

Recombinant Mouse IL-4

Catalog # FL083

Product Specifications

Appearance	Sterile filtered White lyophilized (freeze-dried) powder.
Purity	> 97% by SDS-PAGE or HPLC.
Endotoxin	< 0.1 EU/μg of rMuIL-4 protein as determined by LAL method.
Expression System	Expressed in E. coli.
Species	Mouse
Tag	Tag free.
Activity	Fully biologically active when compared to standard. The ED50 as determined by the dose-dependent proliferation of mouse HT-2 cells is less than 2 ng/ml, corresponding to a specific activity of $\geq 5 \times 10^5$ IU/mg.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.
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 $\leq -20^\circ\text{C}$. Further dilutions should be made in appropriate buffered solutions.
Accession #	P07750 His21-Ser140 with an N-terminal Met
Amino acid sequence	MHIHGCDKNHLREIIGILNEVTGEGTPCTEMDVPNVLTATKNTTESELVCRASKVLRIFYLKHKGTPLKKNSSVLMELQRLF RAFRCLDSSISCTMNESKSTSLKDFLESLKSIMQMDYS
Molecular weight	Approximately 13.5 kDa, a single non-glycosylated polypeptide chain containing 121 amino acids.
Synonyms	B-cell IgG differentiation factor, B-cell growth factor 1, BSF-1, IGG1 induction factor, Lymphocyte stimulatory factor 1
Stability & Storage	Shipped on wet ice. For long term storage, the product should be stored $\leq -20^\circ\text{C}$. 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 Mouse 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. It is produced by mast cells, activated T cells and bone marrow stromal cells. It has many biological roles, including the stimulation of activated B-cell and T-cell proliferation, and the differentiation of CD4+ T-cells into Th2 cells. In addition, IL-4 enhances both secretion and cell surface expression of IgE and IgG1 and also regulates the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes. IL-4 plays a dominant role in the development of allergic inflammation and asthma. The mouse IL-4 has a compact, globular fold, stabilized by three disulfide bonds. The human IL-4 shares about 40% aa sequence identity with mouse/rat IL-4 and they are species-specific in their activities. Recombinant Mouse IL-4 is a 13.5kDa globular protein consisting of 121 amino acid residues.

