

PRODUCT DATA SHEET



Bioworld Technology, Inc.

Recombinant Human Interleukin-4 (rHuIL-4)

Catalog Number: PR1072

Source: Escherichia coli.

Quantity: 5µg/20µg/1.0mg

Description

Interleukin-4 is a pleiotropic cytokine that regulates diverse T and B cell responses including cell proliferation, survival and gene expression. Produced by mast cells, T cells and bone marrow stromal cells, IL-4 regulates the differentiation of naive CD4⁺ T cells into helper Th2 cells, characterized by their cytokine-secretion profile that includes secretion of IL-4, IL-5, IL-6, IL-10, and IL-13, which favor a humoral immune response. Another dominant function of IL-4 is the regulation of immunoglobulin class switching to the IgG1 and IgE isotypes. Excessive IL-4 production by Th2 cells has been associated with elevated IgE production and allergy.

Molecular Weight:

Approximately 15 kDa, a single non-glycosylated polypeptide chain containing 130 amino acids.

Purity:

>95% by SDS-PAGE and HPLC analyses.

Biological Activity:

Fully biologically active when compared to standard. The ED50 as determined by the dose-dependant stimulation of TF1 cells is less than 0.2 ng/ml, corresponding to a Specific Activity of $\square 5 \times 10^6$ IU/mg.

Physical Appearance:

Sterile Filtered White Lyophilized (freeze-dried) powder.

Formulation:

Lyophilized from a 0.2mm filtered concentrated solution in PBS, pH 7.4.

AA Sequence:

MHKCDITLQEI IKTLSL TEQKTLCTEL
TVTDIFAASKNTTEKETFCRAATVLRQ
FYSHHEKDTRCLGATAQQFHRHKQLIR
FLKRLDRNLWGLAGLNSCPVKEANQS
TLENFLERLKTIMREKYSKCSS

Endotoxin:

Less than 1EU/mg of rHuIL-4 as determined by LAL method.

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.

Storage:

This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

Usage:

This material is offered by USA Bioworld biotech for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE. Made in China

MADE IN CHINA

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