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# Anti-Mouse IL-27/p28 (RABBIT) Antibody

**IL-27/p28 Antibody**
**Catalog # ASR5015**

## Specification

### Anti-Mouse IL-27/p28 (RABBIT) Antibody - Product Information

| | |
|---|---|
| Host | **Rabbit** |
| Conjugate | **Unconjugated** |
| Target Species | **Mouse** |
| Reactivity | **Mouse** |
| Clonality | **Polyclonal** |
| Application | **WB, E, I, LCI** |
| Application Note | **IL-27 is expressed in activated antigen presenting cells including monocytes, endothelial cells, and dendritic cells, for example mouse CD4 splenocytes. This purified antibody has been tested for use in western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 23.6 kDa in size corresponding to the mature mouse IL-27/p28 protein by western blotting in appropriate cell lysate or extract.** |
| 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 mouse IL27/p28 protein.** |
| Reconstitution Volume | **100 µL** |
| Reconstitution Buffer | **Restore with deionized water (or equivalent)** |

### Anti-Mouse IL-27/p28 (RABBIT) Antibody - Additional Information

**Gene ID** 246779

**Other Names**
246779

**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 antibody is specific for mouse IL-27/p28 protein. A BLAST analysis was used to suggest cross-reactivity with IL-27A/p28 from mouse sources based on 100% homology with the immunizing sequence. Based on 90% or greater positive homology, there is a chance of cross-reactivity to rat. Cross-reactivity with IL-27 from other sources has not been determined.

**Storage Condition**
Store anti-IL27 antibody 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-Mouse IL-27/p28 (RABBIT) Antibody - Protein Information

**Name** Il27

**Synonyms** Il27a

**Function**
Associates with EBI3 to form the IL-27 interleukin, a heterodimeric cytokine which functions in innate immunity. IL-27 has pro- and anti-inflammatory properties, that can regulate T-helper cell development, suppress T-cell proliferation, stimulate cytotoxic T-cell activity, induce isotype switching in B-cells, and that has diverse effects on innate immune cells. Among its target cells are CD4 T-helper cells which can differentiate in type 1 effector cells (TH1), type 2 effector cells (TH2) and IL17 producing helper T-cells (TH17). It drives rapid clonal expansion of naive but not memory CD4 T-cells. It also strongly synergizes with IL-12 to trigger interferon-gamma/IFN- gamma production of naive CD4 T-cells, binds to the cytokine receptor WSX-1/TCCR which appears to be required but not sufficient for IL-27- mediated signal transduction. IL-27 potentiate the early phase of TH1 response and suppress TH2 and TH17 differentiation. It induces the differentiation of TH1 cells via two distinct pathways, p38 MAPK/TBX21- and ICAM1/ITGAL/ERK-dependent pathways. It also induces STAT1, STAT3, STAT4 and STAT5 phosphorylation and activates TBX21/T-Bet via STAT1 with resulting IL12RB2 up-regulation, an event crucial to TH1 cell commitment. It suppresses the expression of GATA3, the inhibitor TH1 cells development. In CD8 T-cells, it activates STATs as well as GZMB. IL-27 reveals to be a potent inhibitor of TH17 cell development and of IL-17 production. Indeed IL27 alone is also able to inhibit the production of IL17 by CD4 and CD8 T-cells. While IL-27 suppressed the development of pro-inflammatory Th17 cells via STAT1, it inhibits the development of anti-inflammatory inducible regulatory T-cells, iTreg, independently of STAT1. IL-27 has also an effect on cytokine production, it suppresses pro-inflammatory cytokine production such as IL2, IL4, IL5 and IL6 and activates suppressors of cytokine signaling such as SOCS1 and SOCS3. Apart from suppression of cytokine production, IL-27 also antagonizes the effects of some cytokines such as IL6 through direct effects on T-cells. Another important role of IL-27 is its antitumor activity as well as its antiangiogenic activity with activation of production of antiangiogenic chemokines such as IP- 10/CXCL10 and MIG/CXCL9.

