

## IL-27 (L-20): sc-27487

### BACKGROUND

IL-27 triggers expansion of antigen-specific naive CD4<sup>+</sup> 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<sup>+</sup> 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 WSX-1/TCCR-dependent clonal expansion of naive but not memory CD4<sup>+</sup> T cells. IL-27 signaling through TCCR/WSX-1 induces phosphorylation of Stat1-5. The predicted 243 amino acid human IL-27 protein, which is 73% identical to the mouse protein, contains an N-terminal signal peptide, several O-glycosylation sites and a stretch of 13 glutamate residues between helices C and D.

### 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.
- Villarino, A.V., et al. 2004. Understanding the pro- and anti-inflammatory properties of IL-27. *J. Immunol.* 173: 715-720.
- Goldberg, R., et al. 2004. Suppression of ongoing adjuvant-induced arthritis by neutralizing the function of the p28 subunit of IL-27. *J. Immunol.* 173: 1171-1178.
- Yoshimoto, T., et al. 2004. Induction of IgG<sub>2a</sub> class switching in B cells by IL-27. *J. Immunol.* 173: 2479-2485.
- 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.
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### CHROMOSOMAL LOCATION

Genetic locus: IL17D (human) mapping to 13q12.11; Il27 (mouse) mapping to 7 F3.

### SOURCE

IL-27 (L-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IL-27 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-27487 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

IL-27 (L-20) is recommended for detection of IL-27 of mouse, rat and 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).

IL-27 (L-20) is also recommended for detection of IL-27 in additional species, including bovine and porcine.

Suitable for use as control antibody for IL-27 siRNA (h): sc-72184, IL-27 siRNA (m): sc-72185, IL-27 shRNA Plasmid (h): sc-72184-SH, IL-27 shRNA Plasmid (m): sc-72185-SH, IL-27 shRNA (h) Lentiviral Particles: sc-72184-V and IL-27 shRNA (m) Lentiviral Particles: sc-72185-V.

Molecular Weight of IL-27: 27 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

### 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-27 (C-8): sc-390482** or **IL-27 (LB-L22): sc-134367**, our highly recommended monoclonal alternatives to IL-27 (L-20).