

IL-11R α (K-20): sc-1947

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 α receptor, IL-11R α , is a member of the class 1 subgroup of the cytokine receptor family and exhibits structural similarity to the α subunits of the human ciliary neurotrophic factor (CNTF) and the mouse IL-6 receptor. It is speculated that the IL-11R α regulates the proliferation and/or differentiation of skeletal progenitor and mesenchymal cells. Coexpression of gp130 and IL-11 α is necessary for high-affinity binding of IL-11 to IL-11R α . It has also been found that coexpression of IL-11R α 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.
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.

SOURCE

IL-11R α (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of IL-11R α of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-1947 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

IL-11R α (K-20) is recommended for detection of IL-11R α of 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 α (K-20) is also recommended for detection of IL-11R α in additional species, including canine.

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

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

Positive Controls: 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.

SELECT PRODUCT CITATIONS

1. Cork, B.A., et al. 2002. Expression of interleukin (IL)-11 receptor by the human endometrium *in vivo* and effects of IL-11, IL-6 and LIF on the production of MMP and cytokines by human endometrial cells *in vitro*. *Mol. Hum. Reprod.* 8: 841-848.
2. Karpovich, N., et al. 2003. Expression and function of interleukin-11 and its receptor α in the human endometrium. *Mol. Hum. Reprod.* 9: 75-80.
3. Zurita, A.J., et al. 2004. Combinatorial screenings in patients: the interleukin-11 receptor α as a candidate target in the progression of human prostate cancer. *Cancer Res.* 64: 435-439.

RESEARCH USE

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

PROTOCOLS

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


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Try **IL-11R α (4D12): sc-130920**, our highly recommended monoclonal alternative to IL-11R α (K-20).