

Recombinant Mouse IL-4, Tag Free

Information

Accession #	P07750
Alternate Names	B cell growth factor 1; BCDF; BCGF1; BCGF-1; binetrakin; BSF1; BSF-1; IL4; IL-4
Source	Human embryonic kidney cell, HEK293-derived Mouse IL-4 protein
Protein sequence	His23-Ser140
M.Wt	13.4 kDa
Appearance	Solution protein
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. - 12 months from date of receipt, -20 to -70°C as supplied.
Concentration	0.2 mg/mL
Formulation	Dissolved in sterile PBS buffer.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. This solution can be diluted into other aqueous buffers.
Biological Activity	The EC50 for this effect is 0.05-0.2 ng/mL. Measured by its ability to induce IL-11 secretion by Saos-2 human osteosarcoma cells.
Shipping Condition	Shipping with dry ice.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Quality Control

Purity	> 95%, determined by SDS-PAGE.
Endotoxin	<0.010 EU per 1 ug of the protein by the LAL method.

Description

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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