

Active Recombinant Human IL13

Cat. No. IL13-1251H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant human IL-13 produced in E.coli is a single, non-glycosylated, polypeptide chain containing 113 amino acids with two pairs of disulfate bond and having a molecular mass of approximately 12.3kDa.

Species Human

Source E.coli

Description IL-13 is an 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 α 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. IL13 has diverse activities on numerous cell types. On macrophages, IL13 suppresses the production of proinflammatory cytokines and other cytotoxic substances. On B cells, IL13 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 down-regulating IL-1 and TNF α production by fibroblasts and endothelial cells. IL-13R- α 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-13R- α 2.

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Form	Lyophilized from a 0.2µm filtered solution in PBS containing 0.1% HSA, pH7.4.
Bio-activity	Measured in a cell proliferation assay using TF-1 cell line. The specific activity shall be not less than 1 x 10 ⁶ IU/mg.
Endotoxin	≤1EU/µg, determined by the LAL method.
Purity	≥97%, as determined by SDS-PAGE and HPLC method.
Usage	FOR RESEARCH ONLY
Storage	Lyophilized samples are stable for greater than six months from date of receipt at -20 centigrade to -70 centigrade. The reconstituted samples can be stored under sterile conditions at 2-8 centigrade for one month or at -20 centigrade to -70 centigrade for three months without detectable loss of activity. Avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile PBS containing at least 0.1% human serum albumin or bovine serum albumin be added to the vial to prepare a stock solution of not less than 100µg/ml.

GENE INFORMATION

Gene Name	IL13 interleukin 13 [Homo sapiens]
Official Symbol	IL13
Synonyms	P600; IL-13; interleukin-13
Gene ID	3596
mRNA Refseq	NM_002188

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Protein Refseq	NP_002179
MIM	147683
UniProt ID	P35225
Chromosome Location	5q31
Pathway	Asthma, organism-specific biosystem; Cytokine-cytokine receptor interaction, organism-specific biosystem; Fc epsilon RI signaling pathway, organism-specific biosystem
Function	cytokine activity; interleukin-13 receptor binding; protein binding

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