

# PRODUCT INFORMATION



## Interleukin-13 (human, recombinant)

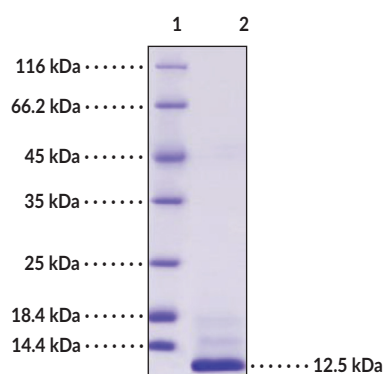
Item No. 40467

### Overview and Properties

**Synonyms:** ALRH Protein, IL-13  
**Source:** Active recombinant human IL-13 expressed in CHO cells  
**Amino Acids:** 1-132  
**Uniprot No.:** P35225  
**Molecular Weight:** 12.5 kDa  
**Storage:** -80°C (as supplied)  
**Stability:** ≥1 year  
**Purity:** ≥92% estimated by SDS-PAGE  
**Supplied in:** Lyophilized from sterile PBS, pH 7.4  
**Endotoxin Testing:** <1.0 EU/μg determined by the LAL endotoxin assay  
**Bioactivity:** See figures for details  
**Specific Activity:** batch specific

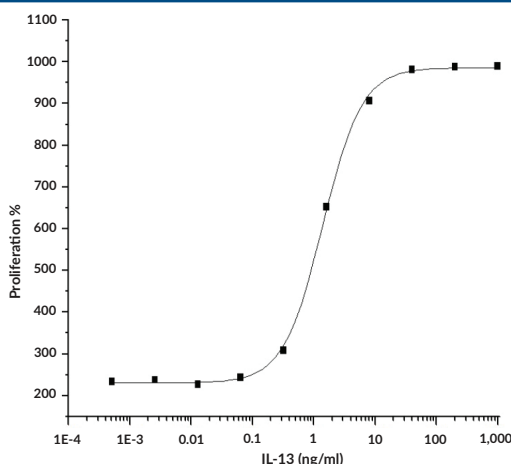
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Images



Lane 1: MW Markers  
Lane 2: Interleukin-13

**SDS-PAGE Analysis of Interleukin-13.**  
This protein has a calculated molecular weight of 12.5 kDa.



**IL-13 measured in a cell proliferation assay using TF1 human erythroleukemic cells.** The  $EC_{50}$  for this effect is typically 0.5-3 ng/ml.

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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## Description

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Interleukin-13 (IL-13) is a cytokine that is involved in type 2 immunity.<sup>1-3</sup> It is a secreted protein that is mainly expressed by activated T cells, but is also produced by mast cells, basophils, eosinophils, and neutrophils.<sup>3,4</sup> Two amino acid sequences of IL-13 have been reported; one is 132 amino acids in length and the other with 14 additional amino acids at the N-terminus resulting in a 146 amino acid protein.<sup>4-6</sup> IL-13 binds to a heterodimer of IL-4 receptor  $\alpha$  (IL-4R $\alpha$ ) and IL-13R $\alpha$ 1 to initiate intracellular signaling through the JAK/STAT or PI3K pathways.<sup>3,7</sup> It also binds to the decoy receptor, IL-13R $\alpha$ 2, to initiate TGF- $\beta$  signaling.<sup>1,3,5</sup> IL-13 has roles in host defense against helminth parasites, airway hyperresponsiveness, antitumor immunity, tissue remodeling, and mucus production.<sup>1,3</sup> It induces the proliferation of activated B lymphocytes and the production of IgG and IgM by B cells co-cultured with T cells.<sup>4</sup> Knockout of *Il13* increases survival and decreases hepatic fibrosis in a mouse model of *S. mansoni* infection.<sup>8</sup> SNPs in *IL13* are associated with asthma.<sup>3</sup> Protein levels of IL-13 are increased in primary and metastatic tumors compared with normal ovarian tissue in patients with ovarian cancer.<sup>9</sup> Cayman's Interleukin-13 (human, recombinant) protein is based on the 132 amino acid sequence and can be used for cell-based assay applications.

## References

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