**Cellular Location**
Secreted. Note=Poorly secreted without coexpression of EBI3

**Tissue Location**
Expressed in macrophages and dendritic cells.

## Anti-Mouse IL-27/p28 (RABBIT) Antibody - Protocols

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

- Western Blot
- Blocking Peptides

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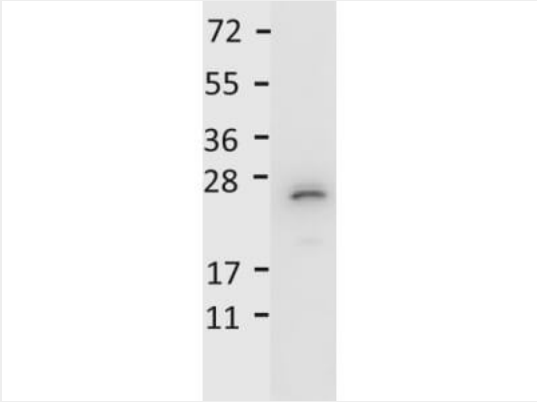
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

**Anti-Mouse IL-27/p28 (RABBIT) Antibody - Images**




Detection of recombinant IL27/p28 protein by Rockland's anti-Mouse IL-27/p28 antibody. Recombinant mouse IL27/p28 was loaded on to an SDS-PAGE gel at 0.25 µg and after separation, transferred to nitrocellulose. The membrane was blocked with 1% BSA in TBST for 30 min at RT, followed by incubation with primary antibody diluted 1:1,000 in 1% BSA in TBST overnight at 4°C. After washes, the blot was reacted with secondary antibody HRP Goat anti-Rabbit IgG antibody diluted 1:40,000 in blocking buffer (p/n MB-070) for 30 min at RT. Data was collected using Bio-Rad VersaDoc® 4000 MP imaging system.

**Anti-Mouse IL-27/p28 (RABBIT) Antibody - Background**

The cytokine Interleukin 27 (IL-27) is produced in response to inflammation. It is made by activated antigen presenting cells including monocytes, endothelial cells, and dendritic cells. IL-27 consists of a heterodimeric combination of Epstein-Barr virus-induced molecule 3 (EBI3, or IL-27B) non-covalently linked with IL-27 p28 (or IL-27A). It is a regulator of T helper cell development and suppressor of T-cell proliferation. IL-27 has both pro- and anti-inflammatory properties. It can stimulate cytotoxic T cell activity and induce isotype switching in B-cells. It has diverse effects on innate immune cells. It induces monocytes and mast cells to secrete pro-inflammatory cytokines. When infection is present, IL-27 induces naive CD4+ T cells to proliferate and develop Th1 cell responses. As an anti-inflammatory regulator, IL-27 can inhibit Th1 or Th2 responses and restrict the strength and duration of adaptive immune responses. The IL-27 p28 subunit, a 28 kDa glycoprotein belonging to the type I cytokine family, is homologous to IL-12 p35, IL-23 p19, and IL-6. The EBI3 (Epstein-Barr virus-induced molecule 3, or IL-27B) subunit is a 23.6 kDa glycoprotein containing two fibronectin type III domains, and belongs to the type I cytokine receptor family. It can exist as a homodimer and can also heterodimerize with IL-12 p35. It is homologous to the p40 subunit of IL-12 and IL-23 and to the extracellular domain of IL-6 R. EBI3 can heterodimerize also with IL-12 p35, or can exist as a homodimer. The heterodimeric IL-27 receptor contains WSX-1 (TCCR) and gp130. WSX-1 is specific for IL-27, and is expressed on resting/naive CD4+ T cells, CD8+ T cells, NK cells, dendritic cells, monocytes, mast cells, and B cells. Gp130, on the other hand, functions as a subunit of the receptor complexes for at least seven other cytokines. IL-27 also promotes effector functions of NK cells and CD8+ T cells. Anti-Mouse IL-27/p28 Antibody is useful for researchers interested in Cancer Immunology Research.