

Recombinant Human IL-4 (His, Strep)

Information B 0

Gene ID	3565				
Accession #	P05112				
Alternate Names	Interleukin-4; IL-4; BSF-1; BCDF; IL4E12; Pitrakinra; Binetrakin; Lymphocyte stimulatory factor 1				
Source	HEK293				
Protein sequence	HKCDITLQEIIKTLNSLTEQKTLCTELTVTDIFAASKNTTEKETFCRAATVLRQFYSHHEKDTRCLGATAQQFH RHKQLIRFLKRLDRNLWGLAGLNSCPVKEANQSTLENFLERLKTIMREKYSKCSS				
Tag	C-His, C-Strep				
M.Wt	The protein has a calculated MW of 14.9 KDa.				
Appearance	Solution protein.				
Stability & Storage	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage2 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 TF-1 human erythroleukemic cells. The EC50 for this effect is 0.01-0.38 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 secreted protein that belongs to the IL-4/IL-13 family. It is a glycosylated peptide containing three intrachain disulfide bonds and adopting a bundled structure of four α -helix. Mature human IL-4 has amino acid sequence identity of 55%, 39%, and 43% with bovine, mouse, and rat IL-4, respectively. The activity of IL-4 in human, mouse, and rat is species-specific. IL-4 exerts its effects through two receptor complexes. Type I receptors expressed on hematopoietic cells are heterodimers of ligand-bound IL-4 R α and co- γ chains (shared subunits of IL-2, -7, -9, -15, and -21 receptors). Type II receptors on non-hematopoietic cells are composed of IL-4 R α and IL-13 R α 1. Type II receptors also transduce IL-13-mediated signaling. IL-4 is predominantly expressed by Th2-biased CD4+ T cells, mast cells, basophils, and eosinophils. It promotes cell proliferation, survival, and conversion of immunoglobulin-like classes to IgG4 and IgE in human B cells, Th2 phenotype acquisition by naïve CD4+ T cells, initiation and chemotaxis of mast cells, eosinophils, and basophils, and proliferation and activation of epithelial cells.













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