

Datasheet for ABIN2018020
IL-4 Protein (AA 23-140)

2 Images

[Go to Product page](#)

Overview

Quantity:	50 µg
Target:	IL-4 (IL4)
Protein Characteristics:	AA 23-140
Origin:	Mouse
Source:	CHO Cells
Protein Type:	Recombinant
Biological Activity:	Active

Product Details

Characteristics:	ED50 < 2 ng/mL, measured in a cell proliferation assay using murine HT-2 cells, corresponding to a specific activity of >5 x 10 ⁵ units/mg.
Purity:	> 95 % as analyzed by SDS-PAGE and HPLC.
Endotoxin Level:	< 0.2 EU/µg, determined by LAL method.

Target Details

Target:	IL-4 (IL4)
Alternative Name:	Interleukin 4 (IL-4) (IL4 Products)
Background:	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+

Target Details

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].

Synonyms: BCGF, BCDF, B cell stimulating factor (BSF-1)

Molecular Weight: 15 kDa, observed by reducing SDS-PAGE.

UniProt: [P07750](#)

Pathways: [JAK-STAT Signaling](#), [Regulation of Leukocyte Mediated Immunity](#), [Positive Regulation of Immune Effector Process](#), [Production of Molecular Mediator of Immune Response](#), [Proton Transport](#), [Activated T Cell Proliferation](#)

Application Details

Restrictions: For Research Use only

Handling

Format: Lyophilized

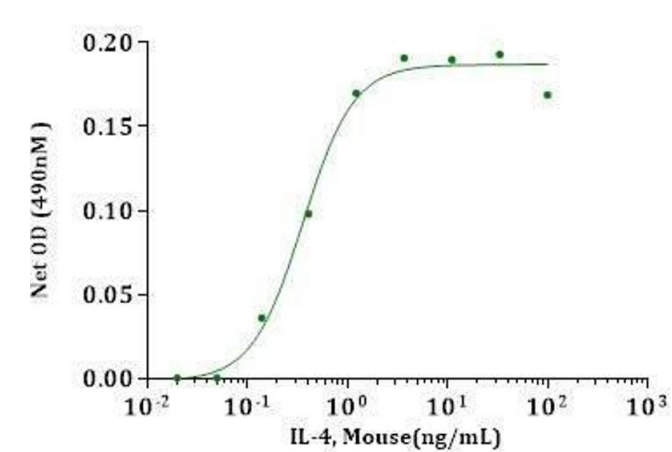
Reconstitution: Reconstituted in ddH₂O or PBS at 100 µg/mL.

Buffer: Lyophilized after extensive dialysis against PBS.

Storage: -80 °C

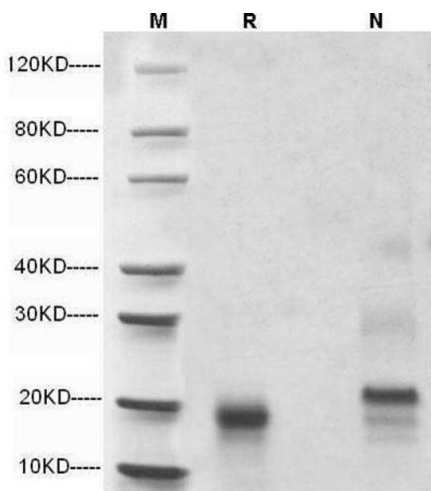
Storage Comment: Lyophilized recombinant Murine Interleukin 4 (IL-4) remains stable up to 6 months at -80 °C from date of receipt. Upon reconstitution, rmlL-4 should be stable up to 1 week at 4 °C or up to 2 months at -20 °C.

Expiry Date: 6 months



Activity Assay

Image 1. IL-4, Mouse stimulates cell proliferation of HT-2 cells. The ED50 for this effect is less than 2ng/mL (0.65 ng/mL).



SDS-PAGE

Image 2. 5 µg of IL-4, Mouse was resolved with SDS-PAGE under reducing (R) and non-reducing (N) conditions and visualized by Coomassie Blue staining.