

# 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<sup>+</sup> 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 $\alpha$ , 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<sup>+</sup> 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.

## 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  $\mu$ g IgG<sub>2a</sub> 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  $\mu$ g per 100-500  $\mu$ 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.

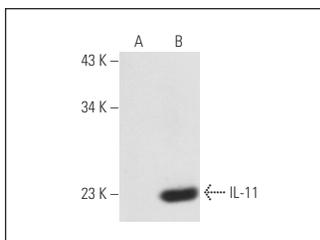
Molecular Weight of IL-11: 23 kDa.

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

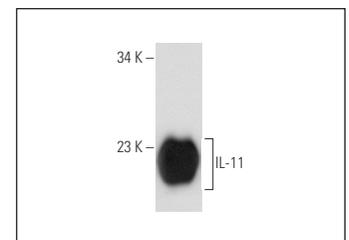
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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](http://www.scbt.com) for detailed protocols and support products.