Epoto Biotech

南京艾璞拓生物科技有限公司

Recombinant Mouse IL-4, Tag Free

Catalog Number: MF-1004

General Information

Synonyms	B cell growth factor 1; BCDF; BCGF1; BCGF-1; binetrakin; BSF1; BSF-1; IL4; IL-4
Accession #	P07750
Source	Human embryonic kidney cell, HEK293-derived Mouse IL-4 protein
	His23-Ser140
Predicted Moleucular weight	13.4 kDa

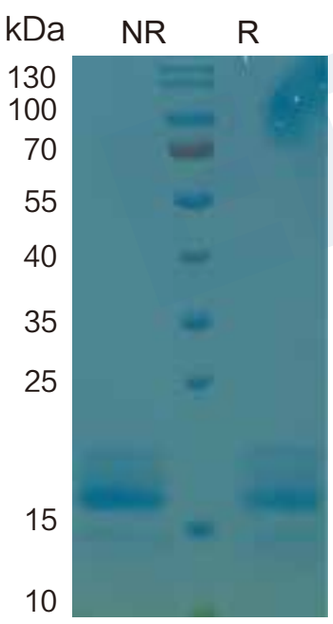
Components and Storage

Formulation	Solution protein.
	Dissolved in PBS buffer.
	This solution can be diluted into other aqueous buffers. Centrifuge the vial prior to opening.
Storage and Stability	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

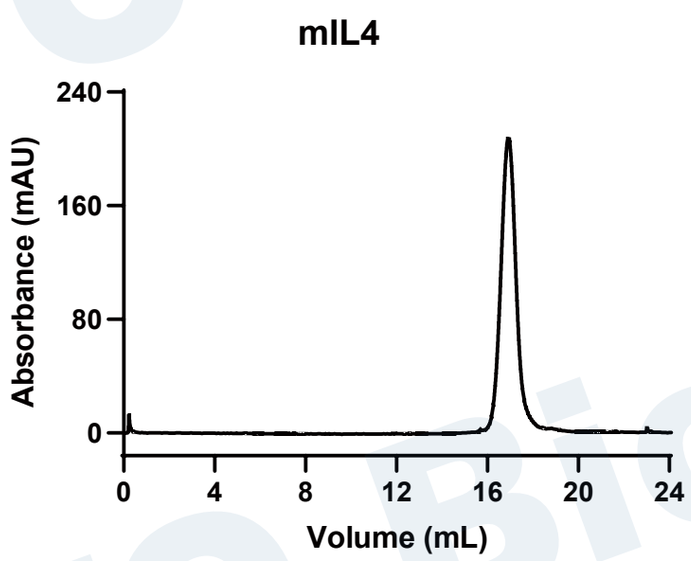
Purity	> 95%, determined by SDS-PAGE.
Endotoxin Level	<0.010 EU per 1 ug of the protein by the LAL method.
Activity	Measured in a cell proliferation assay using HT-2 mouse T cells.
	The EC50 for this effect is 0.2-1.0 ng/mL.

SDS-PAGE



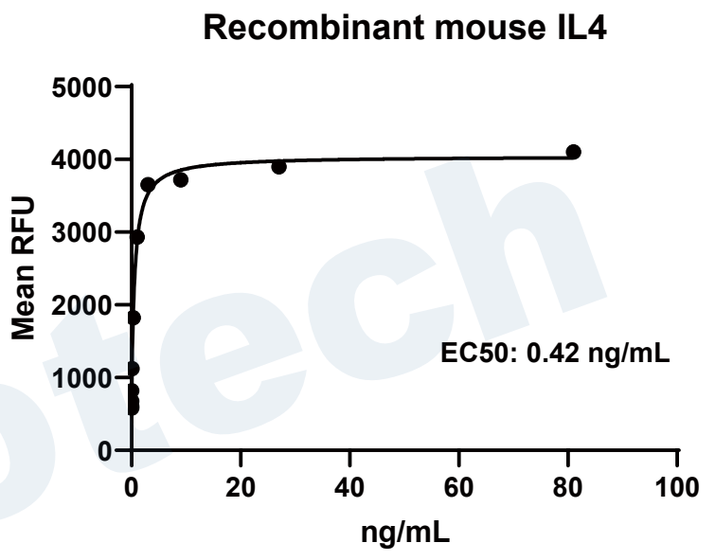
4 ug/lane protein was resolved with SDS-PAGE under non-reducing (NR) and reducing (R) conditions and visualized by Coomassie Blue staining.

Gel filtration



Size-exclusion chromatography of recombinant mouse IL4 protein (280 nm absorbance)

Bioactivity



Recombinant mouse IL4 (Catalog # MF-1004) stimulates cell proliferation of HT-2 mouse T cells.

Background

Interleukin-4 (IL-4) , also known as B cell-stimulatory factor-1, is a monomeric, approximately Th2 cytokine that shows pleiotropic effects during immune responses (1-4). Mature mouse IL-4 shares 39%, 39%, and 59% aa sequence identity with bovine, human, and rat IL-4, respectively. Human, mouse, and rat IL-4 are species-specific in their activities (5-7). IL-4 exerts its effects through two receptor complexes (8, 9). The type I receptor, which is expressed on hematopoietic cells, is a heterodimer of the ligand binding IL-4 R alpha and the common gamma chain. The type II receptor on nonhematopoietic cells consists of IL-4R alpha and IL-13 R alpha 1. The type II receptor also transduces IL-13 mediated signals. IL-4 is primarily expressed by Th2-biased CD4+ T cells, mast cells, basophils, and eosinophils (1, 2). It promotes cell proliferation, survival, and immunoglobulin class switch to IgG1 and IgE in mouse B cells, acquisition of the Th2 phenotype by naive CD4+ T cells, priming and chemotaxis of mast cells, eosinophils, and basophils, and the proliferation and activation of epithelial cells (10 – 13). IL-4 plays a dominant role in the development of allergic inflammation and asthma (12, 14).

Reference

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