SANTA CRUZ BIOTECHNOLOGY, INC.

IL-11Rα (Q-17): sc-100296

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 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-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. 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 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.

SOURCE

IL-11Rα (Q-17) is a mouse monoclonal antibody raised against recombinant IL-11Rα of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

IL-11Rα (Q-17) is recommended for detection of IL-11Rα of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Molecular Weight of membrane-bound IL-11Rα: 151 kDa.

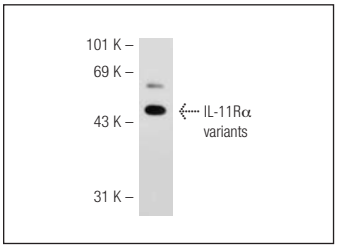
Molecular Weight of soluble IL-11Rα: 51 kDa.

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 goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



IL-11Rα (Q-17): sc-100296. Western blot analysis of IL-11Rα expression in K-562 whole cell lysate.

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.