Recombinant Mouse IL-4 (His, Strep)

Information

Gene ID	16189
Accession #	P07750
Alternate Names	B cell growth factor 1; BCDF; BCGF1; BCGF-1; binetrakin; BSF1; BSF-1; IL4; IL-4
Source	HEK293
Protein sequence	HIHGCDKNHLREIIGILNEVTGEGTPCTEMDVPNVLTATKNTTESELVCRASKVLRIFYLKHGKTPCLKKNSSV LMELQRLFRAFRCLDSSISCTMNESKSTSLKDFLESLKSIMQMDYS
Tag	C-His, C-Strep
M.Wt	The protein has a calculated MW of 13.5 KDa.
Appearance	Solution protein.
Stability & Storage	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. -2 years from date of receipt, -20 to -70 °C as supplied.
Concentration	1 mg/mL
Formulation	Supplied as a 0.2 μm filtered solution in PBS, pH7.4.
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	Fully biologically active as determined by a cell proliferation assay using MC/9 mouse mast cells. The EC50 for this effect is 0.17 ng/mL.
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 % by SDS-PAGE.
Endotoxin	Less than 1.0 EU/μg as determined by LAL method.

Description

Interleukin 4 (IL-4), also known as B cell stimulating factor-1, is a monomeric Th2 cytokine that exhibits pleiotropy in the immune response. The amino acid sequence homology of mature mouse IL-4 was 39%, 39% and 59% with bovine, human and rat IL-4, respectively. IL-4 activity in human, mouse, and rat is species-specific. IL-4 functions through two receptor complexes. Type I receptors expressed on hematopoietic cells are ligand-bound IL-4Rα and common γ heterodimers. Type II receptors on non-hematopoietic cells are composed of IL-4Rα and IL-13Rα1. Type II receptors also transmit IL-13-mediated signaling. IL-4 is predominantly expressed by Th2-biased CD4+ T cells, mast cells, basophils, and eosinophils. It can promote the proliferation and survival of mouse B cells and the conversion of immunoglobulins to IgG1 and IgE, promote the acquisition of Th2 phenotype by naïve CD4+ T cells, promote the initiation and chemotaxis of mast cells, eosinophils and basophils, and the proliferation and activation of epithelial cells. IL-4 plays a leading role in the occurrence and development of allergic inflammation and asthma.

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