

Recombinant Mouse Interleukin 13

Cat. No. IL13-68M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Interleukin-13 produced in <i>E. Coli</i> is a single, non-glycosylated polypeptide chain containing 110 amino acids and having a molecular mass of 12127 Dalton. The IL-13 is purified by proprietary chromatographic techniques.
Species	Mouse
Source	E.coli
Description	IL13 is an immunoregulatory cytokine produced primarily by activated Th2 cells. IL-13 is involved in several stages of B-cell maturation and differentiation. It up-regulates CD23 and MHC class II expression, and promotes IgE isotype switching of B cells. This cytokine down-regulates macrophage activity, thereby inhibits the production of pro-inflammatory cytokines and chemokines. This cytokine is found to be critical to the pathogenesis of allergen-induced asthma but operates through mechanisms independent of IgE and eosinophils. This gene, IL3, IL5, IL4, and CSF2 form a cytokine gene cluster on chromosome 5q, with this gene particularly close to IL4.
Amino Acid Sequence	The sequence of the first five N-terminal amino acids was determined and found to be Met-Pro-Val-Pro-Arg.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 98% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

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Formulation	The protein (1mg/ml) was lyophilized with no additives.
Solubility	It is recommended to reconstitute the lyophilized Interleukin 13 in sterile 18MΩ-cm H ₂ O not less than 100g/ml, which can then be further diluted to other aqueous solutions.
Biological Activity	The ED ₅₀ was determined by the dose dependent proliferation of TF-1 cells and was found to be < 4ng/ml, corresponding to a specific activity of >2.5 x 10 ⁵ .
Protein Content	Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 0.69 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics). 2. Analysis by RP-HPLC, using a calibrated solution of IL-13 as a Reference Standard.
Storage	Lyophilized Interleukin-13 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL13 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	Il13 interleukin 13 [<i>Mus musculus</i>]
Synonyms	Il13; interleukin 13; Il-13; OTTMUSP00000005816
Gene ID	16163
mRNA Refseq	NM_008355

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Protein Refseq	NP_032381
UniProt ID	P20109
Chromosome Location	11 B1.3; 11 29.0 cM
Pathway	Asthma; Cytokine-cytokine receptor interaction; Fc epsilon RI signaling pathway; Jak-STAT signaling pathway
Function	cytokine activity;cytokine receptor binding; interleukin-13 receptor binding
PDB rendering based on 1ga3.	