

**Anti-Human IL-4 (RABBIT) Antibody Biotin Conjugated**  
**IL-4 Antibody Biotin Conjugated**  
**Catalog # ASR4970****Specification****Anti-Human IL-4 (RABBIT) Antibody Biotin Conjugated - Product Information**

Host	Rabbit
Conjugate	Biotin
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, IHC, E, I, LCI
Application Note	This purified antibody has been tested in western blotting and suitable for ELISA. By western blot a band approximately 15 kDa in size corresponding to human IL-4 protein is expected in the appropriate cell lysate or extract. Specific conditions for reactivity should be optimized by the end user.
Physical State	Lyophilized
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	This purified antibody was prepared from whole rabbit serum produced by repeated immunizations with full length recombinant human IL-4 protein.
Reconstitution Volume	100 µL
Reconstitution Buffer	Restore with deionized water (or equivalent)
Stabilizer	10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free
Preservative	0.01% (w/v) Sodium Azide

**Anti-Human IL-4 (RABBIT) Antibody Biotin Conjugated - Additional Information****Gene ID** 3565**Other Names**  
3565**Purity**

This product is an IgG fraction antibody purified from monospecific antiserum by a multi-step process which includes delipidation, salt fractionation and ion exchange chromatography followed by extensive dialysis against the buffer stated above. This purified antibody has been heated to 56°C for 30 minutes. In ELISA and other immunoreactive assays, this antibody will recognize both native and recombinant human IL-4 in cell supernatants and certain body fluids. A control of similarly diluted normal rabbit IgG is recommended.

**Storage Condition**

Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

#### **Precautions Note**

This product is for research use only and is not intended for therapeutic or diagnostic applications.

### **Anti-Human IL-4 (RABBIT) Antibody Biotin Conjugated - 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:<a href="http://www.uniprot.org/citations/1993171" target="\_blank">1993171</a>, PubMed:<a href="http://www.uniprot.org/citations/3016727" target="\_blank">3016727</a>). Induces the expression of class II MHC molecules on resting B-cells. Enhances both secretion and cell surface expression of IgE and IgG1 (PubMed:<a href="http://www.uniprot.org/citations/1993171" target="\_blank">1993171</a>). Also regulates the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes (PubMed:<a href="http://www.uniprot.org/citations/2521231" target="\_blank">2521231</a>). 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:<a href="http://www.uniprot.org/citations/10219247" target="\_blank">10219247</a>, PubMed:<a href="http://www.uniprot.org/citations/11526337" target="\_blank">11526337</a>, PubMed:<a href="http://www.uniprot.org/citations/18243101" target="\_blank">18243101</a>). Engagement of both types of receptors initiates JAK3 and to a lower extend JAK1 phosphorylation leading to activation of the signal transducer and activator of transcription 6/STAT6 (PubMed:<a href="http://www.uniprot.org/citations/7721895" target="\_blank">7721895</a>).

#### **Cellular Location**

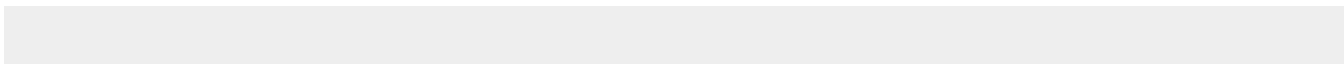
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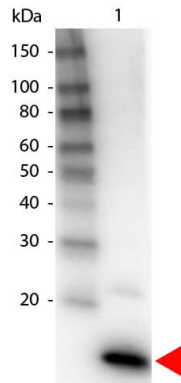
### **Anti-Human IL-4 (RABBIT) Antibody Biotin Conjugated - Protocols**

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-Human IL-4 (RABBIT) Antibody Biotin Conjugated - Images**





Western Blot of Biotin Conjugated Rabbit anti-IL-4 Antibody. Lane 1: Human IL-4. Lane 2: none. Load: 50 ng per lane. Primary antibody: IL-4 Antibody Biotin Conjugated at 1:1,000 for overnight at 4°C. Secondary antibody: HRP Streptavidin secondary antibody at 1:40,000 for 30 min at RT. Block: MB-070 for 30 min at RT. Predicted/Observed size: 17 kDa, 17 kDa for Human IL-4. Other band(s): none.

#### **Anti-Human IL-4 (RABBIT) Antibody Biotin Conjugated - Background**

IL-4 is a pleiotropic cytokine produced by activated T cells. This cytokine is a ligand for interleukin 4 receptor. The interleukin 4 receptor also binds to IL13, which may contribute to many overlapping functions of this cytokine and IL13. STAT6, a signal transducer and activator of transcription, has been shown to play a central role in mediating the immune regulatory signal of this cytokine. This gene, IL3, IL5, IL13, and CSF2 form a cytokine gene cluster on chromosome 5q, with this gene particularly close to IL13. This gene, IL13 and IL5 are found to be regulated coordinately by several long-range regulatory elements in an over 120 kilobase range on the chromosome. Two alternatively spliced transcript variants of this gene encoding distinct isoforms have been reported.