

# IL-2 (B-10): sc-137119

## BACKGROUND

Lymphokines are a group of signaling molecules involved in communication between cells of the immune system. Lymphokines secreted by activated lymphocytes include proteins such as IL-2. This protein is secreted primarily by helper T cells that have been activated through the T cell receptor complex or by other mitogens. Cells targeted by IL-2 include activated T helper and cytotoxic T cells, inducing their proliferation. The secretion of IL-2 can also act as a growth factor for B cells. To date, three different IL-2-dependent signal transduction pathways have been identified: the c-Fos/c-Jun induction pathway mediated by Src family protein-tyrosine kinases; the c-Myc induction pathway; and the rapamycin-sensitive pathway; all of which result in the induction of Bcl-2. In addition, the transcription factor NFAT has been shown to play a major role in the regulation of IL-2 transcription and correlates to an age-related decline in the expression of IL-2.

## REFERENCES

1. Smith, K.A. 1980. T cell growth factor. *Immunol. Rev.* 51: 337-357.
2. Taniguchi, T., Matsui, H., Fujita, T., Takaoka, C., Kashima, N., Yoshimoto, R. and Hamuro, J. 1983. Structure and expression of a cloned cDNA for human interleukin-2. *Nature* 302: 305-310.
3. Lowenthal, J.W., Zubler, R.H., Nabholz, M. and MacDonald, H.R. 1985. Similarities between interleukin-2 receptor number and affinity on activated B and T lymphocytes. *Nature* 315: 669-672.
4. Guy, G.R., Bee, N.S. and Peng, C.S. 1990. Lymphokine signal transduction. *Prog. Growth Factor Res.* 2: 45-70.
5. Germann, T., Jin, S.C., Mattner, F. and Rude, E. 1991. Components of an antigen-/T cell receptor- independent pathway of lymphokine production. *Eur. J. Immunol.* 21: 1857-1861.
6. Miyazaki, T., Liu, Z.J., Kawahara, A., Minami, Y., Yamada, K., Tsujimoto, Y., Barsoumian, E.L., Permuter, R.M. and Taniguchi, T. 1995. Three distinct IL-2 signaling pathways mediated by Bcl-2, c-Myc and Lck cooperate in hematopoietic cell proliferation. *Cell* 81: 223-231.
7. Eljaafari, A., Dorval, I., Soula, M., Quelvennec, E., Pirenne, H., Fagard, R. and Sterkers, G. 1995. Contribution of p56Lck to the upregulation of cytokine production and T cell proliferation by IL-2 in human CD3-stimulated T cell clones. *Cell. Immunol.* 160: 152-156.

## CHROMOSOMAL LOCATION

Genetic locus: IL2 (human) mapping to 4q27; IL2 (mouse) mapping to 3 B.

## SOURCE

IL-2 (B-10) is a mouse monoclonal antibody raised against amino acids 21-153 of IL-2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

IL-2 (B-10) is recommended for detection of IL-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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-2 siRNA (h): sc-39619, IL-2 siRNA (m): sc-39620, IL-2 shRNA Plasmid (h): sc-39619-SH, IL-2 shRNA Plasmid (m): sc-39620-SH, IL-2 shRNA (h) Lentiviral Particles: sc-39619-V and IL-2 shRNA (m) Lentiviral Particles: sc-39620-V.

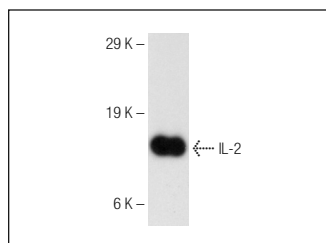
Molecular Weight of IL-2: 15 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, CCRF-CEM cell lysate: sc-2225 or HuT 78 whole cell lysate: sc-2208.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-2 (B-10): sc-137119. Western blot analysis of human recombinant IL-2.

## 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.