

**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 extent 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**

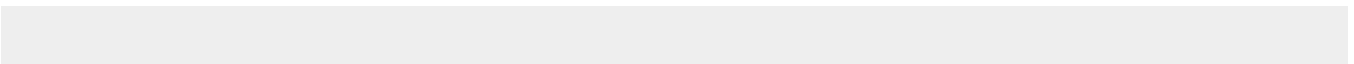
Secreted.

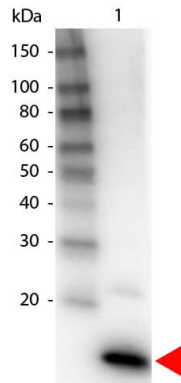
### **Anti-Human IL-4 (RABBIT) Antibody Biotin Conjugated - Protocols**

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.