

IL-11 (F-3): sc-133084

BACKGROUND

Interleukin-11, or IL-11, is a pleiotropic cytokine that is biologically related to IL-6, leukemia inhibitory factor (LIF), oncostatin M (OSM) and ciliary neurotrophic factor (CNTF). IL-11 is a stromal cell-derived cytokine which stimulates the proliferation of primitive hematopoietic progenitor cells and, together with Flt 3-L, stimulates the expansion of CD34⁺ cell populations. Human IL-11 cDNA encodes a 199 amino acid precursor with a 21 amino acid hydrophobic signal peptide which is cleaved to generate a glycosylated biologically active form. IL-11 exerts its biological effects through the interleukin-11 receptor, IL-11R, which is composed of an IL-11 receptor-specific chain designated IL-11R α , and gp130, the signal transducing component common to the IL-6, LIF, OSM and CNTF receptors. Stimulation of the IL-11R results in the activation of the Janus tyrosine kinase family members JAK1 and JAK2 which, once activated, induce the nuclear translocation of the transcription factors Stat1 and Stat3.

REFERENCES

- Paul, S.R., et al. 1990. Molecular cloning of a cDNA encoding interleukin-11, a stromal cell-derived lymphopoietic and hematopoietic cytokine. *Proc. Natl. Acad. Sci. USA* 87: 7512-7516.
- Yang, Y.C. and Yin, T. 1995. Interleukin (IL)-11-mediated signal transduction. *Ann. N.Y. Acad. Sci.* 762: 31-40.
- Lemoli, R.M., et al. 1995. Interleukin-11 (IL-11) acts as a synergistic factor for the proliferation of human myeloid leukaemic cells. *Br. J. Haematol.* 91: 319-326.
- van de Ven, C., et al. 1995. IL-11 in combination with SLF and G-CSF or GM-CSF significantly increases expansion of isolated CD34⁺ cell population from cord blood vs. adult bone marrow. *Exp. Hematol.* 23: 1289-1295.
- Boulton, T.G., et al. 1995. Stat3 activation by cytokines utilizing gp130 and related transducers involves a secondary modification requiring an H7-sensitive kinase. *Proc. Natl. Acad. Sci. USA* 92: 6915-6919.
- Matsuda, T., et al. 1995. Activation of Fes tyrosine kinase by gp130, an interleukin-6 family cytokine signal transducer, and their association. *J. Biol. Chem.* 270: 11037-11039.
- Bellido, T., et al. 1996. Detection of receptors for interleukin-6, interleukin-11, leukemia inhibitory factor, Oncostatin M, and ciliary neurotrophic factor in bone marrow stromal/osteoblastic cells. *J. Clin. Invest.* 97: 431-437.

CHROMOSOMAL LOCATION

Genetic locus: IL11 (human) mapping to 19q13.42; Il11 (mouse) mapping to 7 A1.

SOURCE

IL-11 (F-3) is a mouse monoclonal antibody raised against amino acids 31-199 of IL-11 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IL-11 (F-3) is recommended for detection of IL-11 of mouse, rat and 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-11 siRNA (h): sc-39636, IL-11 siRNA (m): sc-39637, IL-11 shRNA Plasmid (h): sc-39636-SH, IL-11 shRNA Plasmid (m): sc-39637-SH, IL-11 shRNA (h) Lentiviral Particles: sc-39636-V and IL-11 shRNA (m) Lentiviral Particles: sc-39637-V.

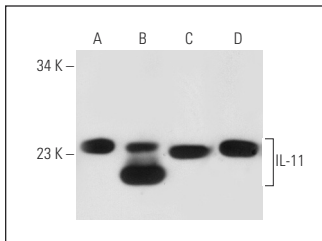
Molecular Weight of IL-11: 23 kDa.

Positive Controls: IL-11 (h): 293T Lysate: sc-113495, NIH/3T3 whole cell lysate: sc-2210 or AN3 CA cell lysate: sc-24662.

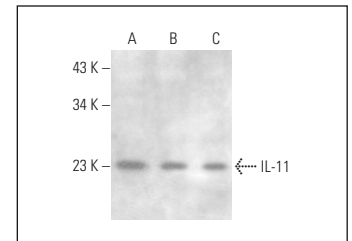
RECOMMENDED SUPPORT REAGENTS

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-11 (F-3): sc-133084. Western blot analysis of IL-11 expression in non-transfected 293T: sc-117752 (A), human IL-11 transfected 293T: sc-113495 (B), An3 CA (C) and NIH/3T3 (D) whole cell lysates.



IL-11 (F-3): sc-133084. Western blot analysis of IL-11 expression in Daudi (A), U-251-MG (B) and 3T3-L1 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Jiang, Y., et al. 2021. Histone H3K27 methyltransferase EZH2 and demethylase JMJD3 regulate hepatic stellate cells activation and liver fibrosis. *Theranostics* 11: 361-378.

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.