

EBI3 Antibody

EBI3 (IN): Epstein-Barr virus induced 3 precursor, interleukin-27 subunit beta, IL-27B

CATALOG NO.: 4977

BACKGROUND:

EBI3 is a subunit in two distinct heterodimeric cytokines: interleukin-27 (IL-27) and IL-35 (1-3). Like interleukin-23 (IL-23), IL-27 is a recently discovered member of the IL-6/IL-12 family of proinflammatory and immunoregulatory cytokines (1). 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 (4), 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- γ , and T-bet (5). 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 (2,3). At least two isoforms of EBI3 are known to exist.

SOURCE:

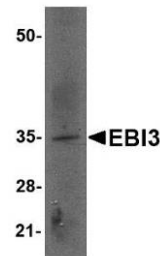
Rabbit polyclonal EBI3 antibody was raised against a 16 amino acid peptide from near the center of human EBI3 (Genbank accession No. NP_005746).

APPLICATION:

EBI3 antibody can be used for the detection of EBI3 by Western blot at 2 – 4 μ g/ml. (Optimal dilution should be determined by user.) Rat spleen tissue lysate can be used as positive control. EBI3 antibody is human, mouse and rat reactive. **This product is for research use only.**

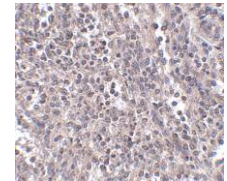
STORAGE:

EBI3 antibody is supplied as immunoaffinity purified IgG in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.



Western blot analysis of EBI3 in rat spleen tissue lysate with EBI3 antibody at 2 μ g/ml.

Immunohistochemistry of EBI3 in human spleen tissue with EBI3 antibody at 2.5 μ g/ml.



RELATED PRODUCTS:

Blocking peptide, Catalog No. **4977P**.
Rat Spleen Tissue Lysate, Catalog No. **1466**.
EBI3 Antibody (CT), Catalog No. **4967**.
IL-27 Antibody (NT), Catalog No. **3797**.
IL-23 Antibody (CT), Catalog No. **3793**.
IL-23 Antibody (NT), Catalog No. **3795**.
TCCR Antibody (NT), Catalog No. **2481**.

REFERENCES:

1. Pfanzen 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.
2. 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.
3. 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.
4. Pfanzen 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.
5. Hisada M, Kamiya S, Fujita K, et al. Potent antitumor activity of interleukin-27. *Cancer Res.* 2004; 64:1152-6. (09-01D)