

## IL-27R $\alpha$ (C-15): sc-47066

### BACKGROUND

IL-27 is a heterodimeric cytokine that consists of EBI3, an IL-12p40-related protein, and p28, a IL-12p35-related polypeptide. IL-27 triggers expansion of antigen-specific naive CD4-positive T cells and promotes polarization towards a Th1 phenotype with expression of  $\gamma$ -interferon. IL-27 contributes to the development of an adaptive immune response through its action on CD4-positive T cells, and also directly acts on cells of the innate immune system. IL-27 protein levels increase upon activation of antigen-presenting cells. IL-27 protein induces orphan cytokine receptor IL-27R (WSX-1)-dependent clonal expansion of naive but not memory CD4<sup>+</sup> T cells. IL-27 signaling through IL-27R and gp130 also induces phosphorylation of Stat1-5.

### REFERENCES

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- Lucas, S., et al. 2003. IL-27 regulates IL-12 responsiveness of naive CD4<sup>+</sup> T cells through Stat1-dependent and -independent mechanisms. *Proc. Natl. Acad. Sci. USA* 100: 15047-15052.
- Artis D, et al. 2004. The IL-27 receptor (WSX-1) is an inhibitor of innate and adaptive elements of type 2 immunity. *J. Immunol.* 173: 5626-5634.
- Villarino, A.V., et al. 2004. Understanding the pro- and anti-inflammatory properties of IL-27. *J. Immunol.* 173: 715-720.
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- Yoshimoto, T., et al. 2004. Induction of IgG<sub>2a</sub> class switching in B cells by IL-27. *J. Immunol.* 173: 2479-2485.
- Holscher, C., et al. 2005. The IL-27 receptor chain WSX-1 differentially regulates antibacterial immunity and survival during experimental tuberculosis. *J. Immunol.* 174: 3534-3544.

### CHROMOSOMAL LOCATION

Genetic locus: IL27RA (human) mapping to 19p13.11; Il27ra (mouse) mapping to 8.

### SOURCE

IL-27R $\alpha$  (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of IL-27R $\alpha$  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-47066 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

IL-27R $\alpha$  (C-15) is recommended for detection of mature IL-27R $\alpha$  and IL-27R $\alpha$  precursor 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-27R $\alpha$  siRNA (h): sc-60836, IL-27R $\alpha$  shRNA Plasmid (h): sc-60836-SH and IL-27R $\alpha$  shRNA (h) Lentiviral Particles: sc-60836-V.

Molecular Weight of IL-27R $\alpha$ : 69 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™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ 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™ Mounting Medium: sc-24941.

### STORAGE

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

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **IL-27R $\alpha$  (F-7): sc-376309** or **IL-27R $\alpha$  (J126): sc-80078**, our highly recommended monoclonal alternatives to IL-27R $\alpha$  (C-15).