Recombinant Murine Interleukin-4

#R00219

Size: 5 μg/100 μg/500 μg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 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.

Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

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. The mouse IL-4 has a compact, globular fold, stabilised by 3 disulphide bonds and contains 121 amino acids residues which is a single non-glycosylated polypeptide. The human IL-4 shares about 40% aa sequence identity with mouse/rat IL-4 and they are species-specific in their activities.

AA Sequence

MHIHGCDKNHLREIIGILNEVTGEGTPCTEMDVPNVLT
ATKNTTESELVCRASKVLRIFYLKHGKTPCLKKNSSVL
MELQRLFRAFRCLDSSISCTMNESKSTSLKDFLESLK
SIMQMDYS

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in 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.

Product Specification

Synonyms	B-cell IgG differentiation factor, B-cell growth factor 1, BSF-1, IGG1 induction factor, Lymphocyte stimulatory factor 1
Accession	P07750
GeneID	16189
Species	Murine
Source	Escherichia coli.
Molecular Weight	Approximately 13.5 kDa, a single non-glycosylated polypeptide chain containing 121 amino acids.
Purity	> 97 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The ED_{50} as determined by the dose-dependant prolifiration of

	Murine HT-2 cells is less then 2 ng/ml, corresponding to a Specific Activity of > 5×10^5 IU/mg.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS, pH 7.4.
Endotoxin	Less than 1 EU/μg of rMuIL-4 as determined by LAL method.