SANTA CRUZ BIOTECHNOLOGY, INC.

IL-27Rα (J126): sc-80078

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 $CD4^+$ T cells. IL-27 signaling through IL-27R and gp130 also induces phosphorylation of Stat1-5.

REFERENCES

1. Pflanz, S., et al. 2002. IL-27, a heterodimeric cytokine composed of EBI3 and p28 protein, induces proliferation of naive $CD4^+$ T cells. Immunity 16: 779-790.
2. Cordoba-Rodriguez, R. and Frucht, D.M. 2003. IL-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.
3. Lucas, S., et al. 2003. IL-27 regulates IL-12 responsiveness of naive $CD4^+$ T cells through Stat1-dependent and -independent mechanisms. Proc. Natl. Acad. Sci. USA 100: 15047-15052.
4. Villarino, A.V., et al. 2004. Understanding the pro- and anti-inflammatory properties of IL-27. J. Immunol. 173: 715-720.
5. 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.
6. Yoshimoto, T., et al. 2004. Induction of IgG_{2a} class switching in B cells by IL-27. J. Immunol. 173: 2479-2485.
7. 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.
8. 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 19p13.12.

SOURCE

IL-27Rα (J126) is a mouse monoclonal antibody raised against an extracellular domain of IL-27Rα of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} in 1.0 ml PBS with < 0.1% sodium azide and protein stabilizer.

RESEARCH USE

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

APPLICATIONS

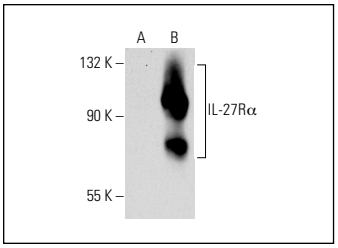
IL-27Rα (J126) is recommended for detection of IL-27Rα of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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

Molecular Weight of IL-27Rα: 69 kDa.

Positive Controls: IL-27Rα (h): 293T Lysate: sc-114657.

DATA



IL-27Rα (J126): sc-80078. Western blot analysis of IL-27Rα expression in non-transfected: sc-117752 (**A**) and human IL-27Rα transfected: sc-114657 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Diegelmann, J., et al. 2012. A novel role for interleukin-27 (IL-27) as mediator of intestinal epithelial barrier protection mediated via differential signal transducer and activator of transcription (STAT) protein signaling and induction of antibacterial and anti-inflammatory proteins. J. Biol. Chem. 287: 286-298.
2. Zhang, J., et al. 2017. Interleukin-35 expression is associated with colon cancer progression. Oncotarget 8: 71563-71573.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.