

PRODUCT DATA SHEET



Bioworld Technology, Inc.

Recombinant IL-4, Mouse

Catalog Number: BK0246-50µg

Source: CHO

Quantity: 50µg

Description:

Interleukin-4 (IL-4) is a pleiotropic cytokine regulates diverse T and B cell responses including cell proliferation, survival, and gene expression. It has important effects on the growth and differentiation of different immunologically competent cells. Interleukin-4 is produced by mast cells, T cells, and bone marrow stromal cells[1]. IL-4 regulates the differentiation of native CD4+ T cells (Th0 cells) into helper Th2 cells, and regulates the immunoglobulin class switching to the IgG1 and IgE isotypes. IL-4 has numerous important biological functions including stimulating B-cells activation, T-cell proliferation and CD4+ T-cells differentiation to Th2 cells. It is a key regulator in hormone control and adaptive immunity[2]. IL-4 also plays a major role in inflammation response and wound repair via activation of macrophage into M2 cells[3]. IL-4 is stabilized by three disulphide bonds forming a compact globular protein structure[4]. Four alpha-helix bundle with left-handed twist is dominated half of the protein structure with 2 overhand connections and fall into a 2-stranded anti-parallel beta sheet[5].

Molecular Weight:

15 kDa, observed by reducing SDS-PAGE.

Purity:

> 95% as analyzed by SDS-PAGE and HPLC.

Biological Activity:

ED50 < 2 ng/ml, measured in a cell proliferation assay using murine HT-2 cells, corresponding to a specific activity of >5 x 10⁵ units/mg.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

Lyophilized after extensive dialysis against PBS.

AA Sequence:

HHHGCDKNHLEIIGILNEV-
TGEGTPCTEMDVPNVLATKNTTESELYCRAS-
KVLRIFYLKHGKTPCLKKNSSVLMELQRLF-
RAFRCLDSSISCTMNESKSTSLKDFLESLSKI-
MQMDYS

Endotoxin:

< 0.2 EU/µg, determined by LAL method.

Reconstitution:

Reconstituted in ddH₂O or PBS at 100 µg/ml.

Storage:

Lyophilized recombinant Murine Interleukin 4 (IL-4) remains stable up to 6 months at -80 °C from date of receipt. Upon reconstitution, rmIL-4 should be stable up to 1 week at 4 °C or up to 2 months at -20 °C.

Usage:

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