

## IL-27 (P-15): sc-27490

### 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

- Pflanz, S., et al. 2002. IL-27, a heterodimeric cytokine composed of Ebi3 and p28 protein, induces proliferation of naive CD4<sup>+</sup> T cells. *Immunity* 16: 779-790.
- Cordoba-Rodriguez, R., et al. 2003. L-23 and IL-27: new members of the growing family of IL-12-related cytokines with important implications for therapeutics. *Expert Opin. Biol. Ther.* 3: 715-723.
- 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.

### CHROMOSOMAL LOCATION

Genetic locus: IL27 (human) mapping to 16p11; IL27 (mouse) mapping to 7 F3.

### SOURCE

IL-27 (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of IL-27 of mouse 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-27490 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

L-27 (P-15) is recommended for detection of IL-27 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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-27 siRNA (m): sc-72185, IL-27 shRNA Plasmid (m): sc-72185-SH and IL-27 shRNA (m) Lentiviral Particles: sc-72185-V.

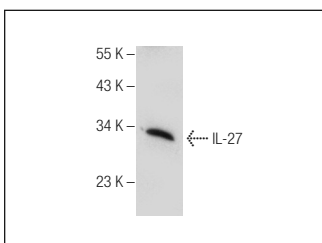
Molecular Weight of IL-27: 27 kDa.

Positive Controls: MM-142 cell lysate: sc-2246.

### 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

### DATA



IL-27 (P-15): sc-27490. Western blot analysis of IL-27 expression in MM-142 whole cell lysate.

### STORAGE

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



Try **IL-27 (C-8): sc-390482**, our highly recommended monoclonal alternative to IL-27 (P-15).