

DATASHEET
Version 20181206**IL-4, Mouse****Cat. No.:** Z02996-1**Size:** 1.0 mg**Synonyms:** BCGF, BCDF, B cell stimulating factor (BSF-1)**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].

Amino Acid Sequence:

00001 HIHGCDKNHL REIIGILNEV TGEPTCTEM DVPNVLTATK
00041 NTTESELVCR ASKVLRIFYI KHGKTPCLKK NSSVLMELQR
00081 LFRAFRCLDS SISCTMNEK STSLKDFLES LKSIMQMDYS
00121

Source: CHO**Species:** Mouse**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.**Molecular Weight:** 15 kDa, observed by reducing SDS-PAGE.**Formulation:** Lyophilized after extensive dialysis against PBS.**Reconstitution:** Reconstituted in ddH₂O or PBS at 100 µg/ml.**Purity:** > 95% as analyzed by SDS-PAGE and HPLC.**Endotoxin Level:** < 0.2 EU/µg, determined by LAL method.**Storage:** Lyophilized recombinant Murine Interleukin 4 (IL-4) remains stable up to 6 months at lower than -70°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.