

**EBI3 Antibody**  
**Catalog # ASC10829****Specification**

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**EBI3 Antibody - Product Information**

Application	WB, IHC, IF
Primary Accession	<a href="#">Q14213</a>
Other Accession	<a href="#">NP_005746</a> , <a href="#">14577917</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	EBI3 antibody can be used for the detection of EBI3 by Western blot at 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 20 µg/mL.

**EBI3 Antibody - Additional Information**

Gene ID	10148
Target/Specificity	
EBI3;	

**Reconstitution & Storage**

EBI3 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

EBI3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**EBI3 Antibody - Protein Information**

**Name** EBI3

**Synonyms** IL27B

**Function**

Associates with IL27 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. Another important

role of IL-27 is its antitumor activity as well as its antiangiogenic activity with activation of production of antiangiogenic chemokines.

#### **Cellular Location**

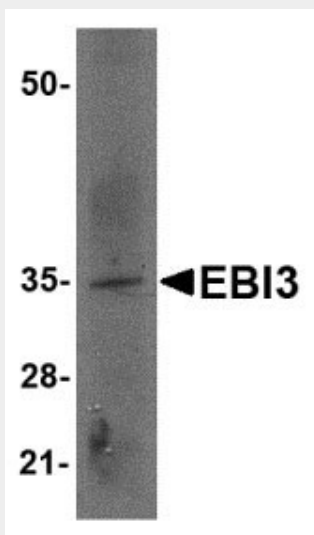
Secreted.

#### **EBI3 Antibody - Protocols**

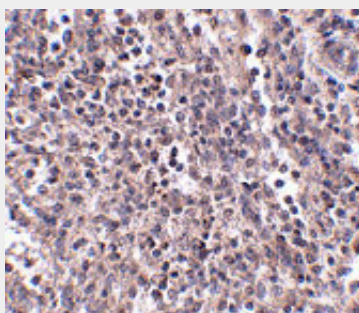
Provided below are standard protocols that you may find useful for product applications.

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

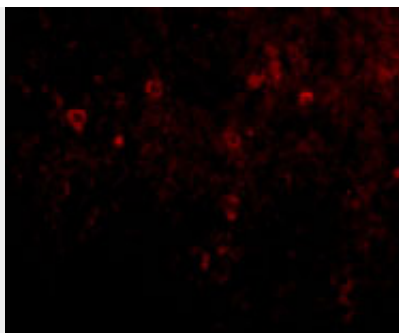
#### **EBI3 Antibody - Images**



Western blot analysis of EBI3 in rat spleen tissue lysate with EBI3 antibody at 2 µg/mL.



Immunohistochemistry of EBI3 in human spleen tissue with EBI3 antibody at 2.5 µg/mL.



Immunofluorescence of EBI3 in Human Spleen cells with EBI3 antibody at 20 µg/mL.

### **EBI3 Antibody - Background**

**EBI3 Antibody:** EBI3 is a subunit in two distinct heterodimeric cytokines: interleukin-27 (IL-27) and IL-35. Like interleukin-23 (IL-23), IL-27 is a recently discovered member of the IL-6/IL-12 family of proinflammatory and immunoregulatory cytokines. It exists as a heterodimer composed of the p40-related protein EBI3 and an IL-12 p35-related protein termed p28. IL-27 is produced after activation by antigen-presenting cells and induces proliferation of naïve but not memory CD4+ T-cells. It acts by binding to its receptor WSX-1 (also known as TCCR) and gp130 which results in the activation of a Jak/STAT signaling cascade, suggesting the IL-27 is involved in the regulation of immune processes. It has been suggested that IL-27 can also be used as a therapeutic agent against cancer as it can also induce tumor-specific anti-tumor activity mediated through CD8+ T-cells, IFN-gamma, and T-bet. IL-35 is composed of EBI3 and the p35 subunit of IL-12 and has been reported to have therapeutic effects against collagen-induced arthritis by expanding the population of regulatory T cells and suppressing Th17 cells. At least two isoform of EBI3 are known to exist.

### **EBI3 Antibody - References**

Pfanz S, Timans JC, Cheung J et al. IL-27, a heterodimeric cytokine composed of EBI3 and p28 protein, induces proliferation of naïve CD4(+) T cells. *Immunity*2002; 16:779-90.  
Devergne O, Birkenbach M, and Kieff E. Epstein-Barr virus-induced gene 3 and the p35 subunit of interleukin form a novel heterodimeric hematopoietin. *Proc. Natl. Acad. Sci. USA*1997; 94:12041-6.  
Niedbala W, Wei X, Cai B, et al. IL-35 is a novel cytokine with therapeutic effects against collagen-induced arthritis through the expression of regulatory T cells and suppression of Th17 cells. *Eur. J. Immunol.*2007; 3021-29.  
Pfanz S, Hibbert L, Mattson J, et al. WSX-1 and glycoprotein 130 constitute a signal-transducing receptor for IL-27. *J. Immunol.*2004; 172:2225-31.