

Anti-IL-4 Antibody
Catalog # ABO12694**Specification**

Anti-IL-4 Antibody - Product Information

Application	WB, IHC-P, E
Primary Accession	P05112
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Interleukin-4(IL4) detection. Tested with WB, IHC-P, ELISA in Human.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-IL-4 Antibody - Additional Information

Gene ID 3565

Other Names

Interleukin-4, IL-4, B-cell stimulatory factor 1, BSF-1, Binetrakin, Lymphocyte stimulatory factor 1, Pitrakinra, IL4

Calculated MW

17492 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat

ELISA , 0.1-0.5 µg/ml, Human, -
Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization

Secreted.

Protein Name

Interleukin-4(IL-4)

Contents

Each vial contains 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg NaN₃. Carrier free (No BSA) form available in stock. If you want this antibody carrier free please specify "Carrier Free" or "No BSA" in your order note. "

Immunogen

E. coli-derived human IL-4 recombinant protein(Position: H25-S153).

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the IL-4/IL-13 family.

Anti-IL-4 Antibody - Protein Information**Name** IL4**Function**

Cytokine secreted primarily by mast cells, T-cells, eosinophils, and basophils that plays a role in regulating antibody production, hematopoiesis and inflammation, and the development of effector T-cell responses (PubMed: [1993171](http://www.uniprot.org/citations/1993171), PubMed: [3016727](http://www.uniprot.org/citations/3016727)). Induces the expression of class II MHC molecules on resting B-cells. Enhances both secretion and cell surface expression of IgE and IgG1 (PubMed: [1993171](http://www.uniprot.org/citations/1993171)). Also regulates the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes (PubMed: [2521231](http://www.uniprot.org/citations/2521231)). Positively regulates IL31RA expression in macrophages. Stimulates autophagy in dendritic cells by interfering with mTORC1 signaling and through the induction of RUFY4. In addition, plays a critical role in higher functions of the normal brain, such as memory and learning (By similarity). Upon binding to IL4, IL4R receptor dimerizes either with the common IL2R gamma chain/IL2RG to produce the type 1 signaling complex, located mainly on hematopoietic cells, or with the IL13RA1 to produce the type 2 complex, which is also expressed on nonhematopoietic cells (PubMed: [10219247](http://www.uniprot.org/citations/10219247), PubMed: [11526337](http://www.uniprot.org/citations/11526337), PubMed: [18243101](http://www.uniprot.org/citations/18243101)). Engagement of both types of receptors initiates JAK3 and to a lower extent JAK1 phosphorylation leading to activation of the signal transducer and activator of transcription 6/STAT6 (PubMed: [7721895](http://www.uniprot.org/citations/7721895)).

Cellular Location

Secreted.

Anti-IL-4 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-IL-4 Antibody - Images

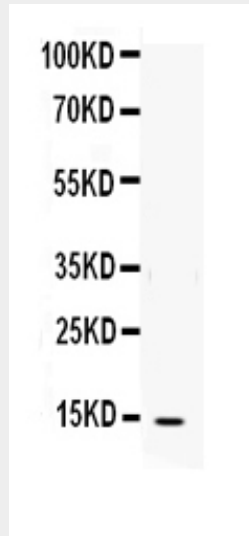


Figure. Western blot analysis of IL-4 using anti- IL-4 antibody (ABO12694). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane: Recombinant Human IL-4 Protein 0.5ng, After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti- IL-4 antigen affinity purified polyclonal antibody (Catalog # ABO12694) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for IL-4 at approximately 14KD. The expected band size for IL-4 is at 14KD.

Anti-IL-4 Antibody - Background

Interleukin-4 (IL-4), also known as a B-cell stimulatory factor¹ (BSF1), is an immunomodulatory cytokine, which can inhibit the growth of tumour cells.¹ The human cDNA contains a single open reading frame encoding a protein of 153 amino acids, including a putative signal peptide. IL-4 may act as an autocrine growth factor in pancreatic cancer cells and also give rise to the possibility that cancer-derived IL-4 may suppress cancer-directed immunosurveillance in vivo in addition to its growth-promoting effects, thereby facilitating pancreatic tumor growth and metastasis.¹ The mouse and human genes and their protein products show structural and functional similarities. The human IL-4 gene, which occurs as a single copy in the haploid genome, is mapped on chromosome 5.² The standard product used in this kit is recombinant human IL-4, consisting of 130 amino acids with the molecular mass of 14KDa.