

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

1. 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.
2. Yang, Y.C. and Yin, T. 1995. Interleukin (IL)-11-mediated signal transduction. *Ann. N.Y. Acad. Sci.* 762: 31-40.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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

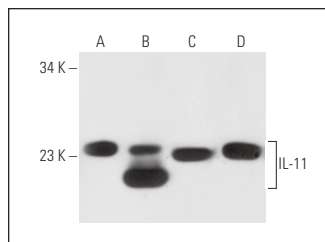
IL-11 (F-3) is recommended for detection of IL-11 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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.

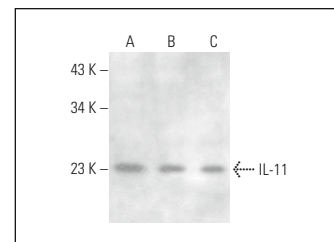
Molecular Weight of IL-11: 23 kDa.

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

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

1. Jiang, Y., et al. 2021. Histone H3K27 methyltransferase EZH2 and demethylase JMJD3 regulate hepatic stellate cells activation and liver fibrosis. *Theranostics* 11: 361-378.
2. Seo, J.H. and Jeon, Y.J. 2022. Global proteomic analysis of mesenchymal stem cells derived from human embryonic stem cells via connective tissue growth factor treatment under chemically defined feeder-free culture conditions. *J. Microbiol. Biotechnol.* 32: 126-140.

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.

PROTOCOLS

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