

## Ebi3 (N-20): sc-26797

### BACKGROUND

Epstein-Barr virus-induced gene 3 (Ebi3) is a widely expressed homolog to the interleukin IL-12 p40 subunit protein that forms a heterodimer with either IL-12 p35 or an IL-12 p35 homolog, p28, to create a new cytokine (IL-27). IL-27 is an early product of activated antigen-presenting cells and drives rapid clonal expansion of naive but not memory CD4<sup>+</sup> T cells. Interferon- $\beta$  differentially regulates expression of the IL-12 family members p35, p40, p19 and Ebi3 in activated human dendritic cells. Ebi3 may function to antagonize IL-12 and to inhibit the development of a Th1 immune response. Ebi3 is strongly expressed in Hodgkin and Reed-Sternberg cells, independently of the EBV status of the tumor cells. Research suggests that Ebi3 may be an additional component of the repertoire employed by Hodgkin and Reed-Sternberg cells to inhibit an effective anti-tumor or anti-viral immune response. The human Ebi3 gene maps to chromosome 19p13.3 and encodes a secreted glycoprotein that is expressed in spleen and tonsils, and at high levels in full-term placenta.

### REFERENCES

1. Devergne, O., et al. 2001. Expression of Epstein-Barr virus-induced gene 3, an interleukin-12p40-related molecule, throughout human pregnancy: involvement of syncytiotrophoblasts and extravillous trophoblasts. *Am. J. Pathol.* 159: 1763-1776.
2. Omata, F., et al. 2001. The expression of IL-12p40 and its homologue, Epstein-Barr virus-induced gene 3, in inflammatory bowel disease. *Inflamm. Bowel Dis.* 7: 215-220.
3. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 605816. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Nieuwenhuis, E.E., et al. 2002. Disruption of T helper 2-immune responses in Epstein-Barr virus-induced gene 3-deficient mice. *Proc. Natl. Acad. Sci. USA* 99: 16951-16956.
5. Niedobitek, G., et al. 2002. Frequent expression of the Epstein-Barr virus (EBV)-induced gene, Ebi3, an IL-12 p40-related cytokine, in Hodgkin and Reed-Sternberg cells. *J. Pathol.* 198: 310-316.

### CHROMOSOMAL LOCATION

Genetic locus: EBI3 (human) mapping to 19p13.3.

### SOURCE

Ebi3 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Ebi3 of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-26797 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### RESEARCH USE

For research use only, not for use in diagnostic procedures.

### APPLICATIONS

Ebi3 (N-20) is recommended for detection of Ebi3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

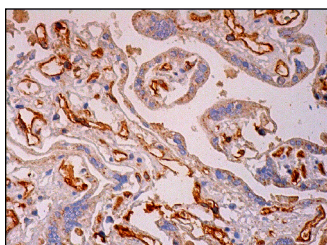
Suitable for use as control antibody for Ebi3 siRNA (h): sc-39410, Ebi3 shRNA Plasmid (h): sc-39410-SH and Ebi3 shRNA (h) Lentiviral Particles: sc-39410-V.

Molecular Weight of Ebi3: 34 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz<sup>™</sup>: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

### DATA



Ebi3 (N-20): sc-26797. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells and membrane staining of endothelial cells.

### STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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Satisfaction  
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Try **Ebi3 (G-4): sc-166158** or **Ebi3 (F-7): sc-515323**, our highly recommended monoclonal alternatives to Ebi3 (N-20)