SANTA CRUZ BIOTECHNOLOGY, INC.

IL-11Rα (F-10): sc-393039

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The pleiotropic cytokine, IL-11, has been shown to have proliferative and differentiation effects on lymphopoietic, myeloid and erythroid cells. IL-11 also has the inhibiting effect of repressing adipogenesis *in vitro*. The IL-11α receptor, IL-11Rα, is a member of the class I subgroup of the cytokine receptor family and exhibits structural similarity to the a subunits of the human ciliary neurotrophic factor (CNTF) and the mouse IL-6 receptor. It is speculated that the IL-11Rα regulates the proliferation and/or differentiation of skeletogenic progenitor and mesenchymal cells. Coexpression of gp130 and IL-11α is necessary for high affinity binding of IL-11 to IL-11Rα. It has also been found that coexpression of IL-11Rα and gp130 is required for proper stimulation of Ba/F3 cells to differentiate into macrophage in response to IL-11.

REFERENCES

1. Quesniaux, V.G., et al. 1993. Review of a novel hematopoietic cytokine, interleukin-11. Int. Rev. Exp. Pathol. 34A: 205-214.
2. Keith, J.C., et al. 1994. IL-11, a pleiotropic cytokine: exciting new effects of IL-11 on gastrointestinal mucosal biology. Stem Cells 12: 79-89.
3. Neuhaus, H., et al. 1994. Et12, a novel putative type-1 cytokine receptor expressed during mouse embryogenesis at high levels in skin and cells with skeletogenic potential. Dev. Biol. 166: 531-542.
4. Hilton, D.J., et al. 1994. Cloning of a murine IL-11 receptor α-chain; requirement for gp130 for high affinity binding and signal transduction. EMBO J. 13: 4765-4775.

CHROMOSOMAL LOCATION

Genetic locus: Il11ra1 (mouse) mapping to 4 A5.

SOURCE

IL-11Rα (F-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 409-432 at the C-terminus of IL-11Rα of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-11Rα (F-10) is available conjugated to agarose (sc-393039 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393039 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393039 PE), fluorescein (sc-393039 FITC), Alexa Fluor® 488 (sc-393039 AF488), Alexa Fluor® 546 (sc-393039 AF546), Alexa Fluor® 594 (sc-393039 AF594) or Alexa Fluor® 647 (sc-393039 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393039 AF680) or Alexa Fluor® 790 (sc-393039 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393039 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

IL-11Rα (F-10) is recommended for detection of IL-11Rα of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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-11Rα siRNA (m): sc-35648, IL-11Rα shRNA Plasmid (m): sc-35648-SH and IL-11Rα shRNA (m) Lentiviral Particles: sc-35648-V.

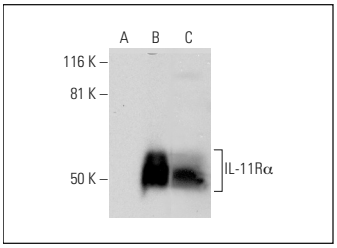
Molecular Weight of IL-11Rα: 51/151 kDa.

Positive Controls: IL-11Rα (m): 293T Lysate: sc-125491, RPE-J cell lysate: sc-24771 or 3T3-L1 cell lysate: sc-2243.

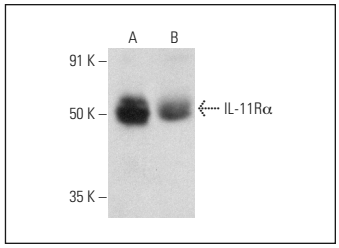
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-11Rα (F-10): sc-393039. Western blot analysis of IL-11Rα expression in non-transfected 293T: sc-117752 (**A**), mouse IL-11Rα transfected 293T: sc-125491 (**B**) and 3T3-L1 (**C**) whole cell lysates.



IL-11Rα (F-10): sc-393039. Western blot analysis of IL-11Rα expression in 3T3-L1 (**A**) and RPE-J (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Xu, X., et al. 2018. Phosphorylation-mediated IFN-γR2 membrane translocation is required to activate macrophage innate response. Cell 175: 1336-1351.e17.

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.