

IL-11 (A-7): sc-133062

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.

SOURCE

IL-11 (A-7) 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 (A-7) is recommended for detection of IL-11 of 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 shRNA Plasmid (h): sc-39636-SH and IL-11 shRNA (h) Lentiviral Particles: sc-39636-V.

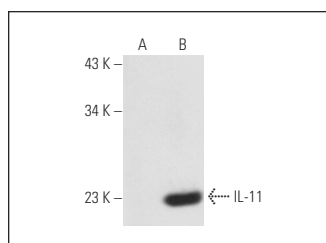
Molecular Weight of IL-11: 23 kDa.

Positive Controls: IL-11 (h): 293T Lysate: sc-113495 or AN3 CA cell lysate: sc-24662.

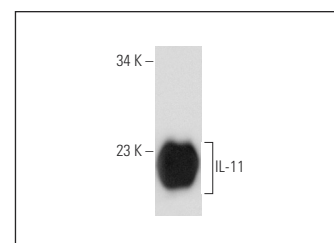
RECOMMENDED SUPPORT REAGENTS

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 (A-7): sc-133062. Western blot analysis of IL-11 expression in non-transfected: sc-117752 (A) and human IL-11 transfected: sc-113495 (B) 293T whole cell lysates.



IL-11 (A-7): sc-133062. Western blot analysis of human recombinant IL-11.

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.