Recombinant Human IL-4

Catalog # FL178

Product Specifications

Appearance	Sterile filtered White lyophilized (freeze-dried) powder.
Purity	> 98% by SDS-PAGE or HPLC.
Endotoxin	< 0.1 EU/μg of rHuIL-4 protein as determined by LAL method.
Expression System	Expressed in E. coli.
Species	Human
Tag	Tag free.
Activity	Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using human TF-1 cells is less than 0.2 ng/ml, corresponding to a specific activity of ≥ 5.0×10^6 IU/mg.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in 20 mM PB, with 150 mM NaCl, 0.02% (v/v) Tween-20, pH 5.0.
Reconstitution	Before use this product, please read the direction below carefully. This vial must be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.
Accession #	P05112 His25-Ser153
Amino acid sequence	HKCDITLQEIIKTLNSLTEQKTLCTELTVTDIFAASKNTTEKETFCRAATVLRQFYSHHEKDTRCLGATAQQFHRHKQLIRFLK RLDRNLWGLAGLNSCPVKEANQSTLENFLERLKTIMREKYSKCSS
Molecular weight	Approximately 15.0 kDa, 129 amino acids.
Synonyms	BCGF, BCDF, B cell stimulating factor (BSF-1)
Stability & Storage	Shipped on wet ice. For long term storage, the product should be stored ≤ -20°C. Please avoid repeated freeze-thaw cycles after reconstitution. 36 months from date of receipt, -20 to -70°C as supplied. 1 month, 2 to 8°C under sterile conditions after reconstitution. 3 months, -20 to -70°C under sterile conditions after reconstitution.
Precautions	Recombinant Human IL-4 is for research use only and not for use in diagnostic or therapeutic procedures.

Background

Interleukin-4 (IL-4) is a pleiotropic cytokine that induces differentiation of naive helper T cells (Th0 cells) to Th2 cells and produced primarily by mast cells, Th2 cells, eosinophils and basophils. IL-4 is a key regulator in humoral and adaptive immunity and has many biological roles, including the stimulation of activated B-cell and T-cell proliferation, and the differentiation of B cells into plasma cells. It regulates the differentiation of naive CD4+ T cells into helper Th2 cells and immunoglobulin class switching to the IgG1 and IgE isotypes. Excessive IL-4 production by Th2 cells is associated with allergies. 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. IL-4 has a compact, globular fold, stabilized by 3 disulfide bonds. The recombinant Interleukin-4 is a 15kDa protein consisting of 129amino acid.

Validation Images