

General Information

Synonyms	ALRHMG116789; BHR1interleukin-13; IL13; IL-13; IL-13MGC116788; interleukin 13
Accession #	P20109
Source	Human embryonic kidney cell, HEK293-derived mouse IL-13 protein
	Ser26-Phe131
Predicted Molecular weight	11.5 kDa

Components and Storage

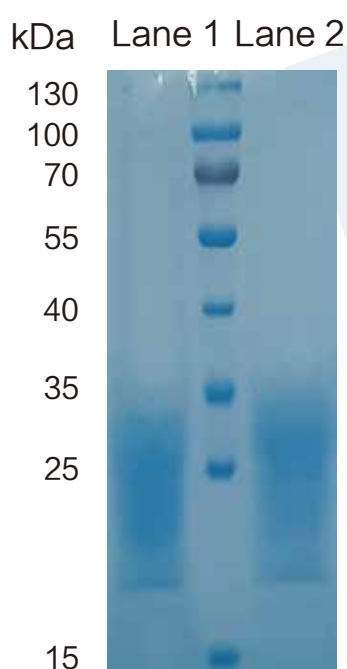
Formulation	Solution protein. Dissolved in PBS buffer to a concentration of 0.2 mg/mL. This solution can be diluted into other aqueous buffers. Centrifuge the vial prior to opening.
Storage and Stability	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. 12 months from date of receipt, -20 to -70 ° C as supplied.

Shipping Shipping with dry ice.

Quality

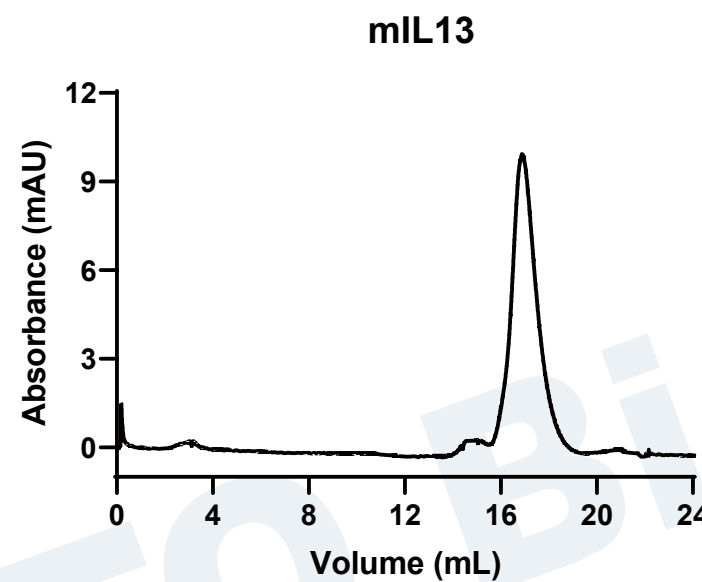
Purity	> 95%, determined by SDS-PAGE.
Endotoxin Level	<0.010 EU per 1 ug of the protein by the LAL method.
Activity	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The EC50 for this effect is 0.5-1.5 ng/mL.

SDS-PAGE



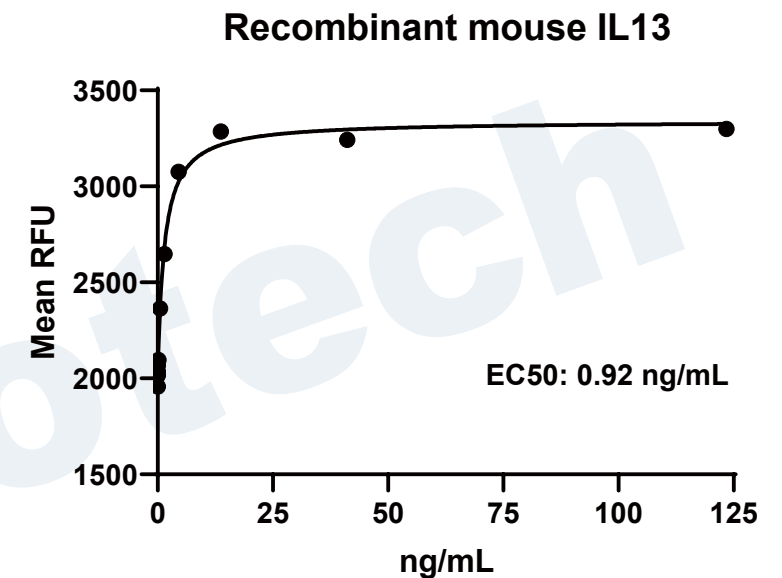
4 ug/lane of recombinant mouse IL-13 was resolved with SDS-PAGE under non-reducing (Lane 1) and reducing (Lane 2) conditions and visualized by Coomassie Blue staining.

Gel filtration



Size-exclusion chromatography of recombinant mouse IL13 protein (280 nm absorbance)

Bioactivity



Recombinant mouse IL13 (Catalog # MF-1013) stimulates cell proliferation of TF-1 human erythroleukemic cells.

Background

Interleukin-13 (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 (1 - 3). IL-13 circulates as a monomer with two internal disulfide bonds that contribute to a bundled four alpha-helix configuration (4, 5). Mature mouse IL-13 shares 57%, 75%, and 58% amino acid sequence identity with human, rat, and rhesus IL-13, respectively. Despite the low homology, it exhibits cross-species activity between human, mouse, and rat (6, 7). IL-13 has diverse activities on numerous cell types (8). 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.

Reference

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