

DATASHEET
Version 20181206**IL-4, Porcine****Cat. No.:** Z02928-1**Size:** 1.0 mg

Synonyms: Interleukin-4, BCGF, BCDF, B cell stimulating factor, BSF-1, Lymphocyte stimulatory factor 1, IL-4, MGC79402, Binetrakin, Pittrakina

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:

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00001 HKCDITLQEI IKTLNLTAR KNSCMELPVT DVFAAPENTT
00041 EKETFCEAST VLRHIYRHHT CMKSLLSGLD RNLSSMANMT
00081 CSVHEAKKST LKDFLERLKT IMKEKYSKC
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Source: CHO**Species:** Porcine

Biological Activity: ED₅₀ < 0.25 ng/ml, measured in a cell proliferation assay using TF-1 human erythroleukemic cells, corresponding to a specific activity of >4 x 10⁶ units/mg

Molecular Weight: 15kDa, 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 porcine Interleukin 4 (IL-4) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rIL-4 should be stable up to 1 week at 4°C or up to 2 months at -20°C.