



# Anti-Human IL-13

20150223ML



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

<b>Cat.-no.:</b>	<b>102-P43</b>
Size:	100 µg
Lot. No.:	According to product label

**Preparation:** Produced from sera of rabbits pre-immunized with highly pure (>98%) recombinant human IL 13 (human Interleukin-13). Anti-human IL 13 specific antibody was purified by affinity chromatography employing immobilized human IL 13 matrix.

## Target Background

<b>Synonyms (Target):</b>	IL13; ALRH; BHR1; P600; IL-13
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IL-13 is a 17 kDa immunoregulatory cytokine that plays a key role in the pathogenesis of allergic asthma and atopy. It is secreted by Th1 and Th2 CD4+ T cells, NK cells, visceral smooth muscle cells, eosinophils, mast cells, and basophils. IL-13 circulates as a monomer with two internal disulfide bonds that contribute to a bundled four alpha-helix configuration. Mature human IL-13 shares 57%, 59%, and 94% amino acid sequence identity with mouse, rat, and rhesus IL-13, respectively. Despite the low homology, it exhibits cross-species activity between human, mouse, and rat. IL-13 has diverse activities on numerous cell types. On macrophages, IL-13 suppresses the production of proinflammatory cytokines and other cytotoxic substances. On B cells, IL-13 induces immunoglobulin class switching to IgE, upregulates the expression of MHC class II, CD71, CD72, and CD23, and costimulates proliferation. IL-13 upregulates IL-6 while downregulating IL-1 and TNF-alpha production by fibroblasts and endothelial cells. IL-13 binds with low affinity to IL-13 R alpha 1, triggering IL-13 R alpha 1 association with IL-4 R alpha. This high affinity receptor complex also functions as the type 2 IL-4 receptor complex. Additionally, IL-13 binds with high affinity to IL-13 R alpha 2 which is expressed intracellularly, on the cell surface, and as a soluble molecule. IL-13 R alpha 2 regulates the bioavailability of both IL-13 and IL-4 and is overexpressed in glioma and several bronchial pathologies. Compared to wild type IL-13, the atopy-associated R110Q variant of IL-13 elicits increased responsiveness from eosinophils that express low levels of IL-13 R alpha 2.

### Database References Target

<b>Protein RefSeq:</b>	NP_002179.2
<b>Uniprot ID:</b>	P35225
<b>mRNA RefSeq:</b>	NM_002188

## Product Specifications

<b>Species reactivity</b>	Human
<b>Clone/Ab feature</b>	Rabbit IgG
<b>Cross reactivity</b>	Human
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal Antibody
<b>Purification</b>	Antigen-affinity purified
<b>Immunogen</b>	Recombinant human IL-13
<b>Formulation</b>	lyophilized from PBS
<b>Reconstitution buffer</b>	water

**Reconstitution:** Reconstitute the antibody in sterile water to a concentration of 0.1 - 1.0 mg/ml.

**Stability:** The lyophilized antibody is stable for at least 2 years from date of receipt at -20°C. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.



**AVOID REPEATED FREEZE AND THAW CYCLES!**

### Applications

**Neutralization:** To yield one-half maximal inhibition [ND<sub>50</sub>] of the biological activity of human IL-13 (2.0 ng/ml), a concentration of 0.12 - 0.15 mg/ml of this antibody is required.

**ELISA:** To detect human IL-13 by direct ELISA (using 100µl/well antibody solution) a concentration of at least 0.5mg/ml of this antibody is required. This antigen affinity purified antibody, in conjunction with compatible secondary reagents, allows the detection of 0.2 - 0.4 ng/well of recombinant human IL-13.

**Western Blot:** To detect human IL-13 by Western Blot analysis this antibody can be used at a concentration of 0.1 - 0.2 mg/ml. Used in conjunction with compatible secondary reagents the detection limit for recombinant human IL-13 is 1.5 - 3.0 ng/lane, under either reducing or non-reducing conditions.

**NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!**



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