

IL-27R α (F-7): sc-376309

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 γ -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.

CHROMOSOMAL LOCATION

Genetic locus: IL27RA (human) mapping to 19p13.12.

SOURCE

IL-27R α (F-7) is a mouse monoclonal antibody raised against amino acids 91-340 mapping within an internal region of IL-27R α of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-27R α (F-7) is available conjugated to agarose (sc-376309 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376309 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376309 PE), fluorescein (sc-376309 FITC), Alexa Fluor[®] 488 (sc-376309 AF488), Alexa Fluor[®] 546 (sc-376309 AF546), Alexa Fluor[®] 594 (sc-376309 AF594) or Alexa Fluor[®] 647 (sc-376309 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376309 AF680) or Alexa Fluor[®] 790 (sc-376309 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

IL-27R α (F-7) is recommended for detection of IL-27R α of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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-27R α siRNA (h): sc-60836, IL-27R α shRNA Plasmid (h): sc-60836-SH and IL-27R α shRNA (h) Lentiviral Particles: sc-60836-V.

Molecular Weight of IL-27R α : 69 kDa.

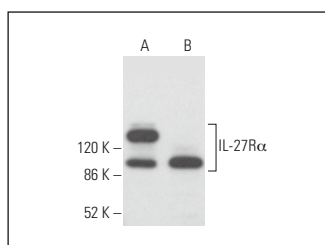
Positive Controls: IL-27R α (h): 293T Lysate: sc-114657, MIA PaCa-2 cell lysate: sc-2285 or DU 145 cell lysate: sc-2268.

RECOMMENDED SUPPORT REAGENTS

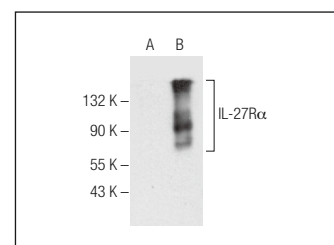
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



IL-27R α (F-7): sc-376309. Western blot analysis of IL-27R α expression in MIA PaCa-2 (A) and DU 145 (B) whole cell lysates.



IL-27R α (F-7): sc-376309. Western blot analysis of IL-27R α expression in non-transfected: sc-117752 (A) and human IL-27R α transfected: sc-114657 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zuo, Q., et al. 2021. Role of IL-6–IL-27 complex in host antiviral immune response. *J. Immunol.* 207: 577-589.
2. Zhang, X.Y., et al. 2022. IL-27 promotes decidualization via the Stat3-ESR/PGR regulatory axis. *J. Reprod. Immunol.* 151: 103623.
3. Zhang, X.Y., et al. 2023. IL-27 deficiency inhibits proliferation and invasion of trophoblasts via the SFRP2/Wnt/ β -catenin pathway in fetal growth restriction. *Int. J. Med. Sci.* 20: 392-405.

RESEARCH USE

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