

# IL-11R $\alpha$ (A-13): sc-31419

## 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-11 $\alpha$  receptor, IL-11R $\alpha$ , is a member of the class I subgroup of the cytokine receptor family and exhibits structural similarity to the  $\alpha$  subunits of the human ciliary neurotrophic factor (CNTF) and the mouse IL-6 receptor. It is speculated that the IL-11R $\alpha$  regulates the proliferation and/or differentiation of skeletogenic progenitor and mesenchymal cells. Coexpression of gp130 and IL-11 $\alpha$  is necessary for high affinity binding of IL-11 to IL-11R $\alpha$ . It has also been found that coexpression of IL-11R $\alpha$  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. *Intl. 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 suppl. 1: 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  $\alpha$ -chain; requirement for gp130 for high affinity binding and signal transduction. *EMBO J.* 13: 4765-4775.
5. Peters, S.O., et al. 1995. Murine marrow cells expanded in culture with IL-3, IL-6, IL-11, and SCF acquire an engraftment defect in normal hosts. *Exp. Hematol.* 23: 461-469.
6. Jacobsen, S.E., et al. 1995. The FLT3 ligand potently and directly stimulates the growth and expansion of primitive murine bone marrow progenitor cells *in vitro*: synergistic interactions with interleukin (IL) 11, IL-12, and other hematopoietic growth factors. *J. Exp. Med.* 181: 1357-1363.

## CHROMOSOMAL LOCATION

Genetic locus: IL11RA (human) mapping to 9p13.3; Il11ra1 (mouse) mapping to 4 A5.

## SOURCE

IL-11R $\alpha$  (A-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of IL-11R $\alpha$  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-31419 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

IL-11R $\alpha$  (A-13) is recommended for detection of IL-11R $\alpha$  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-11R $\alpha$  (A-13) is also recommended for detection of IL-11R $\alpha$  in additional species, including equine and porcine.

Suitable for use as control antibody for IL-11R $\alpha$  siRNA (h): sc-35647, IL-11R $\alpha$  siRNA (m): sc-35648, IL-11R $\alpha$  shRNA Plasmid (h): sc-35647-SH, IL-11R $\alpha$  shRNA Plasmid (m): sc-35648-SH, IL-11R $\alpha$  shRNA (h) Lentiviral Particles: sc-35647-V and IL-11R $\alpha$  shRNA (m) Lentiviral Particles: sc-35648-V.

Molecular Weight of IL-11R $\alpha$ : 51/151 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

## 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.

## 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-11R $\alpha$  (4D12): sc-130920** or **IL-11R $\alpha$  (F-10): sc-393039**, our highly recommended monoclonal alternatives to IL-11R $\alpha$  (A-13).