protein is useful as a standard for a human IL-13 sandwich ELISA, using unlabelled anti-IL-13 antibody, clone JES10-5A2 (catalog #501902) for capture and biotinylated Poly5020 (catalog #502001) antibody for detection.

### Antigen Details

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<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. 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-Welch, <i>et al.</i> 2005. <i>Science Signaling</i> 293.</li><li>4. Hershey GK, <i>et al.</i> 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></ol>
<b>Gene ID</b>	<a href="#">3596</a>

## Related Protocols

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[Sandwich ELISA Protocol](#)

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