Datasheet

Cat. No. PH2006

Recombinant Human IL-4

Information

Accession #	P05112
Alternate Names	Human IL4; hIL-4, recombinant IL4, interleukin 4, BCGF1 Protein
Source	Human embryonic kidney cell, HEK293-derived human IL4 protein
Protein sequence	His25-Ser153
M.Wt	15 kDa
Appearance	Solution protein.
Stability & Storage	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.
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	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The EC50 for this effect is 0.01-0.08 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%, 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 secreted protein that belongs to the IL-4 / IL-13 family [1-3]. It is a glycosylated polypeptide that contains three intrachain disulfide bridges and adopts a bundled four α-helix structure [4]. Mature human IL-4 shares 55%, 39% and 43% aa sequence identity with bovine, mouse, 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 Rα and the common γ chain (a shared subunit of the receptors for IL-2, -7, -9, -15, and -21). The type II receptor on nonhematopoietic cells consists of IL-4 Rα and IL-13 Rα1.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 IgG4 and IgE in human 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].

Reference

